AMALGAMATED SUGAR COMPANY

TWIN FALLS

TIER 1 OPERATING PERMIT APPLICATION

DATED – JUNE 17, 2005

RECEIVED – JUNE 23, 2005

Permit No.: T1-050415

Facility ID No.: 083-00001

PID: SSTV.V004

Logged: ✓

Inactive 6/30/05

Activated 7/26/05

Activated 2/7/06

Bill - 2
Marilyn 1
S1

THE AMALGAMATED SUGAR COMPANY LLC

2320 ORCHARD EAST • P.O. BOX 127 • TWIN FALLS, ID 83303-0127

PHONE: (208) 733-4104

A CENTURY 100 YEARS OF SWEETNESS

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JUN 23 2005

Department of Environmental Quality
State Air Program

June 17, 2005

Mr. Steve VanZandt
Air Quality Compliance Officer
Idaho Department of Environmental Quality (IDEQ)
Twin Falls Regional Office
601 Pole Line Road, Suite 2
Twin Falls, Idaho 83303

RE: Update/Renewal for Tier I Operating Permit Application – The Amalgamated Sugar Company LLC, Twin Falls Facility

Dear Mr. VanZandt:

In correspondence dated August 31, 2004, IDEQ discussed the permit renewal application for the Tier I Operating Permit (T1-030415) for The Amalgamated Sugar Company LLC (TASCO), Twin Falls Facility. As per IDAPA 58.01.01.313.03 of Idaho Rules for the Control of Air Pollution, TASCO submits the following Tier I (Title V) permit renewal application and update for the Twin Falls facility. The updates, revisions, and renewal follows the specific sections contained in the 1995 permit application and the 1999 update. The following is a description of the revisions:

Renewal Application Information.
As per discussions with IDEQ, the format for the Permit Renewal Application consists of the answer sheet and supporting documentation found in the accompanying attachments.

Section 1 – General Facility Information and Certification.
New certification forms are included for Sections 1A and 1B. Section 1C has also been updated.

Section 2 – Compliance Assurance Monitoring (CAM) Requirements.
The CAM rule applies to the Foster Wheeler Boiler (S-B1), the B&W Boiler (SB-2), and the Pulp Dryer (S-D1). The required information is supplied for each emission unit.

Section 3 – Emissions.
This section has been updated based upon additional data collected since the original application and the subsequent update were submitted. Please replace the previous version with the information found in the Section Update. Section 3A (Emissions Unit Data) includes minor revisions for some of the emissions units or pollution control equipment. Emissions data and

JUN 17 2005

Sec 2, 3, 5C
See next page too

supporting information included in Section 3B (Production Data), Section 3C (Emission Factors), and Section 3D (Emission Inventory) have been updated as well.

Section 5A (Compliance Certification at Time of Application) Please see IDEQ 2005 Air Quality Inspection for compliance status and the methodology utilized to determine compliance.

Section 5C (Current/Proposed Compliance Demonstration Methods) TASCO proposes to utilize the methodology outlined in Tier I Operating Permit T1-030415 (Appendix J) for compliance determination.

Section 5D (Changes in Permit Conditions). TASCO is requesting changes in Permit Conditions 2.26, 3.4, 5.2, 11.3, 11.4, and 11.6.

Also attached is a HAP emissions evaluation (Appendix K). Based upon this evaluation, the TASCO Twin Falls facility is not a major source of HAPs.

If you have any questions, please feel free to contact Phyllis Beard, Environmental Manager, or me at (208)733-4104.

Sincerely,

Gary Pool
Plant Manager

Attachments

cc: Corporate Engineering, John McCreedy, Mike Dalton – Boise Corporate
Phyllis Beard, Environmental File – Twin Falls

The Amalgamated Sugar Company LLC
Twin Falls Facility
Tier I Operating Permit (No.T1-030415) Renewal

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DE/AFS/SF

THE AMALGAMATED SUGAR COMPANY LLC

2320 ORCHARD EAST • P.O. BOX 127 • TWIN FALLS, ID 83303-0127

PHONE: (208) 733-4104

April 20, 2007

Mr. Steve VanZandt
Air Quality Compliance Officer
Idaho Department of Environmental Quality (IDEQ)
Twin Falls Regional Office
1363 Fillmore St.
Twin Falls, Idaho 83301

RE: Update of the Renewal for Tier I Operating Permit Application – T1-030415
The Amalgamated Sugar Company LLC, Twin Falls Facility

Dear Mr. VanZandt:

On June 17, 2005, a renewal application was submitted for the Tier I Operating Permit (T1-030415) for The Amalgamated Sugar Company LLC (TASCO), Twin Falls Facility. As requested by Shawnee Chen of IDEQ, TASCO submits the following updates for the Twin Falls facility renewal application. We request that the attached pages be placed in lieu of the attachments submitted in 2005. The following revised sections have been attached:

Section 3B – Production Data.

Section 3C – Emission Factors.

Section 3D – Emission Inventory Evaluation.

Section 3E – Hazardous Air Pollutant (HAPS) Evaluation.

Appendix E – List of Insignificant Activities.

Appendix F – Facility Stack Location Plan.

Appendix G – Emission Factor Documentation.

In addition, a compliance certification statement has been included with the attached revised permit renewal application sections.

If you have any questions, please feel free to contact Gary Lowe, Environmental Manager, or me at (208)733-4104.

Sincerely,

Gary Pool
Plant Manager
The Amalgamated Sugar Company LLC

Attachments: Revised Tier I Permit Renewal Sections &
Certification Statement

cc: Ms. Shawnee Chen (IDEQ)
Corporate Engineering, John McCreedy, Mike Skromyda – Boise Corporate
Gary Lowe, Environmental File – Twin Falls

DE/AFS/SF

THE AMALGAMATED SUGAR COMPANY LLC

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JUL 23 2007

DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A Q PROGRAM

July 17, 2007

Mr. Steve VanZandt
Air Quality Compliance Officer
Idaho Department of Environmental Quality (IDEQ)
Twin Falls Regional Office
1363 Fillmore Street
Twin Falls, ID 83301

RE: Tier I Operating Permit Renewal Application Updates – T1-030415
The Amalgamated Sugar Company LLC, Twin Falls Facility

Dear Mr. VanZandt:

The Amalgamated Sugar Company LLC (TASCO) recently notified the Department of new estimated VOC emission factors including methanol for the main mill vents and pulp dryers. Based on this data, TASCO provides the following updates to the Tier I Permit Renewal Application for the Twin Falls facility:

Section 3C – Emission Factors

Section 3D – Emission Inventory Evaluation

Section 3E – Hazardous Air Pollutant (HAP's) Evaluation

Appendix G – Emission Factor Documentation

Appendix K – HAP's Notification

In addition, a certification statement has been included with the attached revised permit renewal application sections.

If you have any questions, please feel free to contact Gary Lowe, Environmental Manager, or me at (208) 733-4104.

Sincerely,

Gary Pool
Plant Manager
The Amalgamated Sugar Company LLC

GP/dd/ss

Attachments: Revised Tier I Permit Renewal Sections & Certification Statement
Cc: IDEQ – Shawnee Chen
Boise – John McCreedy, Dean C. DeLorey, Corporate Engineering
Twin Falls – Gary Lowe, Environmental File

THE AMALGAMATED SUGAR COMPANY LLC

1951 S. SATURN WAY, SUITE 100 • BOISE, ID 83709
PHONE: (208) 383-6500 • FAX: (208) 383-6684

December 16, 2009

Morrie W. Lewis
Air Quality Analyst
Department of Environmental Quality
1410 North Hilton
Boise, ID 83706

Re: TASCO-Twin Falls, 083-00001
Tier I Renewal Application, T1-030415
CAM Justification and Supplemental Documentation

Dear Mr. Lewis:

During our meeting on November 12, 2009, we discussed supplemental information that you requested in order to facilitate drafting of the subject permit. Based on list from my meeting notes, here is our response to your request.

