



State of Idaho  
Department of Environmental Quality  
Air Quality Division

**AIR QUALITY PERMIT  
STATEMENT OF BASIS**

**Tier I Operating Permit No. T1-050414 PROJ 0414**

**Final**

**The Amalgamated Sugar Company, LLC (TASCO – Paul)**

**Mini-Cassia Facility**

**Paul, Idaho**

**Facility ID No. 067-00001**

**October 15, 2014**

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**Permit Writer**

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions including references to the applicable statutory or regulatory provisions for the terms and conditions as required by IDAPA 58.01.01.362

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## ACRONYMS, UNITS AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
Boiler MACT	40 CFR 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters
Btu	British thermal units
B&W	Babcock & Wilcox
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CaO	calcium oxide
CEMS	continuous emissions monitoring system
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CMS	continuous monitoring systems
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	CO <sub>2</sub> equivalent emissions
COMS	continuous opacity monitoring system
cwt	hundred weight (1 cwt = 100 lb)
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
GHG	greenhouse gases
gph	gallons per hour
gpm	gallons per minute
gr	grain (1 lb = 7,000 grains)
HAP	hazardous air pollutants
ID No.	identification number
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
iwg	inches of water gauge
klb/yr	thousands of pounds per campaign year
km	kilometers
lb	pounds
lb/hr	pounds per hour
lb/MMBtu	pounds per million British thermal units
MACT	Maximum Achievable Control Technology
mg/L	milligrams per liter
MMBtu/hr	million British thermal units per hour
MRRR	Monitoring, Recordkeeping and Reporting Requirements
MSP	monitoring system performance
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
ng/J	nanograms per joule
No.	number
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
NSPS	New Source Performance Standards

O <sub>2</sub>	oxygen
O <sub>3</sub>	ozone
O&M	operation and maintenance
PM	particulate matter
PM <sub>2.5</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM <sub>10</sub>	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million by volume
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PW	process weight rate
QA/QC	quality assurance and quality control
QIP	Quality Improvement Plan
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SO <sub>x</sub>	sulfur oxides
TAP	toxic air pollutants
TASCO-Paul	The Amalgamated Sugar Company, LLC
T1	Tier I operating permit
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
U.S.C.	United States Code
VOC	volatile organic compounds

## 1. FACILITY INFORMATION AND APPLICABILITY

### ***Facility Description***

TASCO-Paul operates an existing beet sugar manufacturing plant located in Paul. The facility is also known as the Mini-Cassia Facility.

### ***Applicability***

The Mini-Cassia Facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit SO<sub>2</sub>, NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM above the major source threshold of 100 T/yr. The facility is also classified as a major facility, as defined in Subsection 008.10.a, because it emits or has the potential to emit HAP above the major source thresholds of 10 T/yr for any single HAP and/or 25 T/yr for any combination of HAP. As a major facility, the Mini-Cassia Facility is required to apply for a Tier I operating permit pursuant to IDAPA 58.01.01.301.

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (statement of basis) that sets forth the legal and factual basis for the Tier I operating permit terms and conditions including reference to the applicable statutory provisions. This document provides the basis for the Tier I operating permit for the Mini-Cassia Facility.

## Facility Permitting History

The following permitting history information was derived from a review of the permit files available to DEQ, and includes permitting actions issued during the previous operating permit term from September 23, 2005 to present. Status is noted as active and in effect (A), superseded (S), or terminated (T).

**Table 1 SUMMARY OF PERMITTING HISTORY**

Issue Date	Permit Number	Project	Status	History Explanation
March 19, 1981	13-1020-0001-00 (067-00001)	Air pollution source permit to establish requirements for the boilers.	S	Initial permit for existing sources. Revised by 1020-0001.
January 1, 1984	1020-0001 (067-00001)	Air pollution source permit revision, which established requirements for the pulp dryers.	S	Revised 13-1020-0001. Revised by P-020407.
September 23, 1999	P-990110	PTC applicability determination for process improvements.	(n/a)	
September 23, 2002	P-020407 (067-00001)	PTC modification to add No. 6 evaporator and establish throughput limits.	S	Revised 1020-0001. Revised by P-050401.
November 14, 2002	P-020416	PTC exemption to install flume water pH control system.	(n/a)	
December 12, 2002	T1-9503-039-1 (067-00001)	Initial T1 operating permit.	S	Initial Title V operating permit. Revised by T1-030416.
February 3, 2005	P-050401	Revised PTC to replace the sugar production limit with a steam production limit.	S	Revised P-020407. Revised by P-050421.
April 15, 2005	X-050409	PTC exemption to install steam dryer and replace pulp presses and evaporators.	(n/a)	
June 17, 2005	O-050412	PTC exemption for pellet cooler project.	(n/a)	
July 27, 2005	P-050406	Initial PTC the Nebraska Boiler (backup).	A	Initial permit.
July 29, 2005	X-050412	PTC exemption for pellet mills and replacement of cyclones with a baghouse.	(n/a)	
September 23, 2005	T1-030416	Renewal and administrative amendment T1 to incorporate compliance schedule and revisions resulting from an appeal.	S	Revised T1-9503-039-1. Revised by T1-050414 PROJ 0414.
November 17, 2005	P-050424	Initial PTC to add temporary emergency generator.	T	Superseded Director exemption issued 10/28/05. Terminated by letter O-050426 issued 1/06/06.
December 15, 2005	P-050421	Revised PTC to increase daily throughput limit.	S	Revised P-050401. Revised by P-060404.
June 14, 2006	P-060404	Revised PTC to increase annual throughput limit.	S	Revised P-050421. Revised by P-2007.0023.
May 16, 2007	P-2007.0023	Revised PTC to temporarily increase steam production in 2006.	S	Revised P-060404. Revised by P-2011.0040 PROJ 60754.
August 20, 2008	O-2008.0082	Applicability concurrence determining the use of anthracite coal in addition to coke as fuel in the kiln was not a modification.	(n/a)	
September 22, 2010	P-2010.0043	Initial PTC to replace lime kiln system.	S	Initial permit. Revised by P-2010.0043 PROJ 61012.
March 8, 2011	P-2011.0040 PROJ 60754	Revised PTC to revise campaign year definition.	S	Revised P-060404 and permit P-2007.0023. Revised by P-2011.0040 PROJ 60995.
June 1, 2012	P-2010.0043 PROJ 61012	Revised PTC to revise slaker control equipment.	S	Revised P-2010.0043. Revised by P-2010.0043 PROJ 61325.
June 11, 2012	P-2011.0040 PROJ 60995	Revised PTC to increase annual throughput and steaming rate limits.	S	Revised P-2011.0040 PROJ 60754. Revised by P-2011.0040 PROJ 61314.
March 18, 2014	P-2010.0043 PROJ 61325	Revised PTC to remove slaker control equipment.	A	Revised P-2010.0043 PROJ 61012.
August 13, 2014	P-2011.0040 PROJ 61314	Revised PTC to convert boilers to natural gas firing only, and to establish limits to resolve a historic equipment review required by T1-030416 compliance schedule.	A	Revised P-2011.0040 PROJ 60995.
October 10, 2014	T1-050414 PROJ 0414	Renewal T1 to incorporate CAM and PTC revisions.	A	Revised T1-030416.

## Process Description

This section lists the emission sources and control equipment, and describes the production or manufacturing processes for this facility.

Table 2 EMISSION UNITS, CONTROL DEVICE, AND DISCHARGE POINT INFORMATION

Source Description		Control Equipment	Installation Date
<b>B&amp;W Boiler (S-B1)</b>		Multiclone (A-B1A) and Spray-Chamber Scrubber (A-B1B) in series	1952
Operational capacity:	175,000 lb/hr steam		
Fuel consumption:	13.2 T/hr		
Fuels:	coal and/or natural gas <sup>(a)</sup>		
<b>Erie City Boiler (S-B2)</b>		Multiclone (A-B2A) and Spray-Chamber Scrubber (A-B2B) in series	1964
Operational capacity:	250,000 lb/hr steam (gas) 220,000 lb/hr steam (coal)		
Fuel consumption:	16.8 T/hr		
Fuels:	coal and/or natural gas <sup>(a)</sup>		
<b>Nebraska Boiler (S-B3, Backup Boiler Only)</b>		None	2005
Operational capacity:	200,000 lb/hr steam		
Fuel consumption:	250 MMBtu/hr		
Fuels:	natural gas		
<b>North Pulp Dryer (S-D2)</b>		Dryer exhaust is split between two cyclones (A-D2A) that operate in parallel. Cyclone exhaust is combined and then split between two Spray-Impingement Scrubbers (A-D2B) that operate in parallel.	1969
PW input rate:	56.9 T/hr		
Fuel consumption:	5.7 T/hr		
Fuels:	coal and/or natural gas		
<b>South Pulp Dryer (S-D1)</b>		Dryer exhaust is split between two cyclones (A-D1A) that operate in parallel. Cyclone exhaust is combined and then split between two Spray- Impingement Scrubbers (A-D1B) that operate in parallel.	1961
PW input rate:	48.5 T/hr		
Fuel consumption:	4.9 T/hr		
Fuels:	coal and/or natural gas		
<b>Pellet Cooler No. 1 (S-D3)</b>		Cyclone (A-D3)	Pre 1970
Manufacturer/Model:	California Pellet Mill/2GA3		
PW input rate:	7.5 T/hr		
<b>Pellet Cooler No. 2 (S-D4)</b>		Cyclone (A-D4/5)	Pre 1970
Manufacturer/Model:	California Pellet Mill/2GA3		
PW input rate:	7.5 T/hr		
<b>Pellet Cooler No. 3 (S-D5)</b>		Cyclone (A-D4/5)	1974
Manufacturer/Model:	California Pellet Mill/2GA3		
PW input rate:	7.5 T/hr		
<b>Lime Kiln (S-K1)</b>		Gas Washer First Carbonation Tank Second Carbonation Tank (A-K1)	2011-2012
Manufacturer:	Eberhardt		
Model:	KR 8.0 (forced draft, vertical)		
Manufacture date:	2011		
Maximum capacity:	770 T/day lime rock		
Maximum operation:	146,300 T/yr lime rock		
Fuel consumption:	55.2 T/day, 59 MMBtu/hr		
Fuels:	anthracite coal and/or coke		
<b>Slaker No. 1 (S-K2) – Eberhardt Process</b>		None	2011-2012
Manufacturer/Model:	Eberhardt KR 8.0 (Rotary, Kiln)		
Maximum capacity:	394 T/day CaO		
Maximum operation:	74,860 T/yr CaO		

Source Description	Control Equipment	Installation Date
<u>Drying Granulator (S-W1)</u> Operational capacity: 73 T/hr wet sugar	Scrubber (A-W1)	Pre 1952
<u>Cooling Granulator No. 1 (S-W2)</u> Operational capacity: 73 T/hr wet sugar	Baghouse (A-W2)	Pre 1952
<u>Cooling Granulator No. 2 (S-W3)</u> Manufacturer/Model: BMA FCP 16/6/6 Operational capacity: 85 T/hr wet sugar	Baghouse (A-W3)	2012
Process Sugar Handling System (S-W4)	Process Sugar Baghouses (A-W4)	1967
Bulk Loadout Sugar Handling System (S-W5)	Bulk Loadout Baghouses (A-W5)	1994

- (a) The facility boilers will be limited to natural gas firing only, effective on the date of the Boiler MACT compliance deadline (Permit Condition 3.7). At such time, the listed control equipment will also no longer be required.

The Amalgamated Sugar Company LLC (TASCO-Paul) operates an existing beet sugar manufacturing plant that processes sugar beets into refined sugar in Paul, Idaho. Sugar beet processing operations consist of several steps, including diffusion, juice purification, evaporation, crystallization, molasses sugar recovery, and dried pulp manufacturing.

Prior to removing sucrose from sugar beets by diffusion, the cleaned and washed beets are sliced into long, thin strips called cossettes. In the diffusion step, the cossettes are conveyed to a continuous diffuser, in which hot water is used to extract sucrose. The sugar-enriched water that flows from the outlet of the diffuser is called "raw juice" and contains between 13% to 18% sugar. The raw juice proceeds to the juice purification operation. The processed cossettes, or pulp, leaving the diffuser is conveyed to the dried pulp manufacturing operation.

In the juice purification step, 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. The juice is then heated to 80-85°C (176-185°F) and proceeds to the liming system. In the liming system tank, milk of lime [Ca(OH)<sub>2</sub> aqueous solution] is added to the juice to absorb or adhere to the impurities. The juice is then sent to the first carbonation tank, where carbon dioxide (CO<sub>2</sub>) gas is bubbled to precipitate the lime as insoluble calcium crystals. The lime kiln is used to produce the CO<sub>2</sub> and the lime, which are both used in carbonation; the lime is converted to milk of lime in a lime slaker. After filtration, the juice is softened. Then a small amount of sulfur dioxide (SO<sub>2</sub>) is added to the juice to inhibit reactions that lead to darkening of the juice. Burning elemental sulfur in a sulfur stove produces the SO<sub>2</sub>. Following the addition of SO<sub>2</sub>, the juice (known as "thin juice") proceeds to the evaporators.

In the evaporation step, the sucrose in the juice is concentrated by removing water in a series of evaporators. Steam from boilers heats the first evaporator, and the steam from the water evaporated in the first evaporator heats the second evaporator, and so on through the final evaporator. After evaporation, the percentage of sucrose in the thick juice is 65% to 75%. 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. The mixture is then filtered, yielding a clear liquid known as standard liquor, which proceeds to the crystallization operation.

In the crystallization step, 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. 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 centrifuges, in which the liquid is centrifuged into the outer shell, and the crystals are left in the inner centrifugal basket. The sugar crystals are washed with pure hot water, and then sent to the granulator/cooling system. 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 centrifuges is called syrup. This syrup is feed liquor for the second boiling step 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.

In the molasses sugar recovery step, the molasses produced in the third boiling step can be used in the production of livestock feed. This molasses can be further desugared using a separator process. However, the Mini Cassia facility does not have a separator so molasses is shipped to other factories for separation. The products of the separator process are “extract” (the high sugar fraction) and – “concentrated separator by product” (CSB, the low sugar fraction). The extract can be stored in tanks or immediately processed in the sugar operation, like thick juice. CSB can be used in the liquid form as livestock feed or can be added to the pulp.

In the dried pulp manufacturing step, wet pulp from the diffusion process is mechanically pressed to reduce the moisture content from about 95% to 75%. After pressing, the pulp can be sold as cattle feed or sent to the dryers. Before entering the rotary drum dryers, CSB or molasses is added to the pressed pulp. The pressed pulp is then dried by hot air in horizontal rotating drums known as pulp dryers. The pulp dryers can be fired by natural gas or coal. The dried pulp product is typically pelletized, but can be sold as livestock feed in both pelletized and unpelletized form.

## 2. APPLICATION SCOPE AND CHRONOLOGY

### **Application Scope**

This permit is a renewal of Tier I Operating Permit No. T1-030416, issued September 23, 2005.

This permit also incorporates the following:

- Compliance Assurance Monitoring (CAM).
- P-050406, issued July 27, 2005.
- P-2010.0043 PROJ 61325, issued on March 18, 2014.
- P-2011.0040 PROJ 60995, issued on June 11, 2012.

### **Application Chronology**

**Table 3 APPLICATION CHRONOLOGY**

Date	Description
June 15, 2005	DEQ received an application for permit renewal.
August 11, 2005	DEQ determined that the application was incomplete.
August 24, 2005	DEQ approves a request to extend expiration of T1-030416 by one year.
December 12, 2006	DEQ receives updates to the application.
December 13, 2006	DEQ determined that the application was complete.
July 26, 2007	DEQ received renewal application updates, including updated emissions estimates and a revised Boiler MACT applicability notification.
November 13, 2007	DEQ received a request to change contact information for the responsible official.
September 3, 2008	DEQ received supplemental information addressing changes to slaking system equipment.
February 10, 2012	DEQ made available a draft permit for applicant review (2011AAG5162, 2008AAG197[v2]), and requested supplemental information.
February 22, 2012	DEQ extended the facility review period until April 13, 2012 at the request of the applicant.
March 15, 2012	DEQ received supplemental information and comments from the applicant on the draft permit, including copies of relevant notifications during the permit term and O&M manuals.
April 13, 2012	DEQ received comments from the applicant on the draft permit.
July 20, 2012	DEQ made available a draft permit and statement of basis for applicant review (2012AAG1988, 2008AAG197[v4], 2008AAG190[v2]).
August 17, 2012	DEQ received comments from the applicant on the draft permit.
May 23, 2014	DEQ made available updated draft T1 and PTC permits and statements of basis for applicant review, which addressed applicant comments and incorporated other recently issued PTC revisions (listed in the Application Scope section) (2014AAG988, 2008AAG197[v5], 2008AAG190[v3], 2014AAG378[v2], 2014AAG377[v2]).
June 13, 2014	DEQ received comments from the applicant on the draft permits (2014AAG1232).
June 24 – July 24, 2014	DEQ provided a public comment period for the proposed PTC and Tier I permitting actions (2014AAG1242, 2008AAG197[v6], 2008AAG190[v4], 2014AAG378[v3], 2014AAG377[v3]).
July 21 and August 22, 2014	DEQ received comments from the applicant on the draft permit (Appendix D; 2014AAG1415, 2014AAG1515).
July 25 – September 8, 2014	DEQ updated the T1 permit based on comments from the applicant, and provided an EPA review period on the proposed T1 action (2014AAG1265, 2008AAG197[v7], 2008AAG190[v5]).
October 15, 2014	DEQ issued the final permit and statement of basis (2014AAG1274, 2008AAG197[v8], 2008AAG190[v6]).

### 3. TECHNICAL REVIEW

#### ***Emissions Inventory***

Emission inventories were provided in the application, and were updated based on recent PTC permitting actions (refer to the Application Scope section for a list of these actions); including the emissions of federally-regulated criteria pollutants and hazardous air pollutants (HAP). Refer to Appendix A for a summary of regulated air pollutant emissions.

## 4. REGULATORY REVIEW

### ***Attainment Designation (40 CFR 81.313)***

This facility is located in Minidoka County, which is designated as attainment or unclassifiable for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>2</sub>, CO, and ozone. Refer to 40 CFR 81.313 for additional information.

### ***Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)***

TASCO-Paul is classified as a major facility as defined in IDAPA 58.01.01.008.10:

- The facility emits or has the potential to emit a regulated air pollutant in an amount greater than or equal to 100 T/yr (and greater than or equal to 250 T/yr);
- The facility emits or has the potential to emit a single regulated HAP in excess of 10 T/yr;
- The facility emits or has the potential to emit a combination of regulated HAP in excess of 25 T/yr.
- The facility emits or has the potential to emit greenhouse gases in excess of 100,000 CO<sub>2e</sub> T/yr.