1. Permit Renewal Application Documents. The original application was dated June 17, 2005. The application was subsequently amended several times to provide additional details and document facility changes. Supplemental information was provided to DEQ on April 20, 2007 and on July 17, 2007. On November 12 you indicated the application had been misplaced, but subsequently you found the application documents. You inquired about electronic versions of the application. Although we have electronic documents, it will be difficult to provide them in usable form. They exist in various formats, none of which are in portable document file (PDF) format. However, if you need a specific form, we will be happy to provide or create a usable electronic version. Please let me know which.

2. Draft Permit Section 3. Please refer to the following attached documents.
   a. The DEQ CAM justification form for the Foster Wheeler Boiler. We are proposing a single CAM indicator which will be readings from the existing COMS. One concern this form highlights is the two opacity standards that apply to the Foster Wheeler Boiler. We request that only the standard under 40 CFR Part 60 applies to this source and the reference to the state opacity limit be deleted.
   b. The SOP and QA/QC plan for the Foster Wheeler Boiler CEMS are attached as one document.
   c. Foster Wheeler Boiler CEMS performance reports for the periods July 1, 2008 through December 31, 2008 and January 1, 2009 through June 30, 2009.
   d. Report of an engineering test for PM10 emissions conducted on September 26-27, 2006 in conjunction with a similar test on the B&W Boiler.

3. Draft Permit Section 4. Please refer to the following attached documents.
    a. The DEQ CAM justification form for the B&W Boiler. We are proposing a single CAM indicator which will be readings from a new COMS. The SOP and QA/QC plan for the new COMS is presently being written. It will be similar to the Foster Wheeler SOP and QA/QC plan. We will provide it to you when it is available.
    b. A copy of weekly visible emission records for the B&W Boiler for the years 2006 through 2009.
    c. Report of a performance test on the B&W Boiler on December 9, 2003 to demonstrate compliance with particulate matter emission limits. Also see the report of an engineering test for PM10 emissions conducted on September 28, 2006 in conjunction with a similar test on the Foster Wheeler Boiler cited in item 2d of this letter.

4. Draft Permit Section 6. Please refer to the following attached documents.
    a. The DEQ CAM justification form for the Pulp Dryer. We are proposing two indicators: scrubber water flow and scrubber pressure drop.
    b. To demonstrate compliance with particulate matter emission limits, TASCO conducted a performance test on the Pulp Dryer on November 9, 2005. A copy of the test report is attached.
    c. Copies of monthly dryer throughput/process weight calculations for beet campaigns 2007-08 and 2008-09.
    d. Copies of daily readings of pressure drop, flow, and water pressure for the pulp dryer scrubber for beet campaigns 2007-08 and 2008-09.
    e. Copies of visible emissions logs from weekly observations during beet campaigns 2007-08 and 2008-09.
    f. Copies of scrubber water quality data from weekly samples for beet campaigns 2007-08 and 2008-09. Although you asked for this data, please note that we are not proposing to use any scrubber water quality parameters as CAM indicator because scrubber water quality is not a valid indicator. We base our opinion not only upon experience with the Twin Falls scrubber, but also on a compliance test run at our Mini-Cassia facility during which scrubber water total solids were in the range of 120,000 mg/l.

5. Draft Permit Section 11. Attached is the notification dated April 20, 2007 to Steve VanZandt, DEQ, concerning the replacement of the scrubber control device of the cooling granulator with a bag house. A copy of this letter was also provided to Shawnee Chen.

6. Per your request on November 12, attached are copies of O&M manuals for all control devices. We understand DEQ intends to post these on the website with the public notice for the draft permit. We will provide electronic copies to facilitate posting. You will note that appendix materials are not included. If you need the complete O&M manuals including the appendices, please let me know.

7. During our meeting on November 12, you requested documentation regarding the wet basis used for Foster Wheeler Boiler CEMS calculation. Although we are not able to document the rationale for installing a wet basis system, the CEMS was installed when the boiler commenced operation in 1975. The DuPont analyzer was upgraded in 1993. To the best of our knowledge the CEMS has determined emissions on a wet basis since its inception. The primary reason is that the system lacks any means to remove moisture from the stack gases. We are uncertain why the dry basis formula was cited in the original Tier 1 permit, other than it appears to be standard language that allows either wet or dry basis. Because wet basis is allowed in the permit and the applicable rules of 40 CFR Part 60, it is appropriate to cite the wet basis formula in the permit.

On November 16, 2009 you provided an updated copy of the draft permit in which you addressed a number of our previous comments. We intend to review the current draft permit and provide additional feedback. As evidenced in this letter, one of our objectives 0is to minimize monitoring requirements. Monitoring parameters that add no value to the permit compliance process should be removed.

If you have any questions concerning this letter or attachments, please contact me.

Sincerely,

Robert L Braun

Robert L. Braun, P.E.
Corporate Environmental Engineering Manager

Attachments

cc: Dean DeLorey
Gary Pool
Gary Lowe

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DEC 17 2009
DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE AQ PROGRAM

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Compliance Assurance Monitoring - Form CAM

Revision 2
08/28/08

Please see instructions on pages 3-8 before filling out the form.

IDENTIFICATION

1. Company Name:	The Amalgamated Sugar Company LLC	2. Facility Name:	Twin Falls	3. Facility ID No.:	083-00001
4. Brief Project Description:	Renewal of Tier I Operating Permit				

MONITORING APPROACH SUBMITTAL

Background

5. Emissions Unit	Description (type of emission point): Foster Wheeler Boiler	Identification (emission point number): P-B1
6. Applicable Regulation, Emission Limits, and Monitoring Requirements	Applicable regulation citation: Opacity: 40 CFR 60.42(a)(2) & IDAPA 58.01.01.677 Particulate Matter: 40 CFR 60.42(a)(1) and IDAPA 58.01.01.667	Pollutant: Opacity Emission limit: 20%, except for 27% or less for one 6-minute period per hour Pollutant: Opacity Emission limit: 20% for no more than 3 minutes in any 60-minute period Pollutant: Particulate Matter Emission limit: 0.1 lb/MMBtu and 0.100 gr/dscf at 8% O2
		Monitoring requirements: Current monitoring requirements include a continuous opacity monitoring system (COMS) per 40 CFR Part 60. Also continuous monitoring of pressure drop across the baghouse.
7. Control Technology	Brief description: Fabric Filter Baghouse	

Table 1. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Description Measurement Approach	Continuous opacity monitoring system (COMS), as required under NSPS rule 40 CFR 60 Subpart D. The monitorin instrument is model USI 500C manufactured by United Sciences.		
	The COMS consists of a transmissometer and reflector. Opacity data from the sensor in percent is gauged via a 4-20 mA signal to a digital display in on the boiler control panel. Opacity data is logged in a local computer and also in the plant data historian.		
II. Indicator Range (Quality improvement plan threshold optional)	Excursion: >15% Opacity; an excursion will trigger an inspection, corrective action, and documentation.		
III. Performance Criteria	———	———	———
A. Data Representativeness	The COMS sensor is located in the exhaust duct of the baghouse. Location and installation of the monitoring device meets the		

	requirements of and has been qualified according to 40 CFR 60.13 and 40 CFR Part 60 Appendix B Performance Specification 1.		
B. Verification of Operational Status	Operational status is assured through procedures established in the Standard Operation Procedure (SOP) and Quality Assurance Plan (QAP) for the Foster Wheeler CEMS. This procedure and plan have been established pursuant to the manufacturer's installation, calibration, and operating recommendations for the instrument.		
C. QA/QC Practices and Criteria	QA/QC practices are outlined in the QAP for the Foster Wheeler CEM.		
D. Monitoring Frequency	During boiler operation the sensor takes an opacity reading every 10 seconds and has a 10 second duriation.		
Data Collection Procedures	All 10-second opacity readings from the sensor are collected and processed by the electronic data logger. Each day a 24 hour record of opacity readings is printed and retained with boiler operation records.		
Averaging Period	All 10-second readings are averaged by the data logger over six-minute periods which are reported on the visual disply of the boiler control room and recorded by the data logger. A current six-minute average percent opacity is also recorded manually on the Boiler House Log Sheet.		

Justification	Present justification for selection of monitoring approach(es) and indicator range(s): Justification for Indicator 1: The COMS has been established under 40 CFR Part 60 as an accepted means for monitoring compliance with applicable opacity permit limits. The COMS was installed on the Foster Wheeler Boiler in 1976. Performance of the COMS against applicable requirements including emission limits and operational reliability is documented semi-annually in excess emissions and monitoring systems performance reports prepared with reference to 40 CFR 60 (c) and (d). With regard to particulate matter, the existing COMS will also be used as a compliance indicator for grain loading. The most recent engineering test of particulate matter emissions from the Foster Wheeler Boiler was conducted on September 26-27, 2006. During this test the average filterable (front half) emissions of particulate matter was determined to be 0.0015 gr/dscf. The maximum was 0.0019 gr/dscf and the minimum was 0.0010 gr/dscf. During the testing opacity readings by the COMS averaged 4.4% with a maximum of 4.6% and minimum of 4.3%. This test indicates a correlation between grain loading and opacity and is reflective good operational controls. Considering that both the grain loading and opacity were below the applicable permit limits, the excursion level of 15% opacity is reasonable. Based upon extensive operational experience with the Foster Wheeler Boiler, its baghouse and the COMS, a single CAM indicator is sufficient for purposes of compliance with 40 CFR Part 64. Justification for Indicator 2: Justification for Indicator 3:

DEQ AIR QUALITY PROGRAM
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Compliance Assurance Monitoring - Form CAM

Revision 2
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Please see instructions on pages 3-8 before filling out the form.

IDENTIFICATION

1. Company Name:	The Amalgamated Sugar Company LLC	2. Facility Name:	Twin Falls	3. Facility ID No.:	083-00001
4. Brief Project Description:	Renewal of Tier I Operating Permit				

MONITORING APPROACH SUBMITTAL

Background

5. Emissions Unit	Description (type of emission point): B&W Boiler	Identification (emission point number): P-B2
6. Applicable Regulation, Emission Limits, and Monitoring Requirements	Applicable regulation citation: Opacity: 40 CFR 60.42(a)(2) & IDAPA 58.01.01.677 Particulate Matter: 40 CFR 60.42(a)(1) and IDAPA 58.01.01.667	Pollutant: Opacity Emission limit: 20% for no more than 3 minutes in any 60-minute period Pollutant: Particulate Matter Emission limit: When firing on coal only: 0.100 gr/dscf at 8% O2; when firing on coal and natural gas: 0.100 * X + 0.011 * Y gr/dscf at 8% O2; when firing on natural gas only: 0.015 gr/dscf at 3% O2. Pollutant: Emission limit:
		Monitoring requirements: Current monitoring requirements include weekly visible emissions observations when firing coal or a combination of coal and natural gas: also continuous measurement of pressure drop across the baghouse.
7. Control Technology	Brief description: Fabric Filter Baghouse	

Table 1. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Description Measurement Approach	Continuous opacity monitoring system (COMS), consistent with 40 CFR 60 Subpart D. The monitoring instrument is Model 4500 MkIII manufactured by Land, a subsidiary of AMETEK Co. The monitor meets the specifications in 40 CFR Part 60, Appendix B, Performance Specifications 1 and 11.		
	The instrument consists of an LED light source and a glass multi-prism retro-reflector. Opacity data from the sensor in percent is gauged via a 4-20 mA signal to a digital display in on the boiler control panel. Opacity data is logged in a local computer and also in the plant data historian.		
II. Indicator Range (Quality improvement plan threshold optional)	Excursion: >15% Opacity; an excursion will trigger an inspection, corrective action, and documentation.		
III. Performance Criteria	——	——	——

A. Data Representativeness	The COMS sensor is located in the exhaust duct of the baghouse. Location and installation of the monitoring device meets the requirements of and has been qualified according to procedures agreed between IDEQ and TASCO.		
B. Verification of Operational Status	Operational status is assured through procedures established in the standard operating procedure (SOP) and quality assurance plan (QAP) for the B&W Boiler COMS. This procedure and plan have been established pursuant to the manufacturer's installation, calibration, and operating recommendations for the instrument.		
C. QA/QC Practices and Criteria	QA/QC practices are outlined in the B&W Boiler QAP as recommended by the manufacturer.		
D. Monitoring Frequency	The response time of the sensor is ≤ 10 seconds to 95%.		
Data Collection Procedures	All 10-second opacity readings from the sensor are collected and processed by the electronic data logger.		
Averaging Period	All 10-second readings are averaged by the data logger over six-minute periods which are reported on the visual disply of the boiler control panel and recorded by the data logger. On an hourly frequency the current average percent opacity is recorded manually on the Boiler House Log Sheet.		

Justification	Present justification for selection of monitoring approach(es) and indicator range(s): Justification for Indicator 1: Until present emissions from the B&W Boiler and baghouse have been documented with periodic VE observations along with pressure drop of the baghouse. This monitoring has been supplemented with periodic performance tests. However, TASCO is of the opinion that an improved monitoring system will facilitate ongoing compliance and documentation thereof. Although the B&W Boiler is not subject to NSPS rules of 40 CFR Part 60, COMS has been established under the rule as an accepted means for monitoring compliance with applicable opacity permit limits. The COMS will be installed on the B&W Boiler within 180 days of permit issuance. Performance of the COMS will be documented annually in a report similar to the excess emissions and monitoring systems performance reports prepared with reference to 40 CFR 60 (c) and (d). With regard to particulate matter, the new COMS can be used as a compliance indicator for grain loading. The most recent engineering test of particulate matter emissions from the B&W Boiler was conducted on September 28, 2006. During this test the average filterable (front half) emissions of particulate matter was determined to be 0.0031 gr/dscf. The maximum was 0.0041 gr/dscf and the minimum was 0.0017 gr/dscf. During the PM testing VE readings were taken by a qualified technician. The VE readings averaged 2.5% with a range from 0% to 5%. Based upon extensive operational experience with other boilers including the Foster Wheeler Boiler and its COMS, a single CAM indicator is sufficient for the B&W Boiler for purposes of complying with 40 CFR Part 64. The COMS will not be used to determine compliance of B&W emissions with permit-specified opacity or grain loading limits. Weekly visible emission inspections will be conducted to determine compliance with the opacity limts. Compliance with PM limits will be determined with periodic performance tests.

DEQ AIR QUALITY PROGRAM
1410 N. Hilton, Boise, ID 83706
For assistance, call the
Air Permit Hotline – 1-877-5PERMIT

Compliance Assurance Monitoring - **Form CAM**
Revision 2
08/28/08

Please see instructions on pages 3-8 before filling out the form.