TASCO-Paul has a fossil-fuel boiler (or combination thereof) of more than 250 MMBtu/hr heat input; therefore the boiler house (which includes the B&W Boiler, Erie City Boiler, and Nebraska Boiler) was classified as a designated facility as defined in IDAPA 58.01.01.006.30 and 40 CFR 52.21(b)(1)(i)(a), and fugitive emissions were included when determining the major facility classification in accordance with IDAPA 58.01.01.008.10.c.i.

Refer to Appendix A for a summary of the regulated air pollutant emissions.

### ***PSD Classification (40 CFR 52.21)***

TASCO-Paul is classified as an existing major stationary source as defined in 40 CFR 52.21(b)(1):

- The facility emits or has the potential to emit a regulated air pollutant in an amount greater than or equal to 100 T/yr (and greater than or equal to 250 T/yr);

TASCO-Paul has a fossil-fuel boiler (or combination thereof) of more than 250 MMBtu/hr heat input; therefore the boiler house (which includes the B&W Boiler, Erie City Boiler, and Nebraska Boiler) was classified as a designated facility as defined in IDAPA 58.01.01.006.30 and in 40 CFR 52.21(b)(1)(i)(a), and fugitive emissions are required to be included when determining the major facility classification in accordance with IDAPA 58.01.01.008.10.c.i and 40 CFR 52.21(b)(1).

Refer to Appendix A for a summary of the regulated air pollutant emissions.

### ***NSPS Applicability (40 CFR 60)***

The facility is subject to the requirements of 40 CFR 60 Subpart Db – New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units and Subpart A – General Provisions.

- The Nebraska “Backup” Boiler is an affected facility subject to NSPS requirements.

### ***NESHAP Applicability (40 CFR 61)***

The facility is not subject to any NESHAP standards in 40 CFR 61.

### ***MACT Applicability (40 CFR 63)***

TASCO-Paul is classified as a major source of HAP and was determined to be subject to the requirements of 40 CFR 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (“Boiler MACT”). Refer to the Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70) section for additional information.

Although boilers at the facility are required to comply with applicable Boiler MACT requirements on or before the compliance deadline during the next permit term, such requirements have not been incorporated into the permit at this time at the request of the applicant. Incorporation of applicable Boiler MACT requirements into the operating permit should be revisited on or before issuance of the next permit renewal.

**CAM Applicability (40 CFR 64)**

Based upon criteria pollutant emission estimates provided (refer to Appendix A for additional information), the B&W Boiler, Erie City Boiler, North Pulp Dryer, and South Pulp Dryer emissions units have been determined to be subject to the requirements of 40 CFR 64 - Compliance Assurance Monitoring.

**Table 4 SUMMARY OF CAM REQUIREMENTS**

Emissions Unit	Pollutant	Control Devices	Limits	Indicators <sup>(a)</sup>	Monitoring Approach <sup>(b)</sup>	Indicator Range
B&W Boiler	PM	Multiclone (A-B1A) and Spray-Chamber Scrubber (A-B1B) in series	0.100 gr/dscf at 8% O <sub>2</sub> <sup>(c)</sup>	Water Flow Rate	Flow meter	280-690 gpm (daily average of 15-minute readings)
				Opacity	Method 9	≤ 15% (weekly reading of 6-minute average)
				Total Solids	Sampling Scrubber Water at Inlet	≤ 142,000 mg/L (monthly sampling Sept to Dec; bi-weekly sampling Jan to campaign end)
Erie City Boiler	PM	Multiclone (A-B2A) and Spray-Chamber Scrubber (A-B2B) in series	Coal <sup>(d)</sup> 0.100 gr/dscf at 3% O <sub>2</sub> ----- Coal and natural gas <sup>(d)</sup> 0.100* X + 0.011 *Y at 8% O <sub>2</sub>	Water Flow Rate	Flow meter	660-1200 gpm (daily average of 15-minute readings)
				Opacity	Method 9	≤ 15% (weekly reading of 6-minute average)
				Total Solids	Sampling Scrubber Water at Inlet	≤ 142,000 mg/L (monthly sampling Sept to Dec; bi-weekly sampling Jan to campaign end)
North Pulp Dryer and South Pulp Dryer	PM	Each dryer exhaust is split between two cyclones (A-D2A, A-D1A) that operate in parallel. Cyclone exhaust is combined and then split between two Spray-Impingement Scrubbers (A-D1B, A-D2B) that operate in parallel.	E = 0.02518(PW) <sup>0.67</sup> (for PW<60,000) <sup>(e)</sup>  E = 23.84(PW) <sup>0.11-40</sup> (for PW≥60,000) <sup>(e)</sup>	Water Flow Rate <sup>(f)</sup>  Pressure Drop <sup>(f)</sup>  Total Solids <sup>(f)</sup>	Flow meter  Manometer  Sampling Scrubber Water at Inlet	100-400 gpm (daily average of 15-minute readings)  ≥ 4.0 iwg; (daily average of 15-minute readings)  ≤ 136,000 mg/L (monthly sampling Sept to Dec; bi-weekly sampling Jan to campaign end)

- a) Indicators of emission control performance for the relevant control device, designed in accordance with 40 CFR 64.3(a)(2).
- b) Monitoring approach established in accordance with 40 CFR 64.6(c).
- c) PM standard for fuel-burning equipment as required by IDAPA 58.01.01.677.
- d) CAM is applicable to the B&W Boiler and Erie City Boiler only when firing coal. For combinations of fuels, the allowable emission shall be determined by proportioning the gross heat input and emission standards for each fuel, in accordance with IDAPA 58.01.01.678. It is noted that control devices are used to achieve compliance with limitations only during coal firing for the B&W Boiler and Erie City Boilers, and that CAM requirements are not expected to be applicable following conversion of these boilers to natural gas firing only as required by January 31, 2016 (Permit Condition 3.7).
- e) PM emission limitation based on process weight rate as required by IDAPA 58.01.01.703.
- f) Each indicator, monitoring approach, and indicator range is applied to the North Pulp Dryer and South Pulp Dryer scrubbers individually.

40 CFR 64..... Compliance Assurance Monitoring

40 CFR 64.2..... Applicability.

*In accordance with 40 CFR 64.2(a), except for backup utility units that are exempt under 40 CFR 64.2(b)(2), the requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 or 71 permit if the unit satisfies all of the following criteria:*

- *The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under 40 CFR 64.2(b)(1);*
- *The unit uses a control device to achieve compliance with any such emission limitation or standard; and*
- *The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. For purposes of this paragraph, "potential pre-control device emissions" shall have the same meaning as "potential to emit," as defined in §64.1, except that emission reductions achieved by the applicable control device shall not be taken into account.*

The facility is a major source that is required to obtain a Part 70 permit (T1 operating permit); refer to the Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70) section for additional information.

The B&W Boiler, Erie City Boiler, North Pulp Dryer, and South Pulp Dryer emissions units each have applicable PM emission limitations and standards and use control devices to achieve compliance with these limitations and standards (as specified in Table 4), and have pre-control device PM emissions equal to or greater than 100 percent of the amount required for a source to be classified as a major source. Exemption under 40 CFR 64.2(b) has not been requested or demonstrated by the applicant. It is noted that control devices are used to achieve compliance with limitations only during coal firing for the B&W Boiler and Erie City Boilers, and that CAM requirements are not expected to be applicable following conversion of these boilers to natural gas firing only as required by January 31, 2016 (Permit Condition 3.7).

40 CFR 64.3..... Monitoring design criteria.

*In accordance with 40 CFR 64.3(a), to provide a reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit, monitoring shall meet the following general criteria:*

- *The owner or operator shall design the monitoring to obtain data for one or more indicators of emission control performance for the control device, any associated capture system and, if necessary to satisfy 40 CFR 64.3(a)(2), processes at a pollutant-specific emissions unit. Indicators of performance may include, but are not limited to, direct or predicted emissions (including visible emissions or opacity), process and control device parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities conducted by the owner or operator.*
- *The owner or operator shall establish an appropriate range(s) or designated condition(s) for the selected indicator(s) such that operation within the ranges provides a reasonable assurance of ongoing compliance with emission limitations or standards for the anticipated range of operating conditions. Such range(s) or condition(s) shall reflect the proper operation and maintenance of the control device (and associated capture system), in accordance with applicable design properties, for minimizing emissions over the anticipated range of operating conditions at least to the level required to achieve compliance with the applicable requirements. The reasonable assurance of compliance will be assessed by maintaining performance within the indicator range(s) or designated condition(s). The ranges shall be established in accordance with the design and performance requirements in this section and documented in accordance with 40 CFR 64.4. If necessary to assure that the control device and associated capture system can satisfy this criterion, the owner or operator shall monitor appropriate process operational parameters (such as total throughput where necessary to stay within the rated capacity for a control device). In addition, unless specifically stated otherwise by an applicable requirement, the owner or operator shall monitor indicators to detect any bypass of the control device (or capture system) to the atmosphere, if such bypass can occur based on the design of the pollutant-specific emissions unit.*

- *The design of indicator ranges or designated conditions may be:*
  - *Based on a single maximum or minimum value if appropriate (e.g., maintaining condenser temperatures a certain number of degrees below the condensation temperature of the applicable compound(s) being processed) or at multiple levels that are relevant to distinctly different operating conditions (e.g., high versus low load levels).*
  - *Expressed as a function of process variables (e.g., an indicator range expressed as minimum to maximum pressure drop across a venturi throat in a particulate control scrubber).*
  - *Expressed as maintaining the applicable parameter in a particular operational status or designated condition (e.g., position of a damper controlling gas flow to the atmosphere through a by-pass duct).*
  - *Established as interdependent between more than one indicator.*

The permittee has proposed monitoring the indicators of performance for the B&W Boiler, Erie City Boiler, North Pulp Dryer, and South Pulp Dryer control devices as specified in Table 4, including direct emissions (opacity and visible emissions), control device parameters affecting control device efficiency (scrubber water flow, scrubber pressure drop, scrubber water total solids), and inspection and maintenance activities (scrubber inspection and maintenance).

The indicators have been designed to provide a reasonable assurance of compliance with the relevant PM emission limits and standards for the anticipated range of operating conditions and to meet the required general criteria.

- For the B&W Boiler and Erie City Boiler scrubbers, the opacity indicator range of less than or equal to 15% (Table 4) was established based upon historical performance testing data. Although such data supported establishing a lower opacity excursion threshold, the permittee has expressed concern that a lower threshold may result in an unacceptable number of excursions and corresponding corrective actions.

Because the opacity excursion threshold is below applicable opacity limits (IDAPA 58.01.01.625), and based on the performance and compliance history of these units and similar units at the Twin Falls facility, it was considered reasonable to establish 15% as the excursion threshold. A higher indicator range was not supported by the data provided, and the permittee has agreed to the excursion threshold established at this time.<sup>1,2</sup>

- For the B&W Boiler, North Pulp Dryer, and South Pulp Dryer scrubbers, the water flow rate indicator ranges (Table 4) were established based upon the performance and compliance history of these units. The proposed water flow rate ranges were within the superseded indicator ranges established in the superseded Tier I operating permit (T1-030416).<sup>7</sup>

From review of available data, including excess emissions reports and inspection reports submitted, no instances of exceedances were found resulting from normal operation within the proposed ranges.

- For the North Pulp Dryer and South Pulp Dryer scrubbers, the pressure drop indicator ranges (Table 4) were established based upon the performance and compliance history of these units. The proposed pressure drop range is within the superseded indicator ranges established in the superseded Tier I operating permit (T1-030416).<sup>7</sup>

From review of available data, including excess emissions reports and inspection reports submitted, no instances of exceedances were found resulting from normal operation within the proposed ranges.

- For the B&W Boiler, Erie City Boiler, North Pulp Dryer, and South Pulp Dryer scrubbers, the total dry solids indicator ranges (Table 4) were established based upon recent performance test data for these units.<sup>7</sup> For the

<sup>1</sup> Response and comments provided on TASCO – Mini-Cassia Facility Draft Tier I Operating Permit No. T1-050414 PROJ 0414, TASCO, April 13, 2012 (2012AAG1021). See also the Statement of Basis for Tier I Operating Permit No. T1-050415 for TASCO – Twin Falls, DEQ, October 7, 2011 (2008AAG1833).

<sup>2</sup> “Review of the Erie City Boiler, B&W Boiler, North Pulp Dryer, and South Pulp Dryer performance tests conducted by TASCO-Paul on February 25-27, 2008,” DEQ, June 6, 2008 (2008AAI324, 2008AAI135).

B&W Boiler and Erie City Boiler scrubber, the water flow rate indicator range (Table 4) was also established based upon recent performance test data for these units.<sup>3,4</sup>

From review of available data, including excess emissions reports and inspection reports submitted, no exceedances were found resulting from normal operation within the proposed ranges.

**Table 5 REVISIONS TO CONTROL DEVICE INDICATOR RANGES**

Emissions Unit	Indicator	Proposed		Superseded <sup>(a)</sup>	
		Permit Condition	Indicator Range	Permit Condition	Indicator Range
B&W Boiler	Water Flow Rate	4.2	280-690 gpm (daily average of 15-minute readings)	2.3	460-690 gpm
	Total Solids	4.2	≤ 142,000 mg/L	2.3	57,900 mg/L
Erie City Boiler	Water Flow Rate	5.3	660-1200 gpm	3.4	660-990 gpm
	Total Solids	5.3	≤ 142,000 mg/L	3.4	57,900 mg/L
North Pulp Dryer and South Pulp Dryer	Total Solids <sup>(b)</sup>	7.3	≤ 136,000 mg/L	4.3	57,900 mg/L

a) Superseded indicator ranges from Tier I Operating Permit T1-030416 issued September 23, 2005.

b) Indicator range listed is applicable to each scrubber stack.

- DEQ has included requirements to notify and submit a permit modification application to address monitoring changes in accordance with 40 CFR 64.7(e) if compliance data supports modifying any excursion threshold (Permit Conditions 4.4, 5.5, and 7.5).
- With regard to detection of bypass, during normal operation when the B&W Boiler, Erie City Boiler, North Pulp Dryer, and South Pulp Dryer emissions units are operating, the permittee has indicated the relevant scrubber control devices cannot be bypassed; this requirement was not included in the permit.<sup>6</sup>

*In accordance with 40 CFR 64.3(b), the owner or operator shall design the monitoring to meet the following performance criteria:*

- *Specifications that provide for obtaining data that are representative of the emissions or parameters being monitored (such as detector location and installation specifications, if applicable).*
- *For new or modified monitoring equipment, verification procedures to confirm the operational status of the monitoring prior to the date by which the owner or operator must conduct monitoring under this part as specified in §64.7(a). The owner or operator shall consider the monitoring equipment manufacturer's requirements or recommendations for installation, calibration, and start-up operation.*
- *Quality assurance and control practices that are adequate to ensure the continuing validity of the data. The owner or operator shall consider manufacturer recommendations or requirements applicable to the monitoring in developing appropriate quality assurance and control practices.*
- *Specifications for the frequency of conducting the monitoring, the data collection procedures that will be used (e.g., computerized data acquisition and handling, alarm sensor, or manual log entries based on gauge readings), and, if applicable, the period over which discrete data points will be averaged for the purpose of determining whether an excursion or exceedance has occurred.*

<sup>3</sup> "Review of the Erie City Boiler performance tests conducted by TASC0-Paul on February 26, 2010," DEQ, June 24, 2010 (2010AAH1196).

<sup>4</sup> Emails from TASC0 to DEQ, May 2014 (2014AAG1232, 2014AAG1241).

- *At a minimum, the owner or operator shall design the period over which data are obtained and, if applicable, averaged consistent with the characteristics and typical variability of the pollutant-specific emissions unit (including the control device and associated capture system). Such intervals shall be commensurate with the time period over which a change in control device performance that would require actions by owner or operator to return operations within normal ranges or designated conditions is likely to be observed.*
- *For all pollutant-specific emissions units with the potential to emit, calculated including the effect of control devices, the applicable regulated air pollutant in an amount equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, for each parameter monitored, the owner or operator shall collect four or more data values equally spaced over each hour and average the values, as applicable, over the applicable averaging period as determined in accordance with paragraph (b)(4)(i) of this section. The permitting authority may approve a reduced data collection frequency, if appropriate, based on information presented by the owner or operator concerning the data collection mechanisms available for a particular parameter for the particular pollutant-specific emissions unit (e.g., integrated raw material or fuel analysis data, noninstrumental measurement of waste feed rate or visible emissions, use of a portable analyzer or an alarm sensor).*
- *For other pollutant-specific emissions units, the frequency of data collection may be less than the frequency specified in paragraph (b)(4)(ii) of this section but the monitoring shall include some data collection at least once per 24-hour period (e.g., a daily inspection of a carbon adsorber operation in conjunction with a weekly or monthly check of emissions with a portable analyzer).*

*In accordance with 40 CFR 64.3(c), in designing monitoring to meet the requirements in paragraphs (a) and (b) of this section, the owner or operator shall take into account site-specific factors including the applicability of existing monitoring equipment and procedures, the ability of the monitoring to account for process and control device operational variability, the reliability and latitude built into the control technology, and the level of actual emissions relative to the compliance limitation.*

*In accordance with 40 CFR 64.3(d)(1), if a continuous emission monitoring system (CEMS), continuous opacity monitoring system (COMS) or predictive emission monitoring system (PEMS) is required pursuant to other authority under the Act or state or local law, the owner or operator shall use such system to satisfy the requirements of this part.*

*In accordance with 40 CFR 64.3(d)(2), The use of a CEMS, COMS, or PEMS that satisfies any of the following monitoring requirements shall be deemed to satisfy the general design criteria in paragraphs (a) and (b) of this section, provided that a COMS may be subject to the criteria for establishing indicator ranges under paragraph (a) of this section:*

- *Section 51.214 and appendix P of part 51 of this chapter;*
- *Section 60.13 and appendix B of part 60 of this chapter;*
- *Section 63.8 and any applicable performance specifications required pursuant to the applicable subpart of part 63 of this chapter;*
- *Part 75 of this chapter;*
- *Subpart H and appendix IX of part 266 of this chapter; or*
- *If an applicable requirement does not otherwise require compliance with the requirements listed in the preceding paragraphs (d)(2)(i) through (v) of this section, comparable requirements and specifications established by the permitting authority.*

*In accordance with 40 CFR 64.3(d)(3), the owner or operator shall design the monitoring system subject to this paragraph (d) to:*

- *Allow for reporting of exceedances (or excursions if applicable to a COMS used to assure compliance with a particulate matter standard), consistent with any period for reporting of exceedances in an underlying requirement. If an underlying requirement does not contain a provision for establishing an averaging period for the reporting of exceedances or excursions, the criteria used to develop an averaging period in (b)(4) of this section shall apply; and*
- *Provide an indicator range consistent with paragraph (a) of this section for a COMS used to assure compliance with a particulate matter standard. If an opacity standard applies to the pollutant-specific emissions unit, such limit may be used as the appropriate indicator range unless the opacity limit fails to meet the criteria in paragraph (a) of this section after considering the type of control device and other site-specific factors applicable to the pollutant-specific emissions unit.*

The CAM indicators have been designed to provide a reasonable assurance of compliance with the relevant PM emission limits and standards for the anticipated range of operating conditions, and to meet the required performance criteria.

Because each of the emissions units applicable to CAM have the potential to emit greater than 100% of the amount required for a source to be classified as a major source, collection of four or more data values equally spaced over each hour over the applicable averaging period were required for at least one indicator on each emissions unit (with opacity and total solids indicators being the exceptions), in accordance with 40 CFR 64.3(b)(4)(ii).

For the B&W Boiler and the Erie City Boiler, reduced frequencies were approved for visible emissions inspection monitoring and total solids sampling. For the North Pulp Dryer and the South Pulp Dryer, reduced frequencies were similarly approved for total solids sampling. The proposed measurement frequencies were approved in accordance with 40 CFR 64.3(b)(4)(ii), taking into account that multiple indicators were proposed for this control device, that at least one indicator meets the recommended measurement frequency, and that both Method 9 observation and total solids sampling are not conducive to measurement at the recommended frequency. It was recognized that such monitoring could not be conducted on a continuous basis, based on the need to have a trained observer and adequate conditions present at the time of monitoring, and the permittee has maintained that the proposed frequencies have been adequate based upon historical performance.<sup>6</sup>

Approved averaging times were established as follows:

- For opacity indicators, weekly use of EPA reference Method 9 (6-minute averaging period of 15-second observations) has been approved to assess excursions.
- For total solids sampling indicators, monthly sampling over the period from September to December, and bi-weekly sampling from January to the campaign end has been approved to assess excursions. This schedule is a continuation of the current monitoring regime, which takes into account the expected increase in total solids in the scrubber water near the end of each campaign year.<sup>6</sup>

Permit Conditions 4.2 – 4.3, 5.3 – 5.4, and 7.3 – 7.4 include the requirements of this section.

40 CFR 64.4..... *Submittal requirements.*

*In accordance with 40 CFR 64.4(a), the owner or operator shall submit to the permitting authority monitoring that satisfies the design requirements in §64.3. The submission shall include the following information:*

- *The indicators to be monitored to satisfy §§64.3(a)(1)–(2);*
- *The ranges or designated conditions for such indicators, or the process by which such indicator ranges or designated conditions shall be established;*
- *The performance criteria for the monitoring to satisfy §64.3(b); and*
- *If applicable, the indicator ranges and performance criteria for a CEMS, COMS or PEMS pursuant to §64.3(d).*

*In accordance with 40 CFR 64.4(b), as part of the information submitted, the owner or operator shall submit a justification for the proposed elements of the monitoring. If the performance specifications proposed to satisfy §64.3(b)(2) or (3) include differences from manufacturer recommendations, the owner or operator shall explain the reasons for the differences between the requirements proposed by the owner or operator and the manufacturer's recommendations or requirements. The owner or operator also shall submit any data supporting the justification, and may refer to generally available sources of information used to support the justification (such as generally available air pollution engineering manuals, or EPA or permitting authority publications on appropriate monitoring for various types of control devices or capture systems). To justify the appropriateness of the monitoring elements proposed, the owner or operator may rely in part on existing applicable requirements that establish the monitoring for the applicable pollutant-specific emissions unit or a similar unit. If an owner or operator relies on presumptively acceptable monitoring, no further justification for the appropriateness of that monitoring should be necessary other than an explanation of the applicability of such monitoring to the unit in question, unless data or information is brought forward to rebut the assumption. Presumptively acceptable monitoring includes:*

- *Presumptively acceptable or required monitoring approaches, established by the permitting authority in a rule that constitutes part of the applicable implementation plan required pursuant to title I of the Act, that are designed to achieve compliance with this part for particular pollutant-specific emissions units;*
- *Continuous emission, opacity or predictive emission monitoring systems that satisfy applicable monitoring requirements and performance specifications as specified in §64.3(d);*
- *Exempted or alternative monitoring methods allowed or approved pursuant to part 75 of this chapter;*
- *Monitoring included for standards exempt from this part pursuant to §64.2(b)(1)(i) or (vi) to the extent such monitoring is applicable to the performance of the control device (and associated capture system) for the pollutant-specific emissions unit; and*
- *Presumptively acceptable monitoring identified in guidance by EPA. Such guidance will address the requirements under §§64.4(a), (b), and (c) to the extent practicable.*

*In accordance with 40 CFR 64.4(c)(1), except as provided in paragraph (d) of this section, the owner or operator shall submit control device (and process and capture system, if applicable) operating parameter data obtained during the conduct of the applicable compliance or performance test conducted under conditions specified by the applicable rule. If the applicable rule does not specify testing conditions or only partially specifies test conditions, the performance test generally shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit. Such data may be supplemented, if desired, by engineering assessments and manufacturer's recommendations to justify the indicator ranges (or, if applicable, the procedures for establishing such indicator ranges). Emission testing is not required to be conducted over the entire indicator range or range of potential emissions.*

*In accordance with 40 CFR 64.4(c)(2), the owner or operator must document that no changes to the pollutant-specific emissions unit, including the control device and capture system, have taken place that could result in a significant change in the control system performance or the selected ranges or designated conditions for the indicators to be monitored since the performance or compliance tests were conducted.*

*In accordance with 40 CFR 64.4(d), if existing data from unit-specific compliance or performance testing specified in paragraph (c) of this section are not available, the owner or operator:*

- *Shall submit a test plan and schedule for obtaining such data in accordance with paragraph (e) of this section; or*
- *May submit indicator ranges (or procedures for establishing indicator ranges) that rely on engineering assessments and other data, provided that the owner or operator demonstrates that factors specific to the type of monitoring, control device, or pollutant-specific emissions unit make compliance or performance testing unnecessary to establish indicator ranges at levels that satisfy the criteria in §64.3(a).*

*In accordance with 40 CFR 64.4(e), if the monitoring submitted by the owner or operator requires installation, testing, or other necessary activities prior to use of the monitoring for purposes of this part, the owner or operator shall include an implementation plan and schedule for installing, testing and performing any other appropriate activities prior to use of the monitoring. The implementation plan and schedule shall provide for use of the monitoring as expeditiously as practicable after approval of the monitoring in the part 70 or 71 permit pursuant to §64.6, but in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval of the permit.*

*In accordance with 40 CFR 64.4(f), if a control device is common to more than one pollutant-specific emissions unit, the owner or operator may submit monitoring for the control device and identify the pollutant-specific emissions units affected and any process or associated capture device conditions that must be maintained or monitored in accordance with §64.3(a) rather than submit separate monitoring for each pollutant-specific emissions unit.*

*In accordance with 40 CFR 64.4(g), if a single pollutant-specific emissions unit is controlled by more than one control device similar in design and operation, the owner or operator may submit monitoring that applies to all the control devices and identify the control devices affected and any process or associated capture device conditions that must be maintained or monitored in accordance with §64.3(a) rather than submit a separate description of monitoring for each control device.*

The permittee has proposed monitoring to meet the specified performance criteria. Refer to the discussion provided above for 40 CFR 64.3 for additional information.

*40 CFR 64.6..... Approval of monitoring.*

*In accordance with 40 CFR 64.6(a), based on an application that includes the information submitted in accordance with §64.5, the permitting authority shall act to approve the monitoring submitted by the owner or operator by confirming that the monitoring satisfies the requirements in §64.3.*

*In accordance with 40 CFR 64.6(b), in approving monitoring under this section, the permitting authority may condition the approval on the owner or operator collecting additional data on the indicators to be monitored for a pollutant-specific emissions unit, including required compliance or performance testing, to confirm the ability of the monitoring to provide data that are sufficient to satisfy the requirements of this part and to confirm the appropriateness of an indicator range(s) or designated condition(s) proposed to satisfy §64.3(a)(2) and (3) and consistent with the schedule in §64.4(e).*

*In accordance with 40 CFR 64.6(c), if the permitting authority approves the proposed monitoring, the permitting authority shall establish one or more permit terms or conditions that specify the required monitoring in accordance with §70.6(a)(3)(i) of this chapter. At a minimum, the permit shall specify:*

- *The approved monitoring approach that includes all of the following:*
  - *The indicator(s) to be monitored (such as temperature, pressure drop, emissions, or similar parameter);*
  - *The means or device to be used to measure the indicator(s) (such as temperature measurement device, visual observation, or CEMS); and*
  - *The performance requirements established to satisfy §64.3(b) or (d), as applicable.*
- *The means by which the owner or operator will define an exceedance or excursion for purposes of responding to and reporting exceedances or excursions under §§64.7 and 64.8 of this part. The permit shall specify the level at which an excursion or exceedance will be deemed to occur, including the appropriate averaging period associated with such exceedance or excursion. For defining an excursion from an indicator range or designated condition, the permit may either include the specific value(s) or condition(s) at which an excursion shall occur, or the specific procedures that will be used to establish that value or condition. If the latter, the permit shall specify appropriate notice procedures for the owner or operator to notify the permitting authority upon any establishment or reestablishment of the value.*
- *The obligation to conduct the monitoring and fulfill the other obligations specified in §§64.7 through 64.9 of this part.*

- *If appropriate, a minimum data availability requirement for valid data collection for each averaging period, and, if appropriate, a minimum data availability requirement for the averaging periods in a reporting period.*

*In accordance with 40 CFR 64.6(d), if the monitoring proposed by the owner or operator requires installation, testing or final verification of operational status, the part 70 or 71 permit shall include an enforceable schedule with appropriate milestones for completing such installation, testing, or final verification consistent with the requirements in §64.4(e).*

Table 6 SUMMARY OF CAM PERMIT CONTENTS

64.6(c) Minimum Requirements		Yes	No	NA	Permit Conditions
<i>Does the permit specify:</i>					
1.	Indicator(s) to be monitored?	X			4.2, 5.3, 7.3
2.	Means or device to be used to measure the indicator(s)?	X			4.2, 5.3, 7.3
3.	Performance requirements established to satisfy § 64.3(b) or (d)?	X			3.38, 4.5, 5.6, 7.6
4.	Means by which the owner or operator will define an exceedance or excursion?	X			4.2, 5.3, 7.3
5.	Obligation to conduct the monitoring and fulfill the other obligations specified in §§ 64.7 through 64.9?	X			4.4, 4.6-4.7, 5.5, 5.7-5.8, 7.5, 7.7-7.8
6.	Minimum data availability requirement? (if applicable)			X	
64.6(d) Enforceable Schedule					
<i>Does the permit specify:</i>					
7.	An enforceable schedule for any required installation, testing, or final verification of operational status? (if applicable)	X			
64.6(e) Submittal Disapproved by Permitting Authority					
<i>Does the permit specify:</i>					
8.	At a minimum, monitoring that satisfies § 70.6(a)(3)(i)(B) if the permitting authority disapproved the proposed monitoring? (if applicable)			X	
9.	A compliance schedule for the source owner to submit an acceptable plan if the permitting authority disapproved the proposed monitoring? (if applicable)			X	

*In accordance with 40 CFR 64.6(e), If the permitting authority disapproves the proposed monitoring, the following applies:*

- *The draft or final permit shall include, at a minimum, monitoring that satisfies the requirements of §70.6(a)(3)(i)(B);*
- *The permitting authority shall include in the draft or final permit a compliance schedule for the source owner to submit monitoring that satisfies §§64.3 and 64.4, but in no case shall the owner or operator submit revised monitoring more than 180 days from the date of issuance of the draft or final permit; and*

*If the source owner or operator does not submit the monitoring in accordance with the compliance schedule as required in paragraph (e)(2) of this section or if the permitting authority disapproves the monitoring submitted, the source owner or operator shall be deemed not in compliance with part 64, unless the source owner or operator successfully challenges the disapproval.*

The approved CAM plan relies upon previously established monitoring techniques, and the permittee has confirmed that monitoring devices have been installed as proposed in the CAM submittal dated February 23, 2011 and in accordance with manufacturer's recommendations and applicable requirements. The CAM plan meets the requirements specified as provided in Table 6 above.

It may be noted that no minimum data availability has been specified for the approved CAM indicators at this time. Where relevant with regard to flow rate and pressure drop monitoring, it is expected that the permittee use all valid data points for each day in calculating each daily indicator average.

*40 CFR 64.7..... Operation of approved monitoring.*

*In accordance with 40 CFR 64.7(a), the owner or operator shall conduct the monitoring required under this part upon issuance of a part 70 or 71 permit that includes such monitoring, or by such later date specified in the permit pursuant to §64.6(d).*

*In accordance with 40 CFR 64.7(b), at all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.*

*In accordance with 40 CFR 64.7(c), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.*

*In accordance with 40 CFR 64.7(d), response to excursions or exceedances.*

- *Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.*
- *Determination of whether the owner or operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.*

*In accordance with 40 CFR 64.7(e), documentation of need for improved monitoring. After approval of monitoring under this part, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the permitting authority and, if necessary, submit a proposed modification to the part 70 or 71 permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.*

Permit Conditions 4.4, 5.5, and 7.5 include the requirements of this section.

*40 CFR 64.8..... Quality improvement plan (QIP) requirements.*

*In accordance with 40 CFR 64.8(a), based on the results of a determination made under §64.7(d)(2), the Administrator or the permitting authority may require the owner or operator to develop and implement a QIP. Consistent with §64.6(c)(3), the part 70 or 71 permit may specify an appropriate threshold, such as an accumulation of exceedances or excursions exceeding 5 percent duration of a pollutant-specific emissions unit's operating time for a reporting period, for requiring the implementation of a QIP. The threshold may be set at a higher or lower percent or may rely on other criteria for purposes of indicating whether a pollutant-specific emissions unit is being maintained and operated in a manner consistent with good air pollution control practices.*

*In accordance with 40 CFR 64.8(b)(1), the owner or operator shall maintain a written QIP, if required, and have it available for inspection.*

*In accordance with 40 CFR 64.8(b)(2), the plan initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:*

- *Improved preventive maintenance practices.*
- *Process operation changes.*
- *Appropriate improvements to control methods.*
- *Other steps appropriate to correct control performance.*
- *More frequent or improved monitoring (only in conjunction with one or more steps under paragraphs (b)(2)(i) through (iv) of this section).*

*In accordance with 40 CFR 64.8(c), if a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the permitting authority if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.*

*In accordance with 40 CFR 64.8(d), following implementation of a QIP, upon any subsequent determination pursuant to §64.7(d)(2) the Administrator or the permitting authority may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:*

- *Failed to address the cause of the control device performance problems; or*
- *Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.*

*In accordance with 40 CFR 64.8(e), implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.*

An approved CAM plan has been established by this permitting action, and a QIP has not been required by DEQ at this time.

Permit Condition 4.7, 5.8, and 7.8 include the requirements of this section.

It may be noted that during the development of appropriate CAM indicator ranges for the boilers, it was considered whether it might be appropriate to establish different indicator ranges for different boiler load operating scenarios (e.g., ranges separately established for Beet Slice, Juice Run, Separator, and Extract). Although the data analyzed did not clearly indicate whether there would be a benefit to such an approach, it may be worth further investigation at such time a quality improvement plan is considered.

**40 CFR 64.9..... Reporting and recordkeeping requirements.**

*In accordance with 40 CFR 64.9(a)(1), on and after the date specified in §64.7(a) by which the owner or operator must use monitoring that meets the requirements of this part, the owner or operator shall submit monitoring reports to the permitting authority in accordance with §70.6(a)(3)(iii) of this chapter.*

*In accordance with 40 CFR 64.9(a)(2), a report for monitoring under this part shall include, at a minimum, the information required under §70.6(a)(3)(iii) of this chapter and the following information, as applicable:*

- *Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;*
- *Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and*
- *A description of the actions taken to implement a QIP during the reporting period as specified in §64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.*

*In accordance with 40 CFR 64.9(b)(1), the owner or operator shall comply with the recordkeeping requirements specified in §70.6(a)(3)(ii) of this chapter. The owner or operator shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to §64.8 and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this part (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).*

*In accordance with 40 CFR 64.9(b)(2), instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.*

Permit Conditions 4.6, 5.7, and 7.7 include the requirements of this section.

### **Acid Rain Permit (40 CFR 72-75)**

This facility is not an affected facility as defined in 40 CFR 72 through 75; therefore, acid rain permit requirements do not apply.

### **Permit Conditions Review**

This section describes the applicable requirements for this facility. Where applicable, monitoring, recordkeeping and reporting requirements (MRRR) follow the applicable requirement and state how compliance with the applicable requirement is to be demonstrated. Requirements and MRRR have been summarized and paraphrased to minimize the length of this document, and permit requirements should be referenced from the actual permit.

The permit is divided into several subsections:

- The first subsection lists the requirements that apply facility-wide.
- Subsequent subsections list requirements applicable to each emission unit or activity.
- The final subsection contains general provisions that apply to all major facilities subject to Tier I operating permit requirements.

To minimize the length of this document, MRRR for the facility-wide permit conditions have been paraphrased, and superseded Tier I Operating Permit No. T1-030416 issued September 23, 2005 has been included in Appendix C for reference to the superseded permit conditions. Refer to the permit for the complete requirement.

The permittee has noted the following considerations which have been addressed:

- Because initial startup notification was already provided for the Nebraska Boiler,<sup>5</sup> relevant MRRR were no longer applicable. These MRRR were therefore not incorporated in the operating permit (specifically, Permit Condition 2.10 of P-050406).
- Because shutdown of the Union Carbide and Belgian lime kilns has already occurred,<sup>6</sup> relevant MRRR were no longer applicable. These MRRR were therefore not incorporated into the operating permit (specifically, Permit Conditions 25, 31, and 35 of P-2010.0043 PROJ 61012).
- Because the Lime Kiln Building is no longer in operation,<sup>7</sup> relevant MRRR were no longer applicable. These MRRR were therefore not incorporated into the operating permit (specifically, Section 11 of T1-030416).
- Because specific fuel-burning equipment standards have been incorporated for each applicable emissions unit into the respective permit sections (B&W Boiler, Erie City Boiler, and Nebraska Boiler), it was considered redundant to include the fuel burning equipment PM standards (IDAPA 58.01.01.676-677) in the facility-wide section of the permit (specifically, Permit Conditions 1.18 and 1.19 of T1-030416 were not included).