IDENTIFICATION

1. Company Name:	The Amalgamated Sugar Company LLC	2. Facility Name:	Twin Falls	3. Facility ID No.:	083-00001
4. Brief Project Description:	Renewal of Tier I Operating Permit				

MONITORING APPROACH SUBMITTAL

Background

5. Emissions Unit	Description (type of emission point): Pulp Dryer	Identification (emission point number): North Stack (P-D1A) & South Stack (P-D1B)
6. Applicable Regulation, Emission Limits, and Monitoring Requirements	Applicable regulation citation: Opacity–IDAPA 58.01.01.625 and Process Weight–IDAPA 58.01.01.703	Pollutant: Opacity Emission limit: 20% for no more than 3 of 60 minutes Pollutant: PM Emission limit: Process Weight Emission Formula Pollutant: Emission limit:
		Monitoring requirements: Current monitoring requirements include weekly VE, weekly recording of data from continuous monitoring of scrubber water flow rate, pressure drop across scrubber, and water pressure on spray nozzles; and monthly samples and analysis of scrubber water for TSS and TDS.
7. Control Technology	Brief description: The pulp dryer has two emission points. Each emission point is equipped with a cyclone and a spray impingment-type scrubber to control emissions.	

Table 1. Monitoring Approach

	Indicator No. 1	Indicator No. 2	Indicator No. 3
I. Indicator Description	Scrubber Water Flow	Scrubber Pressure Drop	
Measurement Approach	In-line magnetic meters measure water flow in gallons per minute.	Differential pressure reading of magnahelic gauges located at the inlet and outlet of each scrubber.	
II. Indicator Range (Quality improvement plan threshold optional)	North: 100-500 gpm South: 100-500 gpm	North: 2 to 6 inches South: 2 to 6 inches	
III. Performance Criteria	———	———	———
A. Data Representativeness	Water flow mag meters are physically located on the pipeline between the scrubber water pumps and the two scrubbers. Flow rate in each pump systems is registered on a display. The display is read periodically by an operator.	Magnahelic pressure gauges are connected by tubes to ports on the walls of the scrubbers at the dryer exhaust inlet and outlet. The differential pressure between readings of the inlet and outlet is registered on the gauges that is read periodically by an operator.	
B. Verification of Operational Status	The mag meters were installed in accordance with manufacturer's recommendations and have been operational since 1999. Operational data has been collected since installation. These	The pressure gauges were installed in accordance with manufacturer's recommendations and have been operational since 1996. Operational data has been	

	mag meters are commonly used and have a history of reliable operation.	collected since installation. The pressure gauges are commonly used in and have a history of reliable operation.	
C. QA/QC Practices and Criteria	The flow meters are removed, cleaned, and inspected annually. Operation is checked during the test-out before the beet run.	The pressure gauges are inspected annually and checked against a calibration manometer.	
D. Monitoring Frequency	Daily	Daily	
Data Collection Procedures	The mag meters provide continuous data on scrubber water flow rates which is monitored and recorded by operators on a daily basis.	Data from the differential pressure gauges is collected continuously. Operators monitor and record the pressure differential on a daily basis.	
Averaging Period	Readings from the mag meters are recorded hourly by operators and hourly readings are averaged for the daily report.	Readings from the pressure gauges are recorded hourly by operators and hourly readings are averaged for the daily report.	

Justification	Present justification for selection of monitoring approach(es) and indicator range(s): Justification for Indicator 1: While the pulp dryer was operating during the 2008-09 campaign (Oct-Feb) water scrubber flow data was recorded daily. North scrubber flows during 2008-09 ranged from 223 to 487 gpm with an average flow of 362 gpm and standard deviation of 44 gpm. South scrubber flows during 2008-09 ranged from 160 to 496 gpm with average flow of 382 gpm and standard deviation of 62 gpm. From daily records for the 2007-08 campaign (Sep-Mar) north scrubber flows ranged from 361 to 490 gpm with an average flow of 440 gpm and standard deviation of 35 gpm. South scrubber flows during 2007-08 ranged from 226 to 522 gpm with an average flow of 416 gpm and standard deviation of 58 gpm. During the 2008-09 campaign TASCO gathered monthly data and calculated the process weight emission limit. The values for 5 months ranged from 44.3 to 44.8 tons per hour with an average of 44.5 tph. During the 2007-08 campaign the process weight values over 7 months ranged form 44.4 to 45.9 tph with an average of 45.1 tph. Process weight data indicates consistent dryer operations over the campaign. With regard to visible emissions, the facility log of weekly observations during the 2008-09 campaign indicated 7 "no see" observations. There were 21 "see" observations all of which triggered an opacity reading. All 21 readings were below the 20% limit. The log of weekly VE observations during the 2007-08 campaign documented 7 "no see" observations. There were 21 "see" observations that resulted in opacity readings. All but one of these readings were below the 20% limit. The one reading over 20% was attributed to a drum fire which triggered a shutdown. On November 9, 2005 TASCO conducted a performance source test of the pulp dryer. Both stacks were sampled simultaneously. During the test water flow to the north scrubber ranged from 495 to 508 gpm with an average flow of 502 gpm. South scrubber water flow ranged from 449 to 491 gpm with an average flow of 467 gpm. Dryer process weight emissions limits calculated process input parameters ranged from 44.8 to 45.3 tph with an average rate of 45.1 tph. The combined average filterable PM emissions measured during the test averaged 12.8 pph or about 28% of the process weight limit. The average opacity from VE observations during the source test was 4%. Results of this test were accepted by DEQ. Although the compliance test did not cover the full indicator range, operational data during the 2008-09 and 2007-08 campaigns covered a wider range of scrubber water flow with no indication that emissions, in particular opacity, exceeded permit limits. Based upon extensive operational experience with the pulp dryer and control device, TASCO has determined the scrubber performs effectively within the proposed indicator range. Justification for Indicator 2: While the pulp dryer was operating during the 2008-09 campaign, the pressure drop across the scrubber was recorded daily. Pressure drop across the north scrubber ranged from 2.4 to 4.0 inches with an average of 3.3 inches and standard deviation of 0.3 inches. Pressure drop across the south scrubber ranged from 2.5 to 4.0 inches with an average of 3.2 inches and standard deviation of 0.3 inches. See above discussion regarding correlation to process weight calculations and VE inspections. From daily records for the 2007-08 campaign north scrubber pressure drop ranged from 1.8 to 3.6 inches with an average of 3.1 inches and standard deviation of 0.2 inches. South scrubber pressure drop during 2007-08 ranged from 1.8 to 3.6 inches with an average of 3.1 inches and standard deviation of 0.2 inches. The above discussion regarding process weight calculations and VE inspections supports the validity of the pressure drop indicator and range. During the above-cited compliance test, pressure drop across the scrubber was recorded with operational data. During the test the pressure drop across the North Scrubber ranged from 4.1 to 4.4 inches with an

	average of 4.3 inches. The pressure drop across the South Scrubber ranged from 4.2 to 4.4 inches with an average of 4.3 inches. During the test both PM and opacity were measured below permit limits, indicating the scrubber was functioning correctly. The above cited data for process weight and visible emissions indicate normal dryer operations with reference to Although the compliance test did not cover the full indicator range, operational data from the 2008-09 and 2007-08 campaigns covered a wider range of scrubber pressure differential with no indication that emissions, in particular opacity, exceeded permit limits. Based upon extensive operational experience with the pulp dryer and control device, TASCO has determined the scrubber will perform effectively within the proposed indicator range. Justification for Indicator 3:

Title V Air Operating Permit
Renewal Application Information **Answer Sheet**

Facility name: The Amalgamated Sugar Company LLC, Twin Falls Facility Permit Number: T1-030415

1.	Contact Person:	Name	Gary Pool
		Title	Plant Manager
		Phone number	(208)733-4104
		e-mail address	gpool@amalsugar.com
		Fax number	(208)735-5432
2.	Permit cover page changes:		Yes (Attachment 1, Section 1A)
3.	Were there any off-permit changes?		No
	If yes, integrate changes into renewal permit? [if no, explain]		NA
	Process information:	Production	Maximum hourly production: 95,000 lbs sugar/hour
		Fuel usage	Boilers: **Foster Wheeler Boiler:** Maximum coal usage: 13 tons/hr. Maximum steam production 220,000 lbs/hr. **B&W Boiler:** Maximum coal usage: 14 tons/hr. Maximum Natural gas usage: 0.28MMcf/hour Maximum steam production 200,000 lbs/hr. **Keeler Boiler:** Maximum Natural gas usage 0.10 MMcf/hour. Maximum steam production: 80,000 lbs/hr **Pulp Dryer:** Maximum coal usage: 4.8 tons per hour Maximum Natural gas usage: 0.12 MMcf/hour **North Lime Kiln:** Maximum Coke usage: 22 tons per day. **South Lime Kiln:** Maximum Coke usage: 8.2 tons per day.
		Raw material usage	Maximum beet slice capacity: 7,800 tons/day
5.	Operating schedule	hours/day	24 hours/day
		days/week	7 days/week
		weeks/year	52 weeks/year
		Seasonal months	Beet Campaign: September-March Juice/Extract Campaign: March - September Separator: January-December. (Section 1C)
6.	Number of employees		200-600
7.	Will there be any changes to the operating scenario(s)? [if yes, describe and attach form AP103]		No
8.	Will there be any new, modified, or reconstructed stationary sources or air pollution control equipment? [if yes, attach appropriate form(s)]		No

8.	Will there be any new, modified, or reconstructed stationary sources or air pollution control equipment? [if yes, attach appropriate form(s)]	No
9.	Are the current emissions units correctly identified and defined in the permit? [if no, provide necessary revisions]	Yes
10.	Does the CAM rule apply to any of the emissions units? [if yes, list the pollutant-specific emissions units that the rules apply to and attach form CP709]	Yes. See Attachment 2
11.	Does the accidental release prevention regulation apply to the facility? [if yes, list the regulated substances present in processes at the facility and identify the applicable program]	No
12.	Are there any other new applicable requirements? [if yes, list the new applicable requirements, emissions units, and attach a series CP700 form that describes the proposed monitoring]	No
13.	Is the source in compliance with all of the conditions of the current permit? [if no, attach a compliance schedule]	Yes. Section 5A, (2005 IDEQ Annual Air Inspection.)
14.	Are there any requested changes to testing conditions? [if yes, identify the condition, the requested change, and the reason]	No.
15.	Are there any requested changes to monitoring conditions other than those being replaced by CAM? [if yes, identify the condition, the requested change, and the reason]	Yes, See Section 5D.
16.	Are there any requested changes to recordkeeping conditions? [if yes, identify the condition, the requested change, and the reason]	Yes, see Section 5D.
17.	Are there any requested changes to reporting conditions? [if yes, identify the condition, the requested change, and the reason]	No
18.	Are there any requested changes to the non-applicable requirements? [if yes, identify the condition, the requested change, and the reason]	No

Statement of Certification:

Based on information and belief formed after reasonable inquiry, the statements and information in this document and any attachments are true, accurate and complete. I also certify that all statements made concerning compliance, which are based on monitoring required by the permit but not required to be submitted to the Department, are true, accurate and complete based on information and belief formed after reasonable inquiry

Gary Pool
Name of Responsible Official

Plant Manager
Title of Responsible Official

Gary Pool
Signature of Responsible Official

6/16/05
Date

SECTION 1C
General Facility Description
(IDAPA 58.01.01 Rule 314.02)

PROCESS DESCRIPTION

Figures 1C-1 and 1C-2 are flow diagrams for a typical sugar beet processing plant. Figure 1C-1 shows the preprocessing operations and the livestock feed production operations, and Figure 1C-2 shows the beet sugar production operations. Mechanically harvested sugar beets are shipped to piling grounds at or near the facility. At the piling grounds the beets are cleaned using beet pilers which remove loose dirt by passing the beets over screens. The pilers then stack the beets onto storage piles. Beets are shipped from off-site storage piling grounds to the facility using trucks or rail cars. Beets are dumped by rail cars, trucks, or front end loaders into wet hoppers which need a flume. The flume uses water to both move and clean the beets. The flume system carries the beets to the beet feeder, which regulates the flow of beets through the system and prevents stoppages in the system. From the feeder, the flume system carries the beets through several cleaning devices, which include rock catchers, sand separators, water spray nozzles, and trash catchers. After cleaning, the beets are separated from the water, with a beet wheel, and are transported by chain and bucket elevator to the processing operations.

Sugar beet processing operations are comprised of several steps, including diffusion, juice purification, evaporation, crystallization, dried pulp manufacture, and sugar recovery from molasses. Descriptions of these operations are presented in the following paragraphs.

Prior to removal of the sucrose from the beet by diffusion, the cleaned and washed beets are sliced into long, thin strips, called cossettes. The cossettes are conveyed to a continuous diffuser, in which hot water is used to extract sucrose from the cossettes. The diffuser is vertical and conveys the cossettes up as water is introduced at the top of the diffuser and flows countercurrent to the cossettes. The water temperature in the diffuser is typically maintained between 50° and 80°C (122° and 176°F). This temperature is dependant on several factors, including the denaturation temperature of the cossettes, the thermal behavior of the beet cell wall, potential enzymatic reactions, bacterial activity, and pressability of the beet pulp. Disinfectants are sometimes added to the diffuser, such as ammonium biosulfite. The sugar-enriched water that flows from the outlet of the diffuser is called raw juice and contains between 13 to 18 percent sugar. This raw juice proceeds to the juice purification operations. The processed cossettes (pulp) leaving the diffuser are conveyed to the dried pulp manufacturing operation.

In the juice purification stage, non-sucrose impurities in the raw juice are removed so that the pure sucrose can be crystallized. First, the juice passes through screens to remove any small cossette particles. Then the mixture is heated to 80° to 85°C (176° and 185°F) and proceeds to the liming system. In the liming system tank, milk of lime [$Ca(OH)_2$] is added to the mixture to adsorb or adhere to the impurities in the mixture. The juice is then sent to the first carbonation tank where carbon dioxide (CO_2) gas is bubbled through the mixture to precipitate the lime as insoluble calcium crystals. Lime kilns are used to produce the CO_2 and lime used in carbonation; the lime is converted to milk of lime in a lime slaker. The small, insoluble crystals (produced during carbonation) settle out in a clarifier, after which the juice is again treated with CO_2 (in the second carbonation tank) to remove the remaining lime and impurities. In 2002, a Dry Lime Handling System (DLH) was installed to handle the spent lime from the process. This groundwater improvement project was done as a part of TASCO's Waste Water Land Application program,

The pH of the juice is lower during this second carbonation, causing large, easily filterable, calcium carbonate crystals to form. After filtration, the juice is softened. Then, a small amount of sulfur dioxide (SO_2) is added to the juice to inhibit reactions that lead to darkening of the juice. At the TASCO Twin Falls Facility, The SO_2 is produced by burning elemental sulfur in a sulfur stove. Liquid sulfur dioxide may also be utilized for this decolorisation step. Following the addition of SO_2, the juice (known as thin juice) proceeds to the evaporators.