### ***Monitoring, Recordkeeping, and Reporting Requirements (MRRR)***

Immediately following each applicable requirement (permit condition) is the periodic monitoring regime upon which compliance with the underlying applicable requirement is demonstrated. A periodic monitoring regime consists of monitoring, recordkeeping and reporting requirements for each applicable requirement. If an applicable requirement does not include sufficient monitoring, recordkeeping and reporting to satisfy IDAPA 58.01.01.322.06, 07, and 08, then the permit must establish adequate monitoring, recordkeeping and reporting sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit in accordance with 40 CFR 70.6(a)(3)(i)(B). This is referred to as "gap-filling" periodic monitoring.

The discussion of each permit condition includes the legal and factual basis for the permit condition. If a permit condition was changed due to facility draft or public comments, a description of why and how the condition was changed is provided.

For each permit condition, certification of compliance is required on an annual basis, which includes making a reasonable inquiry to determine if each requirement was met during the reporting period.

### ***State Enforceability***

An applicable requirement that is not required by the federal CAA and has not been approved by EPA as a SIP-approved requirement is identified as a "State-only" requirement and is enforceable only under state law. State-only requirements are not enforceable by the EPA or citizens under the CAA. State-only requirements are identified in the permit within the citation of the legal authority for the permit condition.

### ***Federal Enforceability***

Unless identified as "State-only", all applicable requirements, including MRRR, are state and federally enforceable. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying applicable requirement (e.g. emissions limit).

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<sup>5</sup> "Notification Requirements PTC No. P-050406, Back-Up Natural Gas Fired Nebraska Boiler," TASCO, July 21, 2006 and "PTC No. P-050406 (Nebraska Boiler)," TASCO, November 20, 2006 (2012AAG658).

<sup>6</sup> Letter addressing Lime Kiln Replacement Project, TASCO, April 12, 2012 (2012AAI1144).

<sup>7</sup> Response and comments provided on TASCO – Mini-Cassia Facility Draft Tier I Operating Permit No. T1-050414 PROJ 0414, TASCO, April 13, 2012 (2012AAG1021).

## ***Permit Conditions***

### **Permit Condition 3.1**

This permit condition incorporates the definition of “campaign year” to ensure compliance with permit conditions relying on this definition (Permit Conditions 3.3 through 3.8).

### **Permit Conditions 3.2 – 3.4**

Permit Conditions 3.2 and 3.3 incorporate daily and annual limits on throughput to the facility.

MRRR include the following (Permit Condition 3.4):

- Monitor and record daily beet throughput daily.
- Monitor and record annual beet throughput monthly.

The annual limit is a PSD avoidance limit, required to ensure net emission increases resulting from the lime kiln replacement project do not exceed applicable pollutant significance thresholds (P-2011.0040 PROJ 60995), and to resolve the historic equipment review.<sup>8</sup>

### **Permit Conditions 3.5 – 3.6**

Permit Condition 3.5 incorporates the total steam production limit for the facility boilers.

MRRR include the following (Permit Condition 3.6):

- Monitor and record annual boiler steam production monthly.

The annual limit is a PSD avoidance limit when coal firing, required to ensure net emission increases resulting from the lime kiln replacement project do not exceed applicable pollutant significance thresholds (P-2011.0040 PROJ 60995), and to resolve the historic equipment review.<sup>8</sup> As specified in the permit conditions, these requirements will no longer be necessary after the 2015 campaign, once coal firing has ceased; for a detailed discussion, refer to the supporting Statement of Basis to P-2011.0040 PROJ 61314.

### **Permit Conditions 3.7 – 3.9**

These permit conditions incorporate fuel usage limits for the facility boilers.

MRRR include the following (Permit Conditions 3.8 and 3.9):

- Monitor and record annual boiler coal usage monthly.
- Notify DEQ upon removal of boiler coal delivery systems.

The annual limit is a PSD avoidance limit, required to ensure net emission increases resulting from the lime kiln replacement project do not exceed applicable pollutant significance thresholds (P-2011.0040 PROJ 60995), and to resolve the historic equipment review.<sup>8</sup>

### **Permit Conditions 3.10 – 3.11**

These permit conditions incorporate applicable Boiler MACT requirements in accordance with 40 CFR 63, Subparts A and DDDDD.

### **Permit Conditions 3.12 – 3.14**

These permit conditions incorporate the requirement to monitor annual emissions from the facility pursuant to 40 CFR 52.21.

MRRR include the following (Permit Condition 3.12 – 3.14):

- Monitor emissions annually and report if a significance threshold is exceeded.
- Exclude emission decreases resulting from the conversion of boilers to natural gas firing with respect to netting calculations for applicability to PSD program requirements.

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<sup>8</sup> Refer to discussion concerning this permit condition in the “Permit Conditions Review” section in Statement of Basis to P-2011.0040 PROJ 61314, DEQ, proposed (2014AAG377).

The exclusion of emission decreases is a PSD avoidance limit established to resolve the historic equipment review.<sup>8</sup>

**Permit Condition 3.15**

This permit condition incorporates the Air Pollution Emergency Rules in accordance with IDAPA 58.01.01.550-562.

**Permit Conditions 3.16 – 3.19 (Superseded Permit Conditions 1.1 – 1.4)**

This permit condition incorporates requirements for the control of fugitive dust in accordance with IDAPA 58.01.01.650-651.

MRRR include the following (Permit Conditions 3.17 – 3.19):

- Inspect sources of fugitive emissions monthly.
- Take corrective action when appropriate.
- Monitor and record the frequency and methods used to control fugitive dust emissions.
- Record fugitive dust complaints received, fugitive dust inspections, and corrective actions.

**Permit Conditions 3.20 – 3.21 (Superseded Permit Conditions 1.5 – 1.6)**

Permit Condition 3.20 incorporates “state-only” requirements for the control of odors in accordance with IDAPA 58.01.01.775-776.

MRRR include the following (Permit Condition 3.21):

- Maintain records of all odor complaints received and the corrective action taken in response to the complaint;
- Take appropriate corrective action when appropriate.
- Record corrective actions.

**Permit Conditions 3.22 – 3.24 (Superseded Permit Conditions 1.7 – 1.8, 2.2, 3.3, and 4.1)**

Permit Condition 3.22 incorporates visible emissions limits in accordance with IDAPA 58.01.01.625.

MRRR include the following (Permit Conditions 3.23 – 3.24):

- Inspect potential sources of visible emissions monthly.
- Take appropriate corrective actions to eliminate the visible emissions and perform Method 9 opacity testing when appropriate.
- Maintain records of inspection, opacity tests, and corrective actions.
- Report exceedances.

Permit Condition 3.23 also references Permit Conditions 4.3 and 5.4, which require an increased monitoring frequency for purposes of CAM. Note that superseded Permit Conditions 2.2, 3.3, and 4.1 were determined to be duplicative and removed.

**Permit Conditions 3.25 – 3.29 (Superseded Permit Condition 1.9)**

These permit conditions incorporate excess emission event requirements in accordance with IDAPA 58.01.01.130-136.

MRRR include the following (Permit Conditions 3.25 – 3.29):

- Take appropriate action.
- Provide notification of the event.
- Report the event.
- Maintain records of the event.

The superseded permit conditions were updated to include additional language from Section 133.01.a for clarification, and to reflect the language in current use for the sake of permitting consistency. No substantive change was intended.

**Permit Conditions 3.30 – 3.31 (Superseded Permit Conditions 1.16 and 1.17)**

Permit Condition 3.30 incorporates sulfur content specifications for fuels in accordance with IDAPA 58.01.01.725.

MRRR include the following (Permit Conditions 3.30 – 3.31):

- Record sulfur content of each fuel shipment.

The superseded permit conditions were revised to include the fuel sulfur content limits for diesel fuels.

The applicant also requested inclusion of the fuel sulfur content limit exemption compliance option, which requires demonstration of equivalent SO<sub>2</sub> emissions and DEQ approval.

**Permit Condition 3.32 (Superseded Permit Condition 1.12)**

This permit condition incorporates open burning requirements in accordance with IDAPA 58.01.01.600-623.

The rule citations and the superseded permit condition were updated to reflect the language in current use for the sake of permitting consistency. No substantive change was intended.

**Permit Condition 3.33 (Superseded Permit Condition 1.13)**

This permit condition incorporates National Emission Standards for Asbestos in accordance with 40 CFR 61, Subpart M.

The superseded permit condition was updated to reflect the language in current use for the sake of permitting consistency. No substantive change was intended.

**Permit Condition 3.34**

This permit condition incorporates standards for refrigerants and their substitutes in accordance with 40 CFR 82.

**Permit Condition 3.35 (Superseded Permit Condition 1.14)**

This permit condition incorporates accidental release prevention requirements in accordance with 40 CFR 68.

The superseded permit condition was updated for clarification purposes. No substantive change was intended.

**Permit Conditions 3.36 – 3.39 (Superseded Permit Condition 1.21)**

These permit conditions incorporate and establish requirements to ensure proper maintenance and operation of treatment and control equipment. The superseded permit conditions were updated for clarification purposes, based on changes to control device information and incorporation of CAM requirements, and for the sake of permitting consistency. O&M manuals have been developed as required by these permit conditions; refer to Appendix B for copies of the most recent O&M manuals. O&M requirements related to the B&W Boiler, the Erie City Boiler, the North Pulp Dryer, and the South Pulp Dryer scrubbers are MRRR for CAM.

MRRR include the following (Permit Conditions 3.37 – 3.39):

- Inspect, maintain, and operate control equipment in accordance with O&M manual(s).
- Record maintenance activities.
- Maintain records of O&M manual(s) and supporting documents, and report manual revisions semi-annually.

Superseded Permit Conditions 2.4, 3.5, 4.4, 5.2, 6.2, 7.2, 8.2, 9.3, and 10.2 required proper operation and maintenance of control equipment for the B&W Boiler, the Erie City Boiler, the Pulp Dryers, the Pellet Coolers, the Lime Kiln, the slaking system, the Granulator System, and the Sugar Handling Systems. These requirements have been consolidated into Permit Conditions 3.36 – 3.39. As discussed below, the slaking system is no longer applicable to O&M manual requirements.

Superseded Permit Conditions 2.8, 3.9, 4.9, 6.3, 7.3 – 7.4, 8.3 – 8.4, 9.4 – 9.5, and 10.3 – 10.4 required installation, operation, calibration, and maintenance of monitoring equipment. These requirements were similarly

consolidated into Permit Conditions 3.36 – 3.39. Explicit indicator ranges were incorporated into each applicable permit section, with the exception of the Lime Kiln section, for which the O&M manuals require updating as a result of the lime kiln replacement project (P-2010.0043) and should be incorporated at the time of the next permit renewal. In this instance, establishing recommended indicator ranges is required in Permit Condition 3.38. As discussed below, the slaking system is no longer applicable to O&M manual requirements.

O&M manual requirements related to the slaking system were removed (superseded Permit Condition 3.37); refer to discussion provided for superseded Permit Conditions 7.1 – 7.5 for additional information.

**Permit Conditions 3.40 – 3.44 (Superseded Permit Condition 1.15 and 1.20)**

These permit conditions incorporate test method and test procedures in accordance with IDAPA 58.01.01.157.

MRRR include the following (Permit Conditions 3.40 – 3.44):

- Notify of intent to test.
- Submit proposed testing for approval.
- Report test results.
- Use recommended test methods unless otherwise approved.

The superseded permit conditions were updated for clarification purposes and to reflect the language in current use for the sake of permitting consistency. No substantive change was intended.

Refer also to Permit Conditions 3.22 – 3.24, 4.3, 4.8 – 4.9, 5.4, 5.9, 7.9, and 9.14 – 9.16 for additional compliance testing requirements.

**MRRR Permit Condition 3.45 (Superseded Permit Condition 1.11)**

This permit condition incorporates a generally applicable MRRR to maintain sufficient records to assure compliance with all of the terms and conditions of the permit.

**MRRR Permit Condition 3.46 (Superseded Permit Condition 1.10)**

This permit condition establishes a generally applicable MRRR for submittal of reports, certifications, and notifications.

The schedule for submitting periodic compliance certifications and semi-annual monitoring reports can be found in General Provisions 12.22 and 12.25. No substantive change was intended.

The permittee has requested clarification on where semi-annual CEMS and CAM reports need to be submitted. DEQ concurs that semi-annual CEMS and CAM reports are required to be submitted to DEQ and are not required to be submitted to EPA, while annual certifications are required to be submitted to both DEQ and EPA (in accordance with 40 CFR Parts 64 and 70).

**Permit Condition 3.47**

This permit condition incorporates federally applicable requirements by reference in accordance with IDAPA 58.01.01.107.

**Permit Condition 4.1 and 4.2 – 4.7 (Superseded Permit Conditions 2.1, 2.3, and 2.7 – 2.11)**

Permit Condition 4.1 incorporates fuel-burning equipment PM standards in accordance with IDAPA 58.01.01.677. The superseded Permit Condition 2.1 was updated for clarification purposes; no substantive change was intended.

MRRR for CAM when firing coal include the following for the control equipment (Permit Conditions 4.2 – 4.7):

- Monitor continuously and record water flow rate daily.
- Monitor and record visible emissions weekly.
- Monitor and record total solids according to the schedule specified.
- Take corrective action upon detecting excursions or exceedances.

- Develop and maintain QA/QC and QIP plans.
- Recordkeeping and reporting of excursions and exceedances.

CAM requirements were established based upon indicators in superseded Permit Conditions 2.7 – 2.11; requirements were revised to meet specific CAM criteria. Refer to the CAM Applicability (40 CFR 64) section for additional information concerning CAM requirements.

As noted in the introductory paragraph, because the fuel burning equipment standard was incorporated in the B&W Boiler permit section, it was not incorporated within the facility-wide section of the permit.

**Permit Condition 4.8 – 4.9, 5.9, and 7.9 (Superseded Permit Conditions 2.5-2.6, 3.6-3.7, and 4.5-4.6)**

These permit conditions establish periodic performance testing. The testing frequencies identified in the superseded permit conditions have been updated based on current DEQ policy.<sup>9</sup> Emissions units with an emission limitation and with PTE exceeding 49.9 TPY are generally required to re-test during the next permit term as provided in Table 7.

**Table 7 PERFORMANCE TESTING REQUIREMENTS**

Emissions Unit	Emission Rate (as Tested)	Emission Limit	Estimated PM <sub>10</sub> (PM) PTE <sup>(a)</sup>	Percentage of Limit <sup>(b)</sup>	Recommended Frequency	Required Next Term?
B&W Boiler	0.042 gr/dscf <sup>(b)</sup>	0.10 gr/dscf	101-121	42%	every 2 yr, <sup>(c)</sup> or within 5 yr of last test <sup>(e)</sup>	Yes
Erie City Boiler	0.065 gr/dscf <sup>(b)</sup>	(0.100 * X + 0.011 * Y) gr/dscf at 8% O <sub>2</sub>	119-154	65%	every 2 yr, <sup>(c)</sup> or within 3 yr of last test <sup>(d)(f)</sup>	Yes
North Pulp Dryer	29.6 lb/hr <sup>(b)</sup>	E = 0.02518(PW) <sup>0.67</sup> (for PW < 60,000)	81-105	67%	every 2 yr, <sup>(c)</sup> or within 3 yr of last test <sup>(d)</sup>	Yes
South Pulp Dryer	21.5 lb/hr <sup>(b)</sup>	E = 23.84(PW) <sup>0.11</sup> -40 (for PW ≥ 60,000)	79-101	50%	every 2 yr, <sup>(c)</sup> or within 5 yr of last test <sup>(e)</sup>	Yes

- a) Refer to Appendix A for additional information concerning emission inventories
- b) Based on the most recent documented performance test report. (Refer to reference 7 above.)
- c) Two-year frequency was based on guidance and estimated potential emissions falling within the range of 100 – 999.9 T/yr.
- d) Three-year frequency was based on guidance and the most recent test result falling within the range of 50 – 80% of the applicable limit.
- e) Five-year frequency was based on guidance and the most recent test result falling within the range of less than 50% of the applicable limit.
- f) PM testing frequency was reduced to one potentially-applicable test (Permit Condition 5.9) if coal firing is used, to reflect the transition to natural gas firing only, for which projected PM emissions were estimated to be 25.8 T/yr.<sup>11</sup>

For the B&W Boiler, the Erie City Boiler, the North Pulp Dryer, and the South Pulp Dryer, it was considered reasonable to require testing every three years for the boilers (Permit Conditions 4.8 and 5.9), and every five years for the pulp dryers (Permit Condition 7.9). These frequencies were established with consideration given to the relevant compliance history,<sup>7</sup> the considerable resources involved in conducting stack testing,<sup>10</sup> consistency in testing similar emissions units (specifically regarding the B&W Boiler and North Pulp Dryer), the application of continuous monitoring (CAM) to these units, and the application of no less than the minimum recommended test frequency for each source category. However, because the permittee has recently committed to limiting all facility boilers to natural gas firing during the next permit term (Permit Condition 3.7),<sup>11</sup> and because recently the Erie City Boiler has primarily used natural gas, the frequency for testing PM emissions from the Erie City Boiler has been reduced to one potentially-applicable test (Permit Condition 5.9) if coal firing is used during the permit term. The transition to natural gas firing is projected to reduce PM emissions from the Erie City Boiler without requiring modification to the boiler.

<sup>9</sup> "Guidance for Requiring Source Tests in Air Permits," Doc ID AQ-IG-P001, rev. 1, Idaho DEQ, April 16, 2007.

<sup>10</sup> "Draft Tier I Operating Permit No. T1-050415 Applicant Review Comments," TASC, May 16, 2011 and June 23, 2011.

<sup>11</sup> "Draft PTC P-2011.0040 PROJ 61314 & Draft T1 Operating Permit T1-050414 PROJ 0414 Comments," TASC, July 21, 2014 (2014AAG1415); see also Appendix D.

Although a “tiered approach” to testing was not included at this time (e.g., subsequent testing frequency established based upon each subsequent test result), the required testing frequencies may be revisited at the time of the next permit renewal.

Permit Condition 4.9 requires an initial performance test to measure the carbon monoxide (CO) emission rate in accordance with IDAPA 58.01.01.211.04, in order to verify the accuracy of B&W Boiler projected-actual CO emission estimates based on burner manufacturer estimates. With consideration given to initial verification testing and ongoing boiler work practice requirements required by the Boiler MACT,<sup>12</sup> additional CO testing was not required beyond the requirements of an initial verification test.

Although not shown in Table 7, the Lime Kiln was recently evaluated with respect to current DEQ policy<sup>11</sup> at the time of issuance of P-2010.0043, and periodic testing requirements have not been re-evaluated at this time. Please refer to the Statement of Basis for P-2010.0043 for additional information concerning this evaluation. Because testing outside of compliance with permit conditions is not required, superseded Permit Conditions 2.6, 3.7, and 4.6 were considered unnecessary and were removed.

MRRR include the following (Permit Conditions 3.40 – 3.44):

- Notify of intent to test.
- Submit proposed testing for approval.
- Report test results.
- Use recommended test methods unless otherwise approved.

**Permit Conditions 5.1, 5.2, and 5.3 – 5.8 (Superseded Permit Conditions 3.1 – 3.2, 3.4, and 3.8 – 3.12)**

Permit Condition 5.1 incorporates fuel-burning equipment particulate matter standards in accordance with IDAPA 58.01.01.677. The superseded Permit Condition 3.1 was updated for clarification purposes; no substantive change was intended.

MRRR includes monitoring fuel type when switching fuels (Permit Condition 5.2) and for CAM when coal firing include the following for the control equipment (Permit Conditions 5.3 – 5.8):

- Monitor continuously and record water flow rate daily.
- Monitor and record visible emissions weekly.
- Monitor and record total solids according to the schedule specified.
- Take corrective action upon detecting excursions or exceedances.
- Develop and maintain QA/QC and QIP plans.
- Record and report excursions and exceedances.

CAM requirements were established based upon indicators in superseded Permit Conditions 3.8 – 3.12; requirements were revised to meet specific CAM criteria. Refer to the CAM Applicability (40 CFR 64) section for additional information concerning CAM requirements.

As noted in the introductory paragraph, because the fuel burning equipment standard was incorporated in the Erie City Boiler permit section, it was not incorporated within the facility-wide section of the permit.

**Permit Condition 6.1**

This permit condition incorporates visible emissions limits in accordance with IDAPA 58.01.01.625.

MRRR include the following (Permit Conditions 3.23 – 3.24):

- Inspect potential sources of visible emissions monthly.
- Take appropriate corrective actions to eliminate the visible emissions and perform Method 9 opacity testing when appropriate.

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<sup>12</sup> Burner tune-ups, as referenced in the application and as specified in 40 CFR 63.7540(a)(12).

- Maintain records of inspection, opacity tests, and corrective actions.
- Report exceedances.

### **Permit Condition 6.2**

This permit condition incorporates fuel-burning equipment PM standards in accordance with IDAPA 58.01.01.676.

No specific monitoring was required for this permit condition. As with all permit conditions, the permittee must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period. Because this boiler is required to use natural gas exclusively and is to be used only for backup purposes, establishing MRRR was not considered necessary at this time.

As noted in the introductory paragraph, because the fuel burning equipment standard was incorporated in the Nebraska Boiler permit section, it was not incorporated within the facility-wide section of the permit.

### **Permit Condition 6.3 – 6.9**

For the Nebraska Boiler, these permit conditions were incorporated to limit annual potential emissions (Permit Condition 6.3), limit fuel usage to natural gas (Permit Condition 6.4), and limit operations to backup use only (Permit Condition 6.7) and based on annual capacity (Permit Condition 6.6). These limits also determine applicable monitoring requirements under NSPS Subpart Db.

MRRR include the following (Permit Conditions 6.8 – 6.9):

- Monitor and record the amount of natural gas combusted daily.
- Calculate the annual capacity factor monthly.

As noted in the introductory paragraph, because initial startup of the Nebraska Boiler has already occurred, certain relevant permit to construct requirements were not incorporated.

### **Permit Condition 7.1 – 7.8 (Superseded Permit Conditions 4.2 – 4.3, and 4.7 – 4.12)**

Permit Condition 7.1 incorporates process weight-based PM standards in accordance with IDAPA 58.01.01.703.

MRRR includes recording the process weight input rate to each of the Pulp Dryers monthly (Permit Condition 7.2) and for CAM include the following for the control equipment (Permit Conditions 7.3 – 7.8):

- Monitor continuously and record water flow rate daily.
- Monitor continuously and record pressure drop daily.
- Monitor and record total solids according to the schedule specified.
- Take corrective action upon detecting excursions or exceedances.
- Develop and maintain QA/QC and QIP plans.
- Record and report excursions and exceedances.

CAM requirements were established based upon indicators in superseded Permit Condition 4.3; requirements were revised to meet specific CAM criteria. Refer to the CAM Applicability (40 CFR 64) section for additional information concerning CAM requirements.

### **Permit Condition 8.1 – 8.2 (Superseded Permit Conditions 5.1 and 5.3)**

Permit Condition 8.1 incorporates process weight-based PM standards in accordance with IDAPA 58.01.01.702.

MRRR includes inspection of control equipment annually (Permit Condition 8.2). The superseded permit conditions were updated for clarification purposes; no substantive changes were intended.

### **Permit Condition 9.1 and 9.3 – 9.16 (Superseded Permit Conditions 6.1 and 6.3 – 6.5)**

For the Lime Kiln, these permit conditions were incorporated to limit annual potential emissions (Permit Condition 9.1), limit sulfur content of fuels (Permit Condition 9.4), limit daily and annual lime rock input (Permit Condition 9.7), limit fuel input (Permit Condition 9.8), require performance testing (Permit Condition 9.14 – 9.16) and to incorporate process weight-based PM standards (Permit Condition 9.3) in accordance with IDAPA 58.01.01.701. Limits were established in P-2010.0043 as PSD avoidance limits and to ensure compliance with applicable ambient air quality standards.

MRRR includes the following for the control equipment (Permit Conditions 9.5 – 9.6, 9.9 – 9.10):

- Monitor and record water flow rate daily.
- Monitor and record pressure drop daily.

MRRR also includes the following (Permit Conditions 9.8, 9.11 – 9.13, 9.16):

- Monitor types and sulfur contents of fuels in each shipment.
- Monitor and record lime rock input daily.
- Calculate 5-day lime rock input average daily.
- Monitor and record annual lime rock input monthly.
- Monitor and record fuel input daily.
- Calculate 5-day fuel input average daily.
- Monitor and record operating conditions during testing.

The superseded permit conditions (Permit Conditions 6.1, 6.3 – 6.5) were determined to be no longer applicable resulting from replacement of the lime kilns (P-2010.0043 PROJ 61012, issued June 1, 2012) and were removed. As noted in the introductory paragraph, because shutdown of the replaced kilns has already occurred, certain relevant permit to construct requirements were not incorporated.

The annual lime rock input and coal/coke fuel limits (Permit Conditions 9.7 and 9.8) are PSD avoidance limits, required to resolve the historic equipment review.<sup>8</sup>

It is noted that based on the results of the most recent performance test, the next test will be required on or before November 19, 2018.<sup>13</sup>

### **Permit Condition 9.2**

This permit condition incorporates visible emissions limits in accordance with IDAPA 58.01.01.625.

MRRR include the following (Permit Conditions 3.23 – 3.24):

- Inspect potential sources of visible emissions monthly.
- Take appropriate corrective actions to eliminate the visible emissions and perform Method 9 opacity testing when appropriate.
- Maintain records of inspection, opacity tests, and corrective actions.
- Report exceedances.

### **Superseded Permit Conditions 7.1 – 7.5**

Slaker requirements were removed in P-2010.0043 PROJ 61325; refer to the supporting statement of basis for this permitting action for additional discussion.

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<sup>13</sup> Letters from DEQ to TASC0, May 2014 (2014AAG982, 2014AAG981).

### **Superseded Permit Conditions 8.1 – 8.5, 9.1 – 9.6, and 10.1 – 10.5**

Because information was provided supporting that these emissions units are inherent process equipment and have potential emissions less than or equal to the significant emission rate (as defined in IDAPA 58.01.01.006), and actual emissions less than or equal to 10% of the significant emission rate and no more than one ton per year of any HAP,<sup>11,14</sup> permit conditions for the Drying Granulator, Cooling Granulators, and the Sugar Handling System were removed.

These emission sources were identified in the Insignificant Emissions Units Based on Size or Production Rate section of the permit, in accordance with IDAPA 58.01.01.317.01.b.i.30. Refer to Appendix D for additional information.

### ***Insignificant Emissions Units Based on Size or Production Rate***

No emissions unit or activity subject to an applicable requirement may qualify as an insignificant emissions unit or activity. As required by IDAPA 58.01.01.317.01.b, insignificant emissions units based on size or production rate must be listed in the permit application. Table 14.1 in the permit lists each insignificant emission unit identified in the permit application and cites the relevant regulatory authority. Activities listed in the permit which qualify as insignificant based on size or production qualify under one of the following criteria:

- (5) combustion source, less than 5 MMBtu/hr, exclusively using natural gas, butane, propane, and/or LPG
- (18) space heaters and hot water heaters using natural gas, propane or kerosene and generating <5 MMBtu/hr.
- (19) tanks, vessels, and pumping equipment, with lids or other appropriate closure for storage or dispensing of aqueous solutions of inorganic salts, bases and acids (excluding  $\geq 99\%$  H<sub>2</sub>SO<sub>4</sub> or H<sub>3</sub>PO<sub>4</sub>,  $\geq 70\%$  HNO<sub>3</sub>,  $\geq 30\%$  HCl, or more than one liquid phase where the top phase is >1% VOC).
- (30) an emission unit or activity with PTE less than or equal to the significant emission rate (PM=25 T/yr, PM<sub>10</sub>=15 T/yr) and actual emissions less than or equal to 10% of the levels contained in the definition of significant (PM=2.5 T/yr, PM<sub>10</sub>=1.5 T/yr) and no more than 1 T/yr of any HAP.

Emission estimates supporting insignificant activities applicability under IDAPA 58.01.01.317.01.b.i(30) were recently provided for Slakers #1-4, lime rock material handling, coke material handling, granulator system, and sugar handling system.<sup>4,11,14,15</sup>

### ***Non-Applicable Requirements for Which a Permit Shield is Requested***

This section of the permit lists the regulations for which the facility has requested, and DEQ proposes to grant, a permit shield pursuant to IDAPA 58.01.01.325.

With regard to Permit Condition 11.1 (superseded Permit Condition 12.1), as discussed in the technical basis memorandum for the initial Tier I operating permit,<sup>16</sup> it was determined that the Pulp Dryers and the Lime Kiln were not fuel-burning equipment in accordance with the definition in IDAPA 58.01.01.006. Available information does not support revisiting this determination at this time.

With regard to Permit Condition 11.2 (superseded Permit Conditions 12.3 and 12.4), as discussed in the technical basis memorandum for the initial Tier I operating permit,<sup>15</sup> it was determined that the B&W Boiler and Erie City Boiler were installed or modified before August 17, 1971, and that NSPS Subpart D was not applicable to these emissions units. Available information does not support revisiting this determination at this time.

With regard to superseded Permit Conditions 12.2 and 12.5 (referencing Sections 1.1 and Permit Conditions 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2, 4.3, and 4.4 of Permit No. 1020-0001, issued January 1, 1984), because the referenced permit has expired, these determinations were considered irrelevant and were removed.

<sup>14</sup> "Draft T1 Operating Permit T1-050414 PROJ 0414 Inherent Process Equipment," TASC0, August 22, 2014 (2014AAG1515); see also Appendix D.

<sup>15</sup> Lime Kiln Replacement Project Application (P-2010.0043), TASC0, March 22, 2010 (2010AAG598). See also Statement of Basis to P-2010.0043 PROJ 61325.

<sup>16</sup> Technical Basis for Tier I Operating Permit No. T1-9503-039-1, DEQ, December 4, 2002 (2011AAG3289).

## ***General Provisions***

### **Permit Conditions 12.1 – 12.3**

The duty to comply general provision incorporates the requirement to comply with all of the permit terms and conditions in accordance with IDAPA 58.01.01.322.15.a and 40 CFR 70.6(a)(6)(i).

The duty to halt or reduce activity general provision incorporates the requirement that needing to halt or reduce an activity cannot be used as a defense in an enforcement action in accordance with IDAPA 58.01.01.322.15.b and 40 CFR 70.6(a)(6)(ii).

The duty to supplement or correct application general provision incorporates the requirement to submit supplementary facts or corrected information upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application in accordance with IDAPA 58.01.01.315.01 and 40 CFR 70.5(b).

### **Permit Conditions 12.4 – 12.5**

The reopening for cause general provisions incorporate the requirements for revising, reopening, revoking, reissuing, or terminating permits for cause in accordance with IDAPA 58.01.01.322.15.c, IDAPA 58.01.01.386, 40 CFR 70.7(f), and 40 CFR 70.6(a)(6)(iii).

Permit conditions are not stayed if a request for permit action or notification of noncompliance is filed, in accordance with IDAPA 58.01.01.322.15.d, and 40 CFR 70.6(a)(6)(iii).

### **Permit Condition 12.6**

The property rights general provision incorporates the requirement that property rights or exclusive privilege are not conveyed by this permit, in accordance with IDAPA 58.01.01.322.15.e, and 40 CFR 70.6(a)(6)(iv).

### **Permit Conditions 12.7 – 12.8**

The duty to provide information general provisions incorporate the requirement to furnish information requested in accordance with Idaho Code §39-108, IDAPA 58.01.01.122, IDAPA 58.01.01.322.15.f, and 40 CFR 70.6(a)(6)(v).

A claim of confidentiality is required when confidential information is submitted in accordance with Idaho Code §9-342A, IDAPA 58.01.01.322.15.g, IDAPA 58.01.01.128, and 40 CFR 70.6(a)(6)(v).

### **Permit Condition 12.9**

The severability general provision incorporates the provision that if any permit requirement is held to be invalid, all unaffected requirements remain in effect and enforceable in accordance with IDAPA 58.01.01.322.15.h and 40 CFR 70.6(a)(5).

### **Permit Conditions 12.10 – 12.11**

The changes requiring permit revision or notice general provisions incorporate the requirement that necessary permits must be obtained before construction or modification of a stationary source, facility, major facility, or major modification in accordance with IDAPA 58.01.01.200-223, IDAPA 58.01.01.322.15.i, IDAPA 58.01.01.380-386, 40 CFR 70.4(b)(12), (14), (15), and 70.7(d), (e).

Changes not addressed or prohibited require permit revision if such changes are subject to any of the requirements specified in IDAPA 58.01.01.209.05 and 40 CFR 70.4(b)(14) and (15); or if such changes are administrative amendments, minor permit modifications, or significant permit modifications specified in IDAPA 58.01.01.381-383. Off-permit or Section 502(b)(10) changes made with notification to DEQ are authorized in accordance with IDAPA 58.01.01.384 or IDAPA 58.01.01.385.

### **Permit Conditions 12.12 – 12.13**

The federal and state enforceability general provisions incorporate the provision that all terms and conditions not specifically cited as “state-only” are enforceable by DEQ in accordance with state law and are enforceable by the United States or any other person in accordance with federal law, in accordance with IDAPA 58.01.01.322.15.j, IDAPA 58.01.01.322.15.k, Idaho Code §39-108, and 40 CFR 70.6(b)(1) and (2).

Those permit conditions cited as “state-only” are enforceable in accordance with state law, in accordance with Idaho Code §39-108, IDAPA 58.01.01.322.15.k, and 40 CFR 70.6(b)(1) and (2).

#### **Permit Condition 12.14**

The inspection and entry general provision incorporates the requirement to allow DEQ or an authorized representative to have access to the premises, to records, and to inspection, in accordance with Idaho Code §39-108, IDAPA 58.01.01.322.15.l, and 40 CFR 70.6(c)(2).

#### **Permit Condition 12.15**

The new requirements during permit term general provision incorporates the requirement to comply with all applicable requirements that become effective during the permit term on a timely basis, in accordance with IDAPA 58.01.01.322.10, IDAPA 58.01.01.314.10.a.ii, 40 CFR 70.6(c)(3) citing 70.5(c)(8).

#### **Permit Condition 12.16**

The fees general provision incorporates the requirement to pay annual registration fees to DEQ in accordance with IDAPA 58.01.01.387 through IDAPA 58.01.01.397 and 40 CFR 70.6(a)(7).

#### **Permit Condition 12.17**

The certification general provision incorporates the requirement to certify all documents submitted to DEQ as true, accurate, and complete in accordance with IDAPA 58.01.01.123 and to comply with IDAPA 58.01.01.124, in accordance with IDAPA 58.01.01.322.15.o, 40 CFR 70.6(a)(3)(iii)(A), and 40 CFR 70.5(d).

#### **Permit Conditions 12.18 – 12.19**

The renewal general provisions incorporate the requirement to submit an application for renewal of the permit 6-18 months before expiration in accordance with IDAPA 58.01.01.313.03 and 40 CFR 70.5(a)(1)(iii).

The permit continuation general provision incorporates the provision that all permit terms and conditions remain in effect until a renewal permit has been issued in accordance with IDAPA 58.01.01.322.15.p and 40 CFR 70.7(b).

#### **Permit Condition 12.20**

The permit shield general provision incorporates the provision that compliance with the terms and conditions of the permit shall be deemed compliance with applicable and non-applicable requirements specifically cited in the permit as of the date of permit issuance, provided that certain criteria are met as specified in accordance with IDAPA 58.01.01.122, IDAPA 58.01.01.325, IDAPA 58.01.01.381.04, IDAPA 58.01.01.382.04, IDAPA 58.01.01.383.05, IDAPA 58.01.01.384.03, IDAPA 58.01.01.385.03, IDAPA 58.01.01.322.15.m, and Idaho Code §39-108 and 112, and 40 CFR 70.6(f).

#### **Permit Condition 12.21**

The compliance schedule general provision incorporates requirements to comply with the compliance schedule, to continue to comply with applicable requirements, and to comply with new requirements on a timely basis in accordance with IDAPA 58.01.01.322.10, IDAPA 58.01.01.314.9, IDAPA 58.01.01.314.10, 40 CFR 70.6(c)(3) and (4).

#### **Permit Condition 12.22**

The compliance certification general provision incorporates the requirement to submit compliance certifications for each emissions unit to DEQ and the EPA as specified in accordance with IDAPA 58.01.01.322.11, 40 CFR 70.6(c)(5)(iii), 40 CFR 70.6(c)(5)(iv), and 62 Fed. Reg. 54900 and 54946.

#### **Permit Condition 12.23**

The false statements general provision incorporates the requirement to make no false statements as specified in accordance with IDAPA 58.01.01.125.

#### **Permit Condition 12.24**

The no tampering general provision incorporates the requirement to not render inaccurate any monitoring device or method in accordance with IDAPA 58.01.01.126.

### **Permit Condition 12.25**

The semiannual monitoring reports general provision incorporates the requirement to submit reports of required monitoring, including the information specified on the basis specified in accordance with IDAPA 58.01.01.322.15.q, IDAPA 58.01.01.322.08.c, 40 CFR 70.6(a)(3)(iii).

### **Permit Condition 12.26**

The reporting deviations and excess emissions general provision incorporates the requirement to promptly report all deviations and excess emissions as specified in accordance with IDAPA 58.01.01.130-136, IDAPA 58.01.01.322.08.c, IDAPA 58.01.01.322.15.q, IDAPA 58.01.01.135, and 40 CFR 70.6(a)(3)(iii).