The evaporation process, which increases the sucrose concentration in the juice by removing water, is performed in a series of five evaporators. Steam from large boilers is used to heat the first evaporator, and the steam from the water evaporated in the first evaporator is used to heat the second evaporator. This transfer of heat continues through the five evaporators, and as the temperature decreases (due to heat loss) from evaporator to evaporator, the pressure inside each evaporator is also decreased, allowing the juice to boil at the lower temperatures provided in each subsequent evaporator. Some steam is released from the first three evaporators, and this steam is used as a heat source for various process heaters throughout the plant. After evaporation, the percentage of sucrose in the "thick juice" is 65-75 percent. Some of this "thick juice" is sent to storage tanks. Most of the "thick juice" is combined with crystalline sugars, produced later in the process, and dissolved in the high melter. This mixture is then filtered, yielding a clear liquid known as standard liquor, which proceeds to the crystallization operation.

Sugar is crystallized by low-temperature pan boiling. The standard liquor is boiled in vacuum pans until it becomes supersaturated. To begin crystal formation, the liquor is "seeded" with finely milled sugar. The seed crystals are carefully grown through control of the vacuum, temperature, feed liquor additions, and steam. When the crystals reach the desired size, the mixture of liquor and crystals, known as massecuite or fillmass, is discharged to the mixer. From the mixer, the massecuite is poured into high-speed centrifugals, in which the liquid is centrifuged into the outer shell, and the crystals are left in the inner centrifugal basket. The sugar crystals are then washed with pure hot water and are sent to the granulator, which is a rotary drum dryer, and then to the cooler. The wash water, which contains a small quantity of sucrose, is pumped to the vacuum pans for processing. After cooling, the sugar is screened and then either packaged or stored in large silos for future packaging.

The liquid that was separated from the sugar crystals in the centrifugals is called syrup. This syrup serves as feed liquor for the "second boiling" and is introduced back into a second set of vacuum pans. The crystallization/centrifugation process is repeated once again, resulting in the production of molasses. (For simplification, the second and third boiling steps are not shown on the drawing.)

The molasses produced in the third boiling step can be used in the production of livestock feed. This molasses can also be further desugarized using the separator process. The products of the separator process are "extract" (the high sugar fraction) and "CSB - concentrated separator by-product (the low sugar fraction)". The extract can be stored in tanks or immediately processed in the sugar end, like thick juice. The CSB is used as livestock feed in either a liquid form or added to pulp.

Wet pulp from the diffusion process is another product of sugar beet processing. Some of the wet pulp is sold as cattle feed directly. However, most of the wet pulp is pressed to reduce the moisture content from about 95 percent to about 75 percent. The water removed by the presses is collected and used as diffusion water. After pressing, the pulp may be sold as cattle feed or

sent to the dryer. Before entering the dryer, CSB or molasses is added to the pressed pulp. The pressed pulp is then dried by hot air in a horizontal rotating drum known as a pulp dryer. The pulp dryer can be fired by natural gas or coal. As the pulp is dried, the gas temperature decreases and the pulp temperature increases. A portion of the product is typically pelletized and is sold as livestock feed. The remainder of the dried pulp is sold as livestock feed in an unpelletized form.

FACILITY DESCRIPTION AND EMISSION SOURCES

For the purpose of this permit application, the facility has been divided into five process areas which are described below:

Boiler House (B). The Boiler House consists of two coal-fired boilers that provide steam for sugar production processes in the main mill, pulp drying, and electricity production. The boilers consist of a Foster Wheeler (S-B1) coal fired boiler and a B&W boiler (S-B2) dual fueled (coal and/or natural gas) boiler. Emissions from each boiler are controlled by baghouses. Additionally, the Boiler House includes a backup boiler (Keeler boiler, S-B3) that is natural gas-fired.

Pulp Drying and Pelletizing (D). Pulp Drying consists of one direct fired pulp dryer (S-D1) that is used to dry pressed beet pulp and produce cattle feed. The pulp drying operation also includes pulp presses, pellet mills, two pellet coolers, dry pulp and pellet storage and handling, and coal handling. The two pellet coolers' emissions are controlled via a cyclone. Product that could be lost during the dry pulp and pellet handling process is collected in a baghouse and added to the livestock feed. The dryer is primarily coal-fired, although it can also be fired by natural gas. The pulp dryer emission control system consists of two cyclones and two impingement-type scrubbers. The exhaust gases from the pulp dryer are divided into two streams. Each stream passes through a cyclone, followed by a scrubber. In addition, the pulp dryer recirculates a portion of the exhaust for the cyclones back to the furnace.

Lime Kiln and CO_2 Production (K). The Lime Kiln Building consists of two lime kilns that convert lime rock into calcium oxide (CaO) rocks; a crusher to reduce the CaO rocks in size; two slakers to produce milk of lime ($Ca(OH)_2$) from the crushed CaO and water; and handling of coke, lime rock, and CaO. The lime kiln exhaust is used as a source of carbon dioxide in the first and second carbonation tanks that are part of the sugar production process in the main mill. Lime kiln exhausts that bypass the carbonation tanks are controlled with a scrubber. The crusher and various emission points from coke and CaO handling are controlled with two baghouses. Emissions from the process slaker are controlled with a cyclone.

Sugar Warehouse and Shipping (W). The warehouse/shipping area contains seven sugar silos; sugar classification units; metal detectors; rail car loading and unloading areas; and bulk loading scales. These points are controlled with baghouses and a housekeeping vacuum also utilizes a baghouse. Emissions from the cooling and drying granulators are controlled with scrubbers. The product collected in the scrubbers is returned to the sugar production process.

Other Sources (O). Other sources include coal, lime rock, and beet storage piles and their associated on-site vehicular traffic. Process ponds, traffic, and construction are placed in this section. The sulfur stove and tower are also identified here. Additionally, all auxiliary vents from the main factory flow process are lumped together in this category.

Note: The letter identified for each process area is utilized in a numbering system that is described in Appendix B (1995 Application).

OPERATING SCENARIO DESCRIPTION

1. Hours/Day — Up to 24 hours per day.
2. Days/Week — Up to 7 days per week.
3. Weeks/Year — Up to 52 weeks per year.
4. Seasonal Variation: The TASCO Twin Falls facility operates year around. The operations consist of the following campaigns:
   a. Beet Processing Campaign
   b. Juice Processing Campaign
   c. Extract Processing Campaign
   d. Separator Only Campaign

The length of the individual campaigns will vary, depending upon crop size and processing characteristics of the material being processed.

Section 3
Emission Data
(IDAPA 58.01.01 Rule 314.05)

Section 3 identifies and quantifies all emissions of pollutants for which the source is major and all emissions of regulated air pollutants, including Hazardous Air Pollutants (HAPs). This section, which meets the requirements of IDAPA 58.01.01 Rule 314.05, is divided into five parts entitled Emissions Unit Data (Section 3A), Production Data (Section 3B), Emission Factors (Section 3C), Emissions (Section 3D), and Hazardous Air Pollutants (Section 3E).

Section 3A provides general information for each emissions unit, pollution abatement device, and emissions point. Emissions point information, including stack location and exit height, is provided in Appendix F. Section 3B provides production rates, raw materials, products, and fuels that are needed to calculate emissions. Productions rates are provided based upon the maximum physical capacity of each emission unit or process and projected future operation of the facility.