### **Permit Condition 12.27**

The emissions trading general provision incorporates the provision that permit revision shall not be required under approved economic incentives, marketable permits, emissions trading, and other similar programs as specified in accordance with IDAPA 58.01.01.322.05.b and 40 CFR 70.6(a)(8).

### **Permit Condition 12.28**

The emergency general provision incorporates the provision that an “emergency” as defined in IDAPA 58.01.01.008 constitutes an affirmative defense to an action brought for noncompliance with a technology-based emissions limitation if criteria are met as specified in accordance with IDAPA 58.01.01.332 and 40 CFR 70.6(g).

## **5. PUBLIC AND EPA REVIEW**

### ***Public Comment Period***

A public comment period was provided in accordance with IDAPA 58.01.01.364. During this time, comments were received in response to DEQ’s proposed action. Refer to the Application Chronology section for public comment period dates, and to Appendix D – Public Comments for a copy of the comments received.

Superseded Permit Conditions 8.1 – 8.5, 9.1 – 9.6, and 10.1 – 10.5 and Insignificant Emissions Units Based on Size or Production Rate have been revised in the proposed permit in response to comments received. These revisions are addressed in the Permit Conditions Review section.

### ***EPA Review of Proposed Permit***

An EPA Region 10 review period was provided in accordance with IDAPA 58.01.01.366. During this time, no comments were received in response to DEQ’s proposed action. Refer to the Application Chronology section for EPA review period dates.

## **APPENDIX A – EMISSION INVENTORIES**

SUMMARY OF CRITERIA POLLUTANT EMISSIONS - Projected Actual Emissions (P-2011.0040 PROJ 60095)  
 Mini Cassia Facility

Table 1

Beet run (days) 208.00  
 Juice run (days) 125.00

Source	ID	PM		PM <sub>10</sub>		SO <sub>2</sub>		CO		NO <sub>x</sub>		VOC		GHG
		max lb/hr	year T/yr	max lb/hr	year T/yr	max lb/hr	year T/yr	max lb/hr	year T/yr	max lb/hr	year T/yr	max lb/hr	year T/yr	year CO <sub>2</sub> e T/yr
B&W Boiler	S-B1	62.8	100.1	62.8	100.1	41.8	79.2	60.0	113.8	235.6	446.4	0.9	1.7	96838
Ene City Boiler	S-B2	67.3	118.3	67.3	118.3	52.3	86.0	0.5	2.9	283.8	575.0	1.1	4.0	140798
South Pulp Dryer	S-D1	44.1	78.7	44.1	78.7	27.4	51.0	287.3	512.4	78.9	146.5	1.8	3.3	42228
North Pulp Dryer	S-D2	45.5	80.8	45.5	80.8	31.9	59.9	349.4	620.1	77.5	145.5	2.1	3.9	49653
Pellet Cooler No. 1	S-D3	2.40	3.88	1.20	1.84									
Pellet Cooler No. 2	S-D4	2.40	3.88	1.20	1.84									
Pellet Cooler No. 3	S-D5	2.40	3.88	1.20	1.84									
Eberhardt Kiln	S-K1	3.10	7.08	3.10	7.08	0.9	2.1	690.2	1572.7	20.2	46.1	1.2	2.8	29991
Process & Flume Slaker	S-KC	0.48	1.05	0.48	1.05									
Drying Granulator	S-W1	0.73	2.35	0.73	2.35									
#1 Cooling Granulator	S-W2	0.37	1.18	0.37	1.18									
#2 Cooling Granulator	S-W3	0.37	1.18	0.37	1.18									
Sugar Handling(Process)	S-W4	0.30	1.31	0.30	1.31									
Sugar Handling(Bulk Loading)	S-W5	0.30	1.31	0.30	1.31									
Main Mill	S-O5											61.5	132.3	
Sulfur Stoves	S-O7					5.5	11.0							
Coal Unloading Area	F-O1													0.15
Coal Storage Area	F-O2													3.51
Boiler Coal Unloading area & Haul Road	F-B3													0.50
Beet Hauling - West & Loop	F-O4 (e-e)													3.24
Beet Hauling - East	F-O4 (f-f)													4.97
Beet Hauling - North - East	F-O4 (j)													0.74
Cooling Towers	F-O8													4.02
Dryer Coal Unloading	F-D6													0.06
Dried Pulp Storage & Loadout	F-D7													0.45
PCC Storage & Handling	F-O8 (e-e)													3.94
<b>TOTAL</b>		<b>222.8</b>	<b>404.4</b>	<b>219.0</b>	<b>420.4</b>	<b>160.4</b>	<b>290.2</b>	<b>1387.4</b>	<b>2821.9</b>	<b>696.0</b>	<b>1359.5</b>	<b>68.5</b>	<b>148.0</b>	<b>359507</b>

**PTE HAP Emissions  
from the  
Mini-Cassia Facility**

Hazardous Air Pollutant (HAP)	B & W Boiler		Erie City Boiler		Nebraska Boiler		North Dryer (tons/year)	U.C. Klin (tons/year)	Belgium Klin (tons/year)	Main Mill (tons/year)	Constituent Totals (tons/year)
	Coal (tons/year)	Net Gas Does not run on NG (tons/year)	Coal (tons/year)	Net Gas (tons/year)	Coal (tons/year)	Net Gas (tons/year)					
Acetaldehyde	0.0144	0.0E+00	0.03		1.915		2.244	0.0E+00	0.0E+00	4.23	8.43
Acrolein	0.0073	0.0E+00	0.01		0.927		1.086	0.0E+00	0.0E+00	0.10	2.13
Formaldehyde	0.0061	0.0E+00	0.01	0.0E+00	0.955		1.119	6.0E-03	0.0E+00	0.04	2.14
Methanol					1.284		1.505			79.74	82.53
Arsenic	0.0104	0.0E+00	0.02	0.0E+00	0.225		0.256	8.0E-02	4.2E-04		0.59
Benzene	0.0329	0.0E+00	0.06	0.0E+00	0.014		0.016	1.7E-04	0.0E+00		0.13
Beryllium	0.0005	0.0E+00	0.00	0.0E+00	0.000		0.000	9.6E-07	2.2E-05		0.00
Cadmium	0.0013	0.0E+00	0.00	0.0E+00	0.001		0.001	3.7E-02	1.7E-02		0.06
Chromium	0.0066	0.0E+00	0.01	0.0E+00	0.003		0.003	1.1E-04	2.7E-04		0.03
Cyanide	0.0633	0.0E+00	0.12		0.025		0.029	0.0E+00	2.6E-03		0.24
Hydrochloric Acid	0.0201	0.0E+00	0.04		0.053		0.062	0.0E+00	0.0E+00		0.17
Hydrogen Fluoride	0.1604	0.0E+00	0.31		0.064		0.074	0.0E+00	0.0E+00		0.60
Lead	0.0108	0.0E+00	0.02	0.0E+00	0.004		0.005	4.0E-05	4.3E-04		0.04
Manganese	0.0124	0.0E+00	0.02	0.0E+00	0.006		0.006	3.0E-05	5.0E-04		0.05
Mercury	0.0009	0.0E+00	0.0013	0.0E+00	0.008		0.009	1.1E-03	5.2E-04		0.005
Nickel	0.0071	0.0E+00	0.01	0.0E+00	0.003		0.004	1.7E-04	2.9E-04		0.03
Selenium	0.0329	0.0E+00	0.06	0.0E+00	0.013		0.015	1.9E-06	1.3E-03		0.13
Toluene	0.0061	0.0E+00	0.01	0.0E+00	0.003		0.004	2.7E-04	0.0E+00		0.02
Xylenes	0.0009	0.0E+00	0.00		0.000		0.000	0.0E+00	0.0E+00		0.00
PAH and other HAPs	0.095	0.0E+00	0.18	0.0E+00	0.44		0.50	0.1442	0.0E+00		1.35
<b>Grand Total</b>											<b>98.68</b>

1. PAH and Other HAP emission factors are listed in the Fuel E\_Factors sheet and include the following

2,4-Dinitrotoluene, 2-Chloroacetophenone, Acetophenone, Antimony Compounds, Benzyl chloride, Bis(2-ethylhexyl)phthalate (DEHP), Bromoform, Carbon disulfide, Chlorobenzene, Chloroform, Cobalt Compounds, Cumene, Dimethyl sulfate, Ethyl benzene, Ethyl chloride (Chloroethane), Ethylene dibromide (Dibromoethane), Ethylene dichloride (1,2-Dichloroethane), Hexane, Isophorone, Methyl bromide (Bromomethane), Methyl chloride (Chloromethane), Methyl chloroform (1,1,1-Trichloroethane), Methyl hydrazine, Methyl Methacrylate, Methyl tert butyl ether, Methylene chloride (Dichloromethane), Phenol, Propionaldehyde, Styrene, Tetrachloroethylene (Perchloroethylene), Vinyl Acetate and PAH Compounds

## **APPENDIX B – O&M MANUALS**

**Operation & Maintenance  
Manual**

**B & W Boiler  
Multiclone and Scrubber**

**The Amalgamated Sugar Company  
Paul Facility**

**Revised February 2008  
Revised June 2008**

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## **B & W Boiler Multiclone & Scrubber**

This Operation & Maintenance Manual (O&M Manual) for the B&W boiler multiclone and scrubber emissions control equipment has been prepared in accordance with the Mini Cassia Tier I Operating Permit (No. T1-030416 issued September 23, 2005). The O&M Manual includes the following:

- General Description of the Control Equipment
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Boiler Start-up, Shutdown Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

### **General Description**

The B&W boiler is a coal fired stoker boiler, which produces 200 psi super heated steam that is used to generate electrical power and evaporate water from sugar beet juices. The B&W boiler is equipped with an economizer. Emissions from the B&W boiler are controlled by a multiclone and wet scrubber. An economizer is located between the multiclone and wet scrubber in the exhaust stream. A process flow diagram for the B&W boiler and emission control system is included in Figure 1.

The multiclone, which was manufactured by Western Precipitation, contains 224 cones and its primary purpose is to remove large particulates from the exhaust stream (Figure 2).

The low pressure drop wet scrubber which was manufactured by Celesco is used as a final cleaning mechanism before exhaust gases are discharged to the atmosphere (Figure 3). The wet scrubber includes both high (150 psi) and low (80 psi) pressure sprays. Low pressure sprays are located primarily in the back portion of the scrubber. High pressure sprays are located in the front end of the scrubber. A few low pressure sprays are also located in the throat of the scrubber.

In September 2004 a new dual alkali scrubber water treatment system was installed. This system was required under the 2002 TASC0/ IDEQ compliance agreement and was a prerequisite to discontinuing operation of the lime pond.

Figure 1

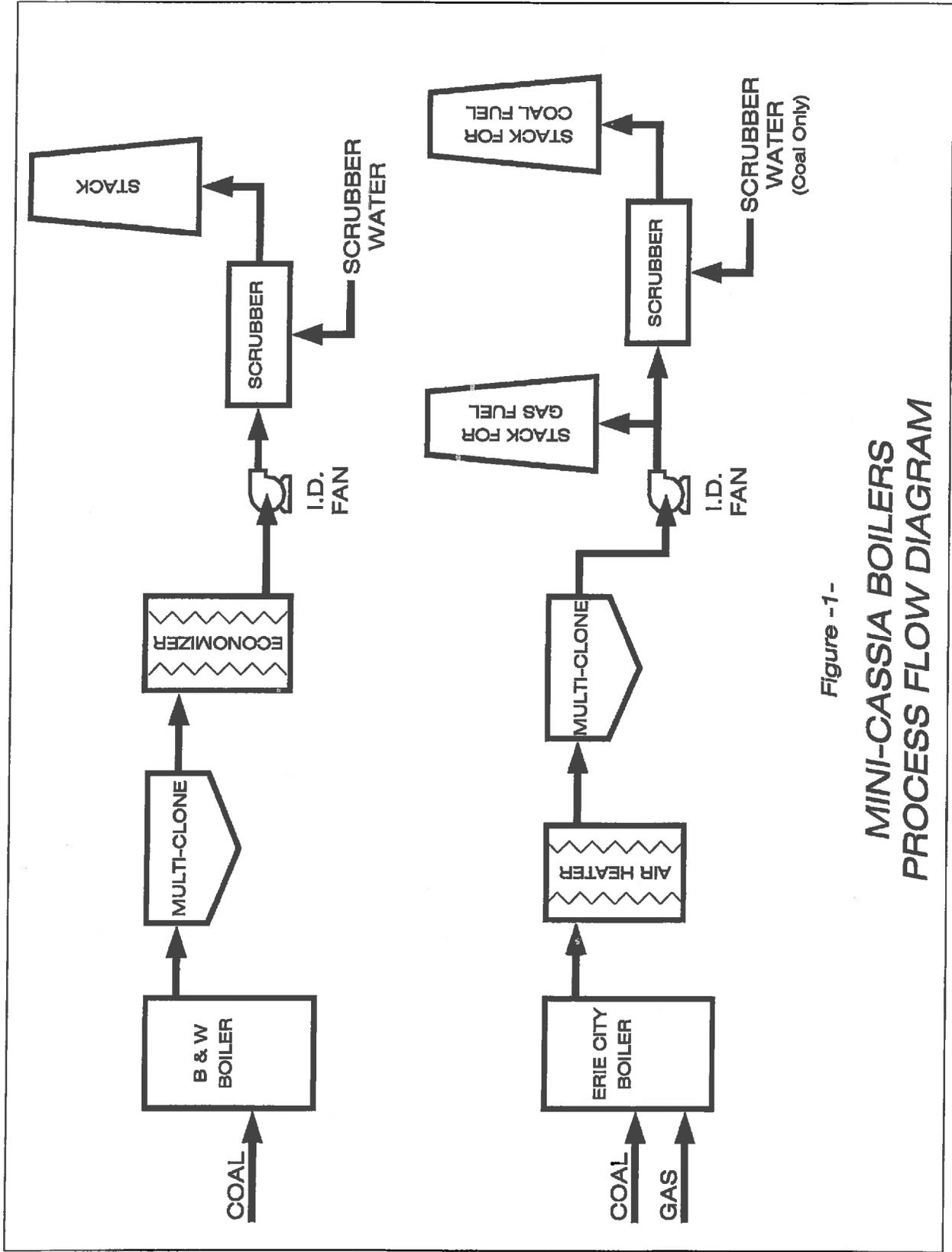


Figure -1-  
MINI-CASSIA BOILERS  
PROCESS FLOW DIAGRAM

**Figure 2**

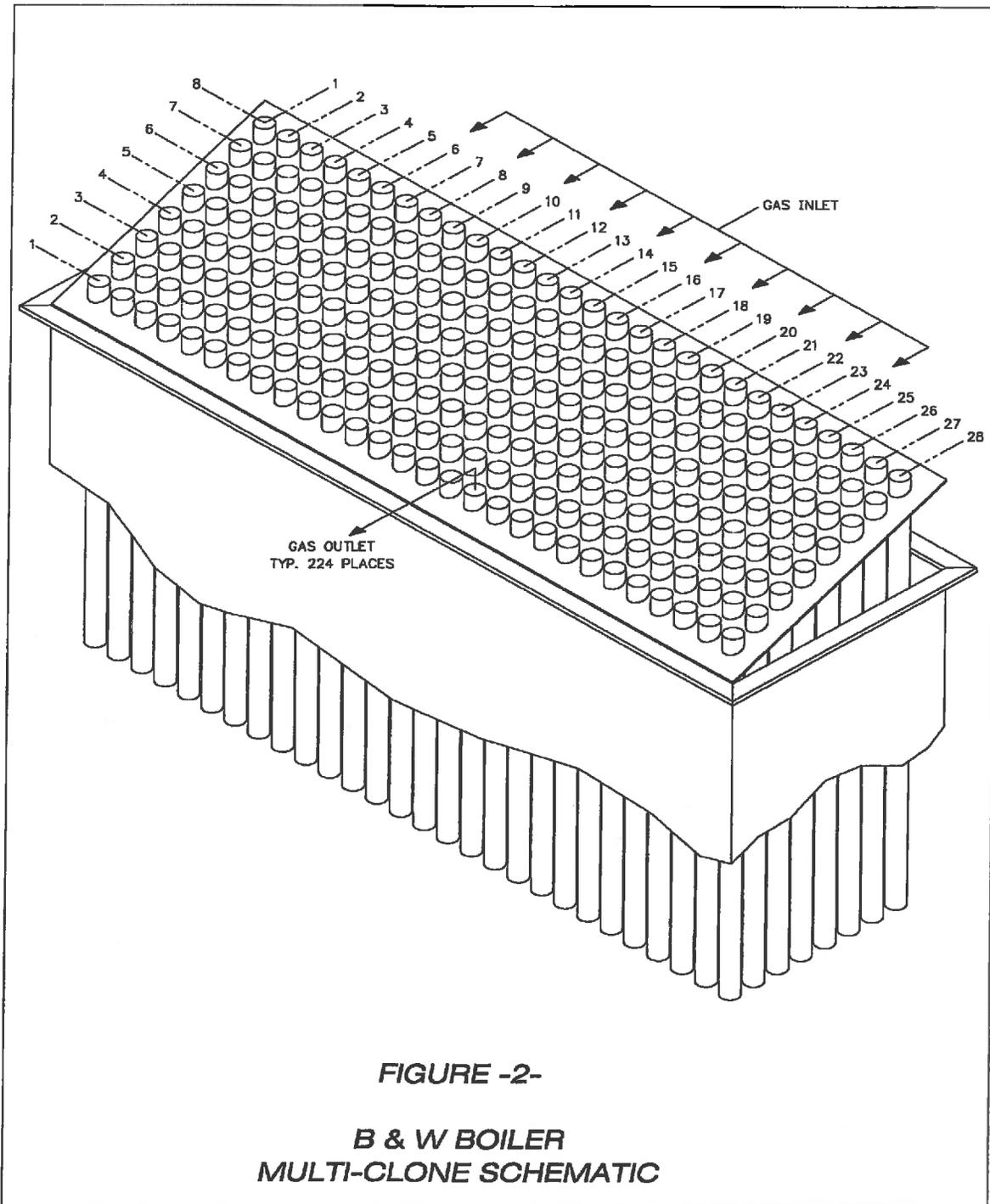
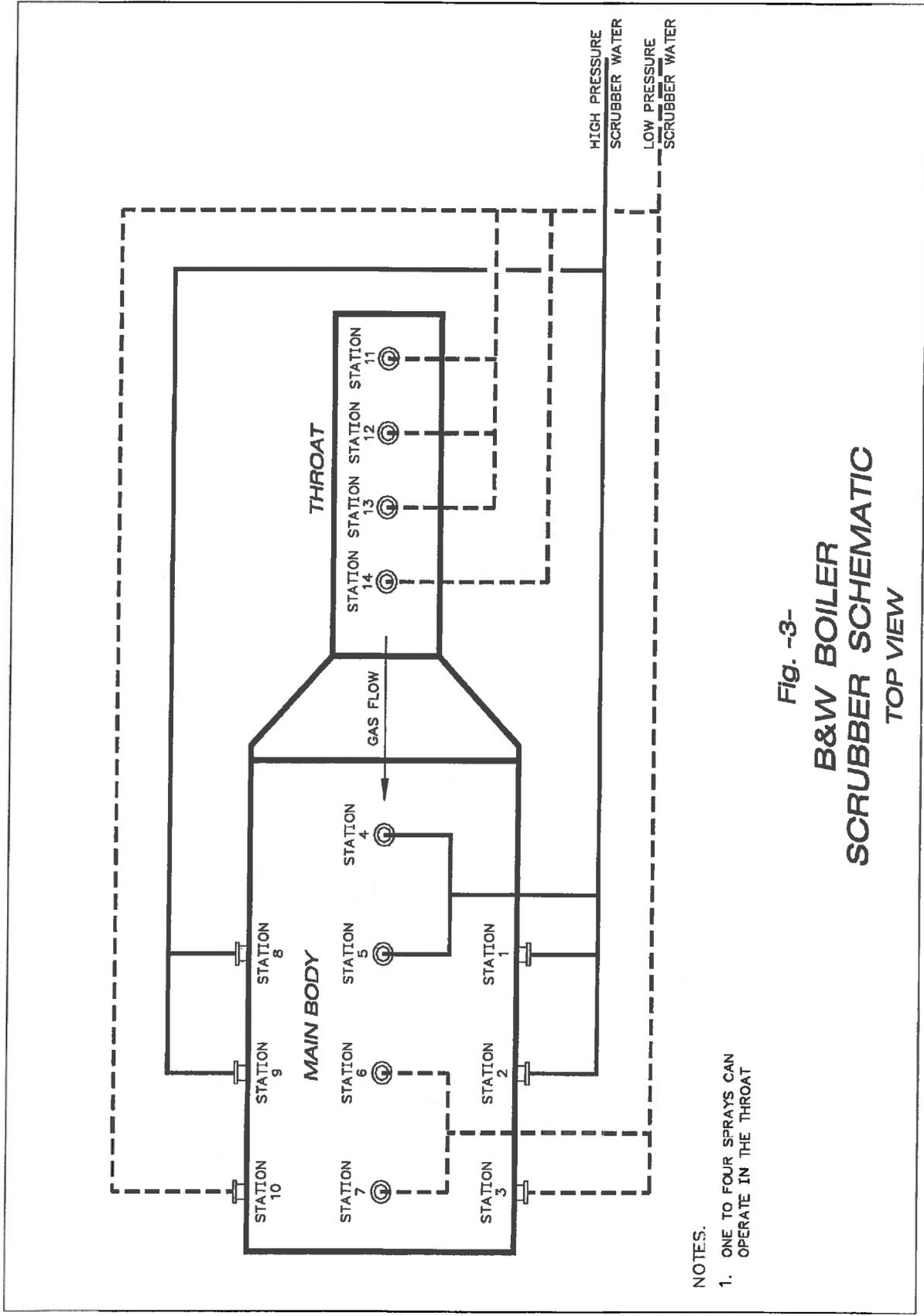


Figure 3



NOTES.

- 1. ONE TO FOUR SPRAYS CAN OPERATE IN THE THROAT

Fig. -3-  
**B&W BOILER  
SCRUBBER SCHEMATIC  
TOP VIEW**

## **Operating Procedures**

Operating procedures for the B&W boiler scrubber and multiclone have been developed based on manufacturer data, visible emissions observations, and particulate stack tests. Key operating parameters for the wet scrubber are water flow and water quality. As per the requirements of the Tier I permit, the operating ranges for these parameters are:

- Water Flow .....460 - 690 gpm
- Water Quality Total Solids .....142,090 mg/l max

The above total solids concentration limit changed after compliance stack testing performed February 27, 2008, DEQ approved the limit June 6, 2008.

Operation of the multiclone fluctuates based on the steam loading of the boiler. As result, no operational adjustments can be made to the multiclone. The typical pressure drop of this multiclone is 2.5 inches of water at a steam loading rate of 160,000 pounds per hour.

## **Monitoring**

Periodic monitoring of the B&W boiler emissions control equipment is conducted in accordance with the Tier I permit. This includes visible emissions observations, parametric monitoring, and stack tests. The frequency of the monitoring is as follows:

- Water Flow (gpm) .....Weekly
- Visible Emissions Observations .....Weekly (or monthly as the permit allows)
- Water Quality (TDS & TSS) .....Monthly then Bi-Weekly
- Particulate Stack Tests .....Once per permit term

Listed below is a description of the monitoring methods and sampling locations.

### **Scrubber Water Flow**

Water flows to the low pressure and high pressure sprays are continuously monitored and recorded weekly. The magnetic flow meters are located on the inlet to the scrubber.

### **Scrubber Water Quality**

The inlet water to the scrubber is sampled monthly from September to December, then bi-weekly from January to the end of campaign for total solids (suspended solids + dissolved solids) using EPA Methods 2540-B or the sum of Methods 2540-C and 2540-D. The scrubber water sample is collected at the main header feeding the scrubber pumps.

### **Visible Emissions**

Visible emissions (VE) are conducted by a certified VE inspector using see/no see criteria in accordance with the air permit. Observations are conducted weekly to

determine whether there are any visible emissions. If visible emissions are present, a Method 9 opacity test is required. If four consecutive weekly visible emissions inspections indicate that visible emissions are not present, or opacity is below 20%, the frequency of visible emissions inspections can be decreased to monthly until such time that any Method 9 evaluation indicates emissions in excess of 20%. At such time, the visible emission inspections return to a weekly basis.

### **Stack Testing**

Particulate stack tests are conducted at least once during the life of the Tier I permit to ensure compliance with the permit limits and to assess the performance of the emissions control equipment. Source testing for particulate matter for permit compliance will be conducted in accordance with Method 5B.

## **Maintenance Procedures**

Maintenance is an important component for the proper operation of the emission control equipment. TASC0 has identified the following daily and annual tasks to be completed to ensure proper operation of the B&W scrubbers.

### **Daily Inspections and Maintenance**

The normal daily maintenance procedures call for inspection of the following at a minimum of once each shift:

#### **Inspection of scrubber pumps**

- Check pump packing, tighten as needed.
- Observe pump pressure.

#### **Inspection of Clemons Filters**

- Observe filter pressure on the inlet and outlet of the filter, change filter when there is greater than a 10 psig difference.

#### **Inspection of Spray System**

- At least once per shift, remove two spray bars and clean if necessary.
- Inspect spray nozzles for wear.
- Observe pressure at the spray bars to ensure adequate scrubber water flow.

#### **Observe Scrubber Water Flow**

- If flow is reduced, inspect pumps, filters and spray nozzles to ensure adequate flow.
- If system is not plugged and the flow is still reduced, inspect the flow meter for any scale build-up.

Replace pressure gauges when necessary.

### **Annual Maintenance**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, the multiclone and scrubber will be inspected for physical degradation that could affect the performance of the control device. Once per year during the intercampaign period, or as needed during operation the following maintenance activities will be performed.

#### **Water Pressure Gauges**

- Clean
- Replace

#### **Scrubber Spray Nozzles and Spray Bars**

- Clean
- Repair
- Replace worn nozzles
- Adequate water pressure to sprays
- Adequate water flow to sprays
- Proper spray pattern observed

#### **Ducts**

- Check and, if needed, repair leaks.
- Check for thin or weak metal.
- Replace or repair worn metal.

#### **Scrubber Housing**

- Inspect for damage. Repair as necessary.

#### **Instrumentation**

- Inspect and service all scrubber system instrumentation including water flow meters.

#### **Stack**

- Inspect stack for any damage that may have occurred. Repair as necessary.

## **Startup and Shutdown Procedures**

During start-up, emissions from the B&W boiler are passed through the multiclone and scrubber. At low steam production rates, the pollution control equipment's collection efficiencies are reduced during start-up. Additionally, as the boiler's loading is increased to its normal operating temperature and pressure, numerous adjustments must be made on the fuel, air, and various other boiler controls. As a result of these adjustments and the

low initial steam production rates, the B&W boiler may occasionally exceed the opacity and grain loading limits, during start-up.

#### **Pre-Startup Procedure**

Prior to starting normal operation, the following steps should be taken to ensure that all elements of the scrubber are in proper working order.

- Nozzles—Verify that all nozzles in the spray system are clear and functioning properly.
- Filters—Clean all filters in the high pressure system and low pressure system.
- Plumbing—Verify that the high and low pressure plumbing is intact and clear. Each spray nozzle header should be pre-tested outside of the scrubber to ensure that all nozzles are functioning properly.
- Emergency Spray—With both the high and low pressure systems off, test the emergency spray system.

#### **Startup Procedure**

The scrubber system may be placed in operation with or without the boiler being in operation using the following steps:

- Open inlet and outlet valves to the high and low pressure systems.
- Open all valves to the fourteen (14) nozzle headers.
- Turn on both high pressure and low pressure pumps.
- Verify sludge drain is clear and the scrubber is draining properly. If it is not draining, shut off the water systems and locate and remove the stoppage.
- Check pressure gauges on high and low sides and verify they are in the normal operating ranges as follows:
  - High Pressure System stations: 150 psig.
  - Low Pressure Systems stations: 80 psig.

#### **Shutdown Procedure**

The scrubber system may be shut down by simply turning off the high pressure and low pressure pumps. Emergency water source located in the throat of the scrubber should be isolated.

### **Upset Conditions and Corrective Procedures**

The Mini Cassia facility is committed to minimizing upsets which can lead to an excess emission event. The following information should be used for properly responding to upset conditions that can lead to an excess emission.

#### **Cause / Corrective Action**

An upset condition has the potential to occur when one or more of the following conditions occur:

- **Upsets to the scrubber system.** Scrubber system upsets can occur from nozzle wear, nozzle plugging or pump malfunction. In order to minimize these events, operators promptly replace nozzles on the spray system, clean the Clemons filters, clean spray bars and/or switch pumps to increase scrubber water flow.

### **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective actions are necessary, maintenance personnel are available to repair the equipment. If the pollution control equipment cannot be repaired in a timely manner, the back-up natural gas-fired Nebraska boiler can be utilized until corrective measures are complete.

### **Record Keeping**

Maintenance and monitoring records for the B&W boiler emissions control system shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained:

- The water flow to the B&W boiler scrubber will be monitored continuously and recorded at least once per week during the B & W Boilers operation and archived in facility files.
- Scrubber water must be sampled monthly from September to December (when the B & W Boiler is operating) and bi-weekly from January until the end of each campaign. The samples shall be analyzed for TSS and TDS and the results recorded and archived in facility files.
- Annual scrubber maintenance records will be recorded and maintained in the facility files.
- Weekly and/or monthly visible emissions will be recorded and maintained in the facility files.

**Operation & Maintenance  
Manual**

**Cooling Granulator Baghouses**

**The Amalgamated Sugar Company, LLC**

**Paul Facility**

Revised February, 2008

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# Cooling Granulator Baghouses

## Introduction

This Operation & Maintenance Manual (O&M Manual) for the Cooling Granulator Baghouse equipment has been prepared in accordance with the Mini-Cassia Tier I Operating Permit (No. T1-030416, issued September 23, 2005). The O&M Manual includes the following:

- General Description of the Control Equipment
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Granulator Start-up, Shut-down Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

## General Description

Baghouses are used to recover sugar dust product from the cooling granulators. The technical specifications are listed below. (See also Figure 1)

Air from the cooling granulators which contains sugar dust enters the baghouse under negative pressure and is distributed using an inlet baffle. The inlet baffle decreases inlet gas velocity, which improves distribution and reduces the impact of high velocity particles on filter bags.

Air flows from the bottom inside of the bag to the top outside of the bag filtering sugar dust from the flow. As the bag builds up with sugar dust (filter cake), the differential pressure increases across the baghouse. Filter cake is removed from the bags periodically by either timer, continuous, or pressure differential controlled with pulsejet air that breaks up the filter cake and allows the sugar dust to drop into the hopper. The dust is removed from the hoppers using air lock rotary valves. Recovered sugar dust is collected and sent to the melter for use in the process.

### Cooling Granulator #1 Baghouse Specifications:

Manufacture	Dalmatic
Number of Bags	160
Type of Bags	Polyester
Maximum Operating Temperature	Ambient (N/A)
Dimensions	19" x 60"
Flow Rate	~16,600 acfm

Differential Pressure Range	≥ 1 inches water gauge
Air to Cloth Ratio	6.2:1
Dust Removal	Pulse Jet

Cooling Granulator #2 FMC Baghouse Specifications:

Manufacture	Dalmatic
Number of Bags	240
Type of Bags	Polyester
Maximum Operating Temperature	Ambient (N/A)
Dimensions	19" x 60"
Flow Rate	~17,000 acfm
Differential Pressure Range	≥ 1 inches water gauge
Air to Cloth Ratio	6.2:1
Dust Removal	Pulse Jet

**Operating Procedures**

Operating procedures for the Cooling Granulator Baghouses are based on manufacturer's data, visible emissions and operating experience.

**Monitoring Program**

Periodic monitoring of the Cooling Granulator emissions control equipment is conducted in accordance with the Tier I permit. This includes parametric monitoring and visible emissions observations. Differential pressure and visible emissions observations are used to monitor the performance of the baghouse system. The frequency of the monitoring is as follows:

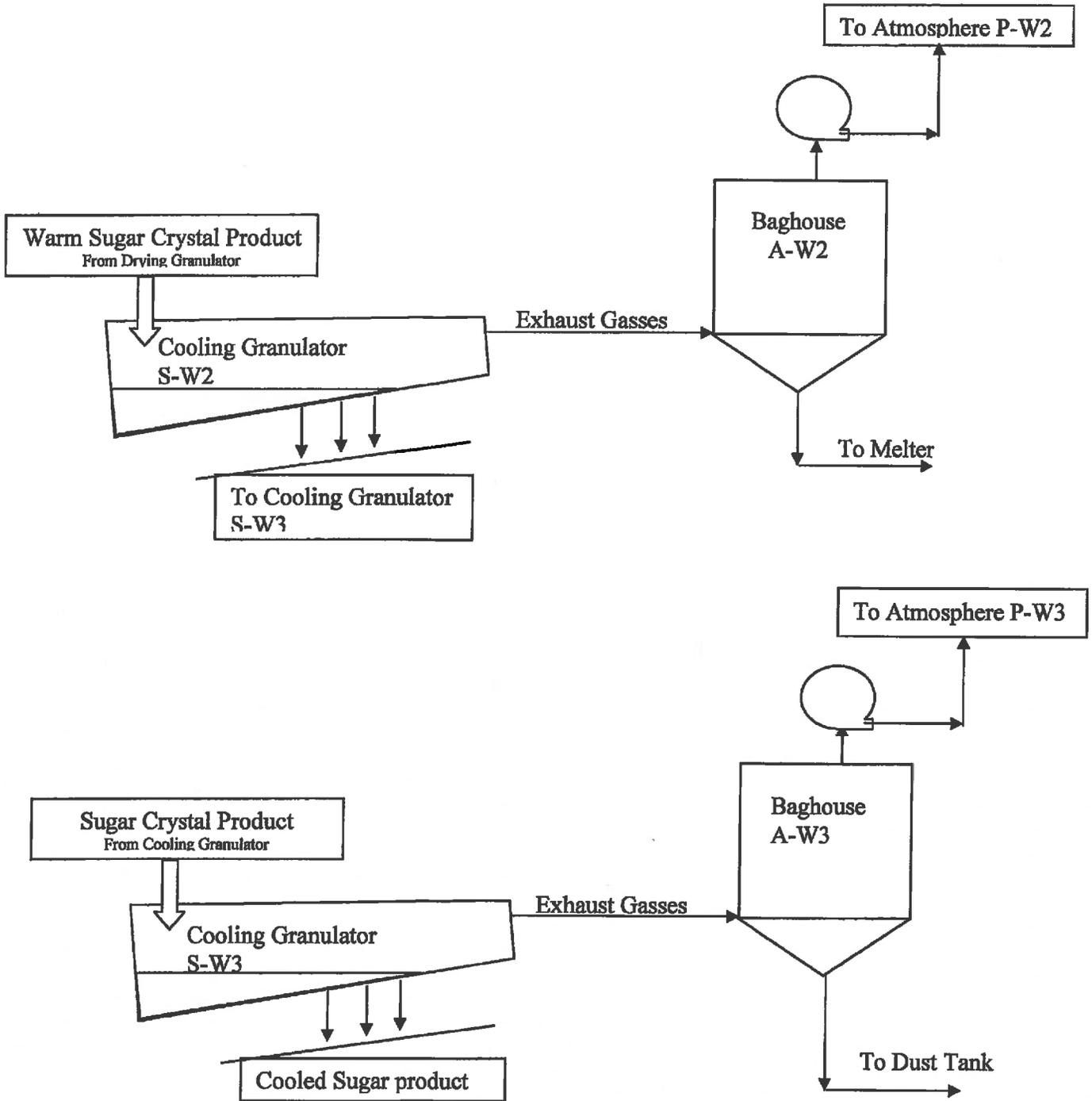
**Differential Pressure Drop Monitoring**

Differential pressure drop (DPD) is required to be monitored by the Tier I permit. Differential pressure data is recorded weekly and archived in facility records for compliance reporting purposes.

**Visible Emissions**

Visible emissions (VE) of the baghouses are conducted by a certified visual emissions inspector using see/no-see criteria in accordance with the air permit once per month. The findings are documented in a log sheet. If an emission is detected, then corrective action is implemented as soon as possible to resolve the problem.

**Figure 1 Cooling Granulator Baghouse Diagrams**



## **Maintenance Procedures**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, the Cooling Granulator baghouses will be inspected for physical degradation that could affect the performance of the control device. Once per year during the inter-campaign period, or as needed during operation the following maintenance activities will be performed.

- **Bags**
  - Inspect
  - Replace worn bags
- **Cages**
  - Inspect
  - Replace damaged cages
- **Bag Cleaning System**
  - Inspect system
  - Replace worn equipment
  - Inspect rams, dampers, controls
- **Pressure Drop Equipment**
  - Leak determination
  - Inspect, clean, and if needed, calibrate
  - Replace worn or leaking lines
- **General Physical Condition**
  - Check, and if needed repair housing leaks
  - Check for leaks around access hatches, repair if needed
  - Check and repair ducting leaks
  - Replace or repair thin metal

## **Start-up and Shut-down Procedures**

The following procedures for the start-up and shut-down of the baghouse are used for both scheduled and non-scheduled events:

### **Baghouse Start-up Procedure**

#### **Compressed Air System**

- 1) Check for leaks in the compressed air system.
- 2) Ensure that air is available.
- 3) Open main air valve momentarily to ensure that solenoid and diaphragm valves are operating correctly.