Emission factors used to calculate PM, PM10, SO2, NOx, VOC, and HAP emissions are provided in Section 3C. Emission factor calculations and documentation are provided in Appendix G. Where necessary, emission factors included have been updated based upon best available information. Section 3D provides estimated short-term and long-term emissions. Hourly and/or daily emissions are calculated by multiplying estimated maximum production data in Section 3B by the emission factors in Section 3C that are based on regulatory limits or the worst case-emissions scenario. For pollutants that do not have regulatory limits, short-term emissions are based on estimated emission factors. Long-term emissions provided in Section 3D are calculated based on the estimated maximum production data in Section 3B and estimated emission factors in Section 3C. Section 3E provides long term HAP emission data.

EMISSION UNIT DATA - BOILER HOUSE

EMISSION SOURCE

Identification Number:	**S-B1**
Description:	Foster Wheeler Boiler
Manufacturer:	Foster Wheeler Co.
Make/Model:	Unknown
Date Installed/Modified:	1973
Burner Type:	Spreader Stoker
Burner Type Code:	01
Used for Process:	100 %
Used for Space Heat:	0 %
Fuel Type:	Coal
Fuel Code:	10
Percent Oxygen:	11.6 - 12.0
Percent Nitrogen:	1.0 - 2.0
Percent Hydrogen:	3.5-4.0
Percent Sulfur:	<0.4 - 1.0
Percent Ash:	5.0 - 10.0
Percent Carbon:	55.5 - 56.0
Percent Moisture:	18.0 - 23.0
Heat Content (Btu/unit):	9,500 - 14,000 Btu/lb Avg 11,750
Emission Train:	S-B1-----><A-B1-----> P-B1

Identification Number:	**S-B2**
Description:	Babcock and Wilcox Boiler
Manufacturer:	Babcock and Wilcox Co.
Make/Model:	Unknown
Date Installed/Modified:	Pre 1970
Burner Type:	Dry Bottom (Pulverized Coal)
Burner Type Code:	06
Used for Process:	100 %
Used for Space Heat:	0 %
Fuel Type:	Coal
Fuel Code:	10
Percent Oxygen:	11.6 - 12.0
Percent Nitrogen:	1.0 - 2.0
Percent Hydrogen:	3.5-4.0
Percent Sulfur:	0.4 - 1.0
Percent Ash:	5.0 - 10.0
Percent Carbon:	55.5 - 56.0
Percent Moisture:	18.0 - 23.0
Heat Content (Btu/unit):	9,500 - 14,000 Btu/lb 11,750 Btu/lb
Emission Train:	S-B2-----><A-B2-----> P-B2

Natural Gas
01
1,000 Btu/cu ft

Identification Number:	S-B3
Manufacturer:	Keeler Co.
Make/Model:	Unknown
Date Installed/Modified:	1968
Burner Type Code:	09
Used for Process:	100 %
Used for Space Heat:	0 %
Fuel Type:	Natural Gas
Fuel Code:	01
Heat Content (Btu/unit):	1,000 Btu/cu ft
Emission Train:	S-B3-----> P-B3

EMISSION SOURCE

Identification Number:	**F-B4**
Description:	Railcar Unloading
Date Installed/Modified:	Pre 1970
Material Description:	Coal
Emission Train:	Fugitive

POLLUTION CONTROL EQUIPMENT

Identification Number:	A-B1	A-B2B
Description:	Baghouse	Baghouse
Quantity:	1	1
Type:	Fabric filter>250 deg F	Fabric filter>250 deg F
Type Code:	016	016
Manufacturer:	Joy Western Company	Joy Western Company
Make/Model:	Unknown	Unknown
Pressure Drop (in. H2O):	1.0 - 10.0	1.0 - 10.0
Wet Scrubber Flow (gpm):	NA	NA
Baghouse Air/Cloth Ratio (fpm):	1.8	2.2

STACK DATA

Identification Number:	P-B1	P-B2	P-B3
Type:	Vertical, uncovered	Vertical, uncovered	Vertical, uncovered
Type Code:	02	02	02
Ground Elev. (ft):	3808	3808	3808
Coordinates (km):	-087-025	-000-000	-035-010
Exit Height (m):	+048	+066	+015
Exit Diameter (ft):	6.6	9	4
Exit Gas Flow Rate (acfm):	80,000 - 90,000	90,000 - 100,000	Unknown
Exit Temperature (deg. F):	280-290	300-310	Unknown

SECTION 3A. EMISSION UNIT DATA - LIME KILN AND CO2 PRODUCTION

EMISSION SOURCE

Identification Number: S-K1
Description: South Belgian Lime Kiln
Manufacturer: SS Burke & Co.
Make/Model: Unknown
Date Installed/Modified: Pre 1970
Process Streams:
Input: Lime Rock ~~CaOH~~ $CaCO_3$
Coke
Output: Calcium Oxide (CaO)
Carbon Dioxide (CO2)
Emission Train: S-K1----->A-K1----->A-K1/2A---->P-K1/2A, P-K1/2B, P-K1/2C
S-K1----->A-K1/2----->P-K1/2D
Scrubber

Identification Number: S-K2
Description: North Belgian Lime Kiln
Manufacturer: Larrowe Construction
Make/Model: Unknown
Date Installed/Modified: Pre 1970
Process Streams:
Input: Lime Rock
Coke
Output: Calcium Oxide (CaO)
Carbon Dioxide (CO2)
Emission Train: S-K2----->A-K2---->A-K1/2A----->P-K1/2A, P-K1/2B, P-K1/2C
S-K2----->A-K1/2----->P-K1/2D
Scrubber

EMISSION SOURCE

Identification Number:	**S-K4**
Description:	Process Slaker
Manufacturer:	Yanke
Make/Model:	Unknown
Date Installed/Modified:	1988
Process Streams:	
Input:	Water
Output:	Milk of Lime
Emission Train:	S-K4----->A-K4---->P-K4

Identification Number:	**S-K5**
Description:	Lime Kiln Material Handling
Date Installed/Modified:	Pre 1970
Material Description:	Coke Feed (Scale)
	Lime Rock
	Crushed Calcium Oxide (CaO)
	Pebble Calcium Oxide (CaO)
Emission Train:	S-K5----->A-K5A----->P-K5A
	S-K5----->A-K5B----->P-K5B

POLLUTION CONTROL EQUIPMENT

POLLUTION CONTROL EQUIPMENT

Identification Number:	A-K1/2	A-K5B
Description:	Scrubber	Baghouse
Quantity:	1	1
Type:	wet scrubber, med eff	fabric filter, <180 deg F
Manufacturer:	TASCO	Micro-D Pulsair Co.
Make/Model:	NA	1-F1-24
Pressure Drop (in. H2O):	Unknown	Unknown
Wet Scrubber Flow (gpm)	Unknown	NA
Baghouse Air/Cloth Ratio (fpm):	NA	8

STACK DATA

Identification Number:	P-K1/2D
Description:	Exhaust Vent Stack
Type:	Vertical, uncovered
Type Code:	02
Ground Elev. (ft):	3,808
Coordinates (m):	+052-007
Exit Height (m):	+038
Exit Diameter (ft):	1.5
Exit Gas Flow Rate (acfm)	Unknown
Exit Temperature (deg. F)	Unknown

Identification Number:	P-K4	P-K5B
Description:	Process Slaker	Process Baghouse
Type:	Vertical, uncovered	Horizontal
Type Code:	02	04
Ground Elev. (ft):	3,808	3,808
Coordinates (m):	+038-022	+051+002
Exit Height (m):	+011	+016
Exit Diameter (ft):	1	2.5
Exit Gas Flow Rate (acfm)	Unknown	Unknown
Exit Temperature (deg. F)	Unknown	Unknown

SECTION 3A. EMISSION UNIT DATA - PULP DRYING AND PELLETIZING

EMISSION SOURCE

Identification Number:	**S-D1**	
Description:	Pulp Dryer	
Manufacturer:	Laclede-Christy Co. (Furnace) and Stearns Rogers (Dryer)	
Make/Model:	Unknown	
Date Installed/Modified:	Pre 1970	
Process Streams:		
Input:	Pressed Pulp	
	Additives	
	Pulverized Coal	
	Natural Gas	
Output:	Dried Pulp	
Fuel Type:	Coal	Natural Gas
Fuel Code:	10	01
Percent Oxygen:	11.5 - 12.0	
Percent Nitrogen:	1.0 - 2.0	
Percent Hydrogen:	3.5 - 4.0	
Percent Sulfur:	0.4 - 1.0	
Percent Ash:	5.0 - 7.0	
Percent Carbon:	55.5 - 56.0	
Percent Moisture:	7.0 - 23.0	
Heat Content (Btu/unit):	9,500 - 13,000 Btu/lb	1,000 Btu/cu ft
Emission Train:	S-D1----->A-D1A----->A-D1B----->P-D1A	
	S-D1----->A-D1A----->A-D1B----->P-D1B	

Identification Number:	**S-D2**
Description:	Pellet Cooler No. 1
Manufacturer:	California Pellet Mill
Make/Model:	Unknown
Date Installed/Modified:	Pre 1970
Process Streams:	
Input:	Warm Pellets
	Ambient Air
Output:	Cool Pellets
Emission Train:	S-D2----->A-D2/3----->P-D2/3

EMISSION SOURCE

Identification Number:	**S-D3**
Description:	Pellet Cooler No. 2
Manufacturer:	California Pellet Mill
Make/Model:	Unknown
Date Installed/Modified:	Pre 1970
Process Streams:	
Input:	Warm Pellets
	Ambient Air
Output:	Cool Pellets
Emission Train:	S-D3----->A-D2/3----->P-D2/3

Identification Number:	**S-D4**
Description:	Pulp Dryer Material Handling
Manufacturer:	TASCO
Make/Model:	NA
Date Installed/Modified:	Pre 1970
Material Discription:	
	Pellets & Shredded Pulp
	Ambient Air
Emission Train:	S-D4----->A-D4----->P-D4

Identification Number:	**F-D5**
Description:	Railcar Unloading
Date Installed/Modified:	Pre 1970
Material Description:	Coal
Emission Train:	Fugitive

Identification Number:	**F-D6**
Description:	Shredded & Pelletized Pulp Storage & Loadout
Date Installed/Modified:	Pre 1970
Material Description:	Shredded Pulp
Emission Train:	Fugitive

POLLUTION CONTROL EQUIPMENT

Identification Number:	**A-D1A**	**A-D1B**
Description:	Cyclones	Scrubbers
Quantity:	2	2
Type:	centrif coll, low eff	wet scrubber, med eff
Type Code:	009	002
Manufacturer:	Stearns Rogers	TASCO
Make/Model:	Unknown	NA
Pressure Drop (in. H2O):	Unknown	4.4 - 6.6
Wet Scrubber Flow (gpm):	NA	300-500
Baghouse Air/Cloth Ratio (fpm):	NA	NA

STACK DATA

Identification Number:	**P-D1A**	**P-D1B**
Type:	Vertical, uncovered	Vertical, uncovered
Type Code:	02	02
Ground Elev. (ft):	3,808	3,808
Coordinates (m):	+053+081	+058+081
Exit Height (m):	+025	+025
Exit Diameter (ft):	8	8
Exit Gas Flow Rate (acfm):	29,200 - 43,800	29,200 - 43,800
Exit Temperature (deg. F):	133 -199	133 -199

SECTION 3A. EMISSION UNIT DATA - SUGAR WAREHOUSE AND SHIPPING

EMISSION SOURCE

Identification Number:	**S-W1**
Description:	Drying Granulator No.1
Manufacturer:	Link Belt
Make/Model:	Rotolouvre
Date Installed/Modified:	1951
Process Streams:	
Input:	Wet Sugar
	Hot Air
Output:	Dry Sugar
Emission Train:	S-W1----->A-W1----->P-W1

Identification Number:	**S-W2**
Description:	Cooling Granulator No.2
Manufacturer:	Unknown
Make/Model:	Unknown
Date Installed/Modified:	1962
Process Streams:	
Input:	Hot Sugar
	Ambient Air
Output:	Cool Sugar
Emission Train:	S-W2----->A-W2----->P-W2

POLLUTION CONTROL EQUIPMENT

Identification Number:	**A-W1**	**A-W2**
Description:	Rotoclone	Dustbox
Quantity:	1	1
Type:	wet scrubber, high eff	wet scrubber, high eff
Type Code:	001	001
Manufacturer:	Link Belt	TASCO
Make/Model:	NA	NA
Pressure Drop (in. H2O):	NA	NA
Wet Scrubber Flow (gpm)	144 - 216	144 - 216
Baghouse Air/Cloth Ratio (fpm):	NA	NA

STACK DATA

Identification Number:	**P-W1**	**P-W2**
Type:	Vertical, uncovered	Vertical, uncovered
Type Code:	02	02
Ground Elev. (ft):	3,808	3,808
Coordinates (km):	-017+018	-027+10
Exit Height (m):	+021	+013
Exit Diameter (ft):	2.67	1.83
Exit Gas Flow Rate (acfm)	16,000 - 18,000	13,000 - 15,000
Exit Temperature (deg. F)	100	90

EMISSION SOURCE

Identification Number:	**F-O1**
Description:	Coal Unloading
Date Installed/Modified:	Pre 1970
Material Description:	Coal
Emission Train:	Fugitive

Identification Number:	**F-O2**
Description:	Coal Storage
Date Installed/Modified:	Pre 1970
Material Description:	Coal
Emission Train:	Fugitive

Identification Number:	**F-O3**
Description:	Coal Loading
Date Installed/Modified:	Pre 1970
Material Description:	Coal
Emission Train:	Fugitive

Identification Number:	**S-O5**
Description:	Main Mill
Manufacturer:	Various
Make/Model:	Various
Date Installed/Modified:	Pre 1970
Process Streams:	
Input:	Sugar Beets
	Water
Output:	Sugar
	Pulp
	Additives
Emission Train:	S-O5----->Vents

EMISSION SOURCE

Identification Number:	**S-O6**
Description:	Sulfur Stove
Date Installed/Modified:	Pre 1970
Material Description:	Sulfur
Emission Train:	S-O6--->A-O6--->P-O6

POLLUTION CONTROL EQUIPMENT

Identification Number:	**A-O6**
Description:	Sulfur Tower
Quantity:	1
Type:	Miss. Cont.
Type Code:	099
Manufacturer:	TASCO
Make/Model:	NA
Pressure Drop (in. H2O):	NA
Wet Scrubber Flow (gpm)	NA
Baghouse Air/Cloth Ratio (fpm):	NA

STACK DATA

Identification Number:	**P-O6**
Type:	Vertical, uncovered
Type Code:	02
Ground Elev. (ft):	3,808
Coordinates (km):	+036+011
Exit Height (m):	+018
Exit Diameter (ft):	1
Exit Gas Flow Rate (acfm)	Unknown
Exit Temperature (deg. F)	Unknown