#### **Timer Circuit**

- 1) Ensure that line voltage is within 10% of specified range.

- 2) Apply power to timer and confirm that solenoid valves are cycling properly.

#### **Auxiliary Equipment**

- 1) Check for proper operation of exhaust fan, conveyor, and air locks.
- 2) Wait for the production equipment to be placed in service.
- 3) Initiate cleaning cycles prior to placing the production equipment into service.

#### **Start-up Procedure**

- 1) Apply power to all auxiliary equipment (except fan).
- 2) Energize timer and valve in compressed air.
- 3) Introduce air to the baghouse by opening damper and starting fan.

#### **Baghouse Shut-down**

- 1) Shut down fans
- 2) After sugar production equipment shut-down, cycle timers for 15 to 30 minutes to remove all sugar dust from the baghouses.
- 3) Shut down timer and compressed air systems
- 4) Shut down auxiliary equipment.

### **Upset Conditions and Corrective Procedures**

The Mini-Cassia facility is committed to minimizing upsets and eliminating excess emissions events as quickly as possible. For each excess emissions event, the facility promptly notifies IDEQ and prepares written reports in accordance with IDAPA 58.01.01.130 thru 136.

### **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective measures are necessary, maintenance personnel are available to repair the equipment. If the pollution equipment on S-W2 cannot be repaired in a timely manner, a shut down of the system is required. If S-W3 cannot be repaired, shutdown of the equipment will occur and warmer sugar will be transported to the silos.

### **Record Keeping**

Maintenance and monitoring records for the Cooling Granulator baghouses shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained:

- The pressure drop for each baghouse will be recorded at least once per week during baghouse operations and archived in facility files.
- Visible emissions using see/no-see criteria will be conducted monthly on the baghouse vents and logged.
- Annual baghouse maintenance records will be maintained in the facility files.

**Operation & Maintenance  
Manual**

**Drying Granulator Dust Box**

**The Amalgamated Sugar Company, LLC**

**Paul Facility**

Revised February 2008

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# Drying Granulator Dust Box

## Introduction

This Operation & Maintenance Manual (O&M Manual) for the Drying Granulator emission control equipment has been prepared in accordance with the Mini Cassia Tier I Operating Permit (No. T1-030416, issued September 23, 2005). The O&M Manual includes the following:

- General Description
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Dryer Start-up, Shut-down Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

## General Description

The rotary drying granulator removes moisture from processed sugar before it is cooled and sent to the storage silos for conditioning. The air vented through the drying granulator is ducted to a scrubber called a “Dust Box” where it is sprayed with thin juice or water to recover the sugar dust and return it to the sugar crystallization process. During Beet Campaign, thin juice is used as the scrubbing medium. During the juice run, condensate water is used as a make-up to collect the sugar dust. The sugar water is continuously removed from the system based on brix (% sugar in the water) usually from 35 to 40 %. Treated air from the dust box is vented to atmosphere. (Figure 1)

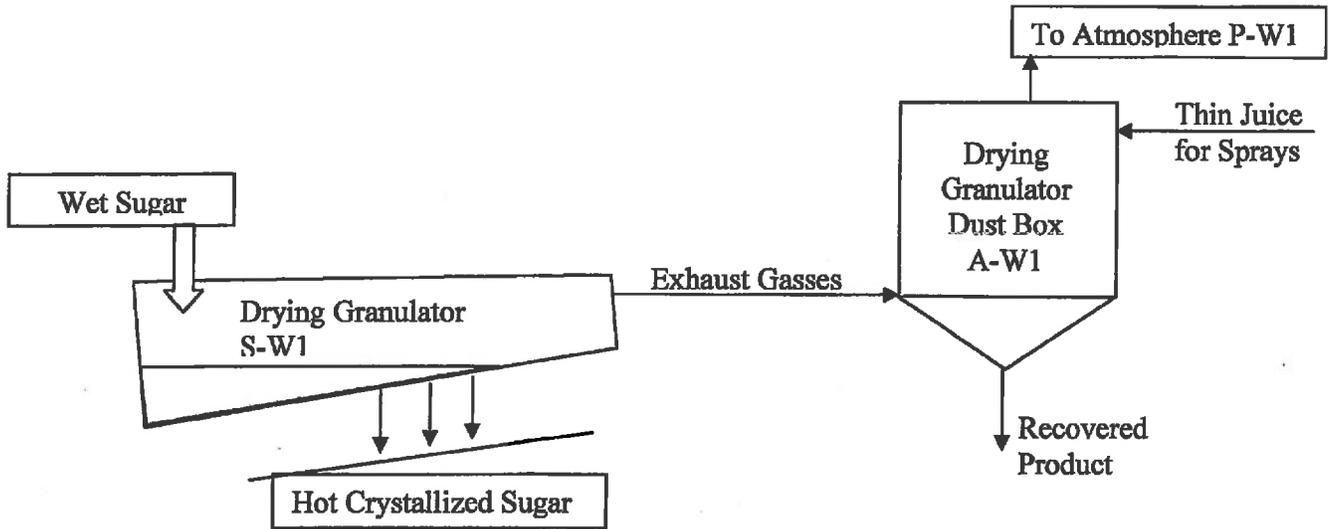
### Dust Box Specifications:

Dust Box design	Spray Header
Materials of construction	Stainless Steel
Nozzle Pressure	≥ 27 psig
Wet Scrubber Water Flow	up to 200 gpm
Scrubber water	Thin Juice and/or Condensate Water
Brix of Treatment Water	10 – 40 %

## Operating Procedures

Operating procedures for the Drying Granulator Dust Box are based on operational experience, visible emissions observations and stack tests of comparable equipment at other TASCOS facilities.

**Figure 1 Drying Granulator Emission Control**



## **Monitoring Program**

Periodic monitoring of the Drying Granulator emission control equipment is conducted in accordance with the Tier I permit. This includes parametric monitoring and visible emissions observations. The frequency of the monitoring is as follows:

### **Monitoring Procedures and Equipment**

The Dust Box is monitored using two independent methods. These are listed below along with a description of the method.

#### **Dust Box Pressure Spray**

The Dust Box pressure spray is required to be monitored in accordance with the Tier I permit. Spray pressure measurements are monitored continuously and recorded weekly. The data is archived for compliance reporting purposes.

#### **Visible Emissions**

Visible emission (VE) observations are conducted monthly under normal operating conditions. The visible emissions inspection consists of a see/no-see evaluation. If any visible emissions are present a certified visible emissions employee will conduct a Method 9 opacity test.

## **Maintenance Procedures**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, the Drying Granulator Dust Box will be inspected for physical degradation that could affect the performance of the control device. Once per year during the inter-campaign period, or as needed during operation the following maintenance activities will be performed.

- **Water Pressure Gauges**
  - Clean
  - Repair
  - Calibrated, if needed
  
- **Spray Nozzles**
  - Clean
  - Repair
  - Verify adequate water pressure to sprays
  - Verify adequate water flow to sprays
  - Verify proper spray pattern
  
- **Demister**
  - Cleaned

- **Duct to Scrubber**
  - Check and, if needed, repair leaks
  - Check for thin or weak metal
  - Replace or repair worn metal

### **Start-up and Shut-down Procedures**

The following procedure will be followed for start-up and shut-down operations for all scheduled and unscheduled events.

#### **Start-Up Procedure**

- The Dust Box will be placed in service with full design thin juice/water flow. The Drying Granulator will be started up in the normal manner by introducing processed sugar from the spinner deck.
- As the Drying Granulator reaches normal throughput rates, operators will begin monitoring Dust Box brix.

#### **Shut-Down Procedure**

During shut-down, the Dust Box remains on-line until the Drying Granulator has shut down and all dried process sugar has cleared the system. The Dust Box can then be shut down.

### **Upset Conditions and Corrective Procedures**

The Mini-Cassia facility is committed to minimizing upsets and eliminating excess emissions events as quickly as possible. For each excess emissions event, the facility promptly notifies IDEQ and prepares written reports in accordance with IDAPA 58.01.01.130 thru 136.

### **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective measures are necessary, maintenance personnel are available to repair the equipment. If the pollution equipment cannot be repaired in a timely manner, a shut down of the system is required.

### **Record Keeping**

Maintenance and monitoring records for the Drying Granulator Dust Box shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained:

- The water pressure to the Drying Granulator Dust Box will be monitored continuously and recorded at least once per week during operation and archived in facility files.
- Annual scrubber maintenance and calibration records will be recorded and maintained in the facility files.
- Monthly visible emission checks during sugar operations using see/no-see criteria will be logged.

**Operation & Maintenance  
Manual**

**Erie City Boiler  
Multiclone and Scrubber**

**The Amalgamated Sugar Company  
Mini-Cassia Facility**

**Revised February 2008**

**Revised June 2008**

**Revised June 2010**

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## **Erie City Boiler Multiclone & Scrubber**

This Operation & Maintenance Manual (O&M Manual) for the Erie City Boiler multiclone and scrubber emissions control equipment has been prepared in accordance with the Mini Cassia Tier I Operating Permit (No. T1-030416, issued September 23, 2005). The O&M Manual includes the following:

- General Description of the Control Equipment
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Boiler Start-up, Shutdown Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

### **General Description**

The Erie City boiler produces 400 psi superheated steam for generating power and evaporating water from sugar beet juice. The Erie City boiler is fired by pulverized coal and/or natural gas and includes an air pre-heater followed by a multiclone and wet scrubber in series with a demister located in the stack. When firing natural gas only, exhaust gases are vented through an auxiliary stack located between the multiclone and scrubber. A process Flow diagram for the Erie City boiler and emission control system is included in Figure 1.

The multiclone, which was manufactured by Research-Cottrell Inc., contains 114 cones and its primary purpose is to remove large particulates from the exhaust stream (Figure 2). The low pressure drop wet scrubber which was manufactured by Celesco is used as a final cleaning mechanism before exhaust gases are discharged to the atmosphere (Figure 3).

In September 2004 a new dual alkali scrubber water treatment system was installed. This system was required under the 2002 TASCO/ IDEQ compliance agreement and was a prerequisite to discontinuing operation of the lime pond.

Before the 2007 beet campaign an atomizing spray nozzle, manufactured by TurboSonic, was placed near the end of the scrubber to capture fine particulate matter. Also a mist eliminator, manufactured by Munters, was installed in the stack to remove entrained liquid in the exhaust gas stream (Figure 4). [Should the mist eliminator also be shown in Figure 1?]

The TurboSonic spray nozzle was removed in the 2008 campaign. The Erie City boiler remained in compliance without the use of the atomizing spray. The demister was modified before the 2008 campaign, the top row of chevrons were removed. The Erie City boiler remained in compliance without the use of the top row of chevrons in the demister.

The wet scrubber includes both high (150 psi) and low (80 psi) pressure sprays. Low pressure sprays are located in the back portion of the scrubber and in the throat of the scrubber. High pressure sprays are located in the front end of the scrubber. The demister utilizes low pressure spray water to keep the chevrons in the demister rinsed and wetted.

Figure 1

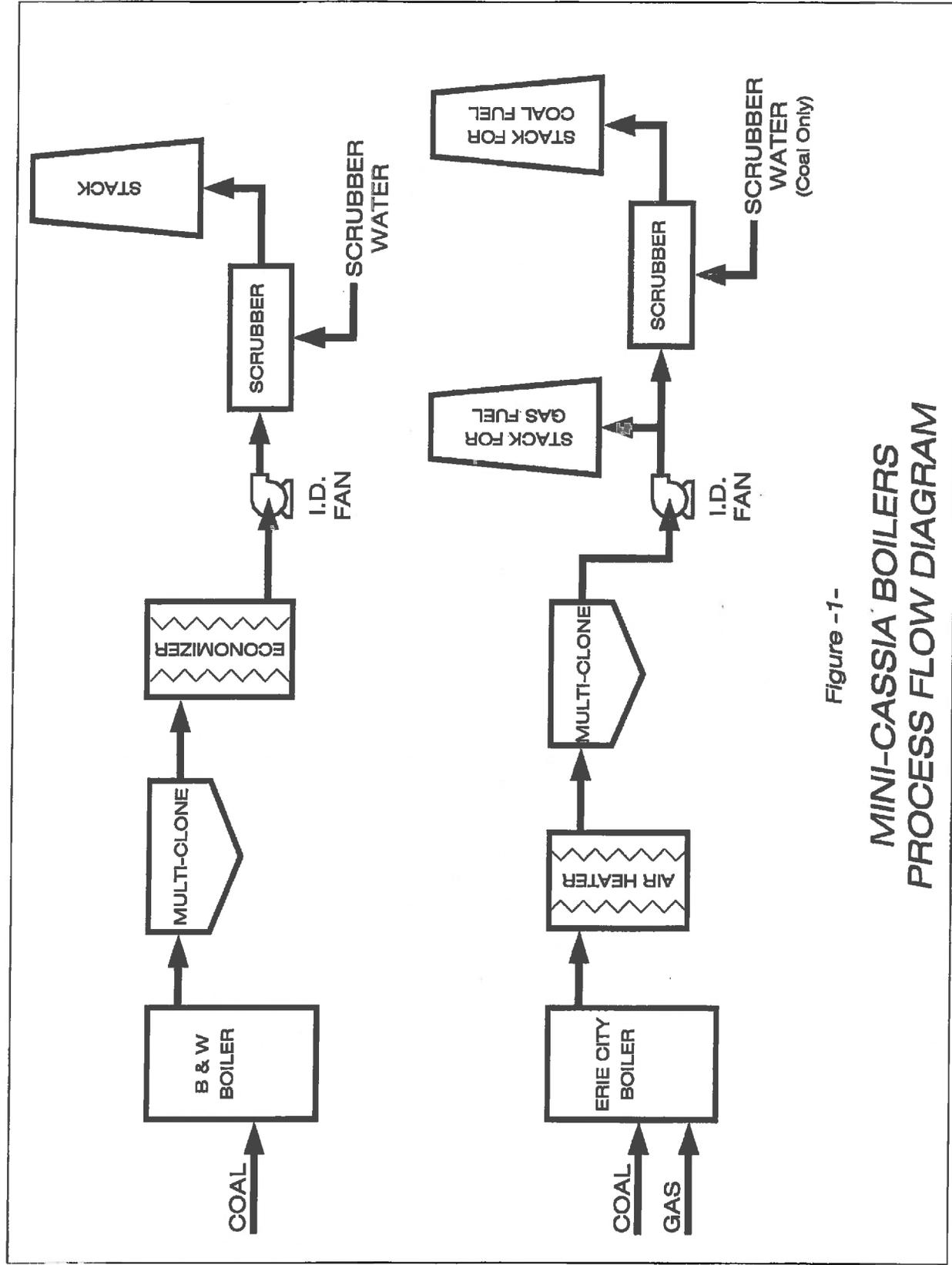
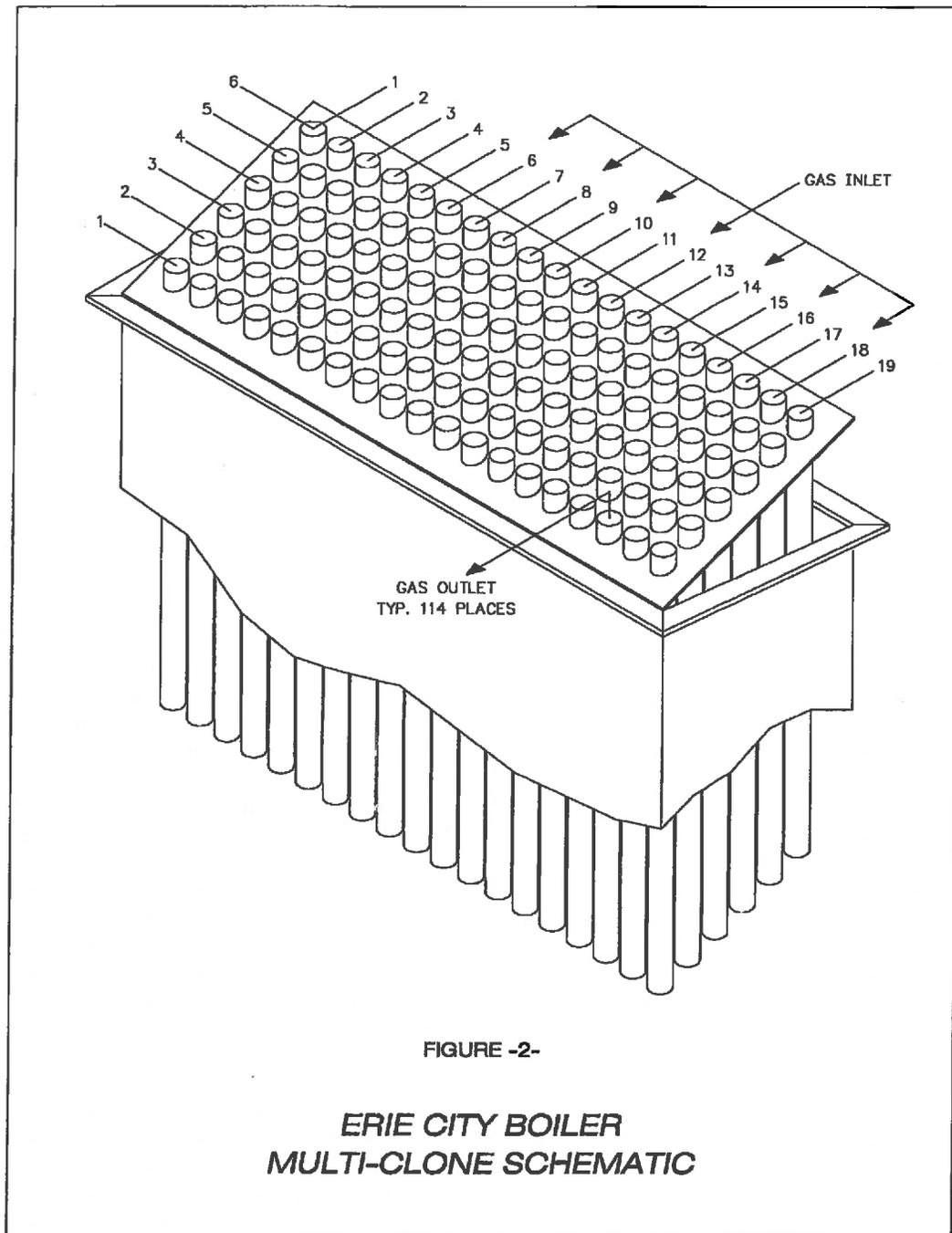


Figure -1-  
MINI-CASSIA BOILERS  
PROCESS FLOW DIAGRAM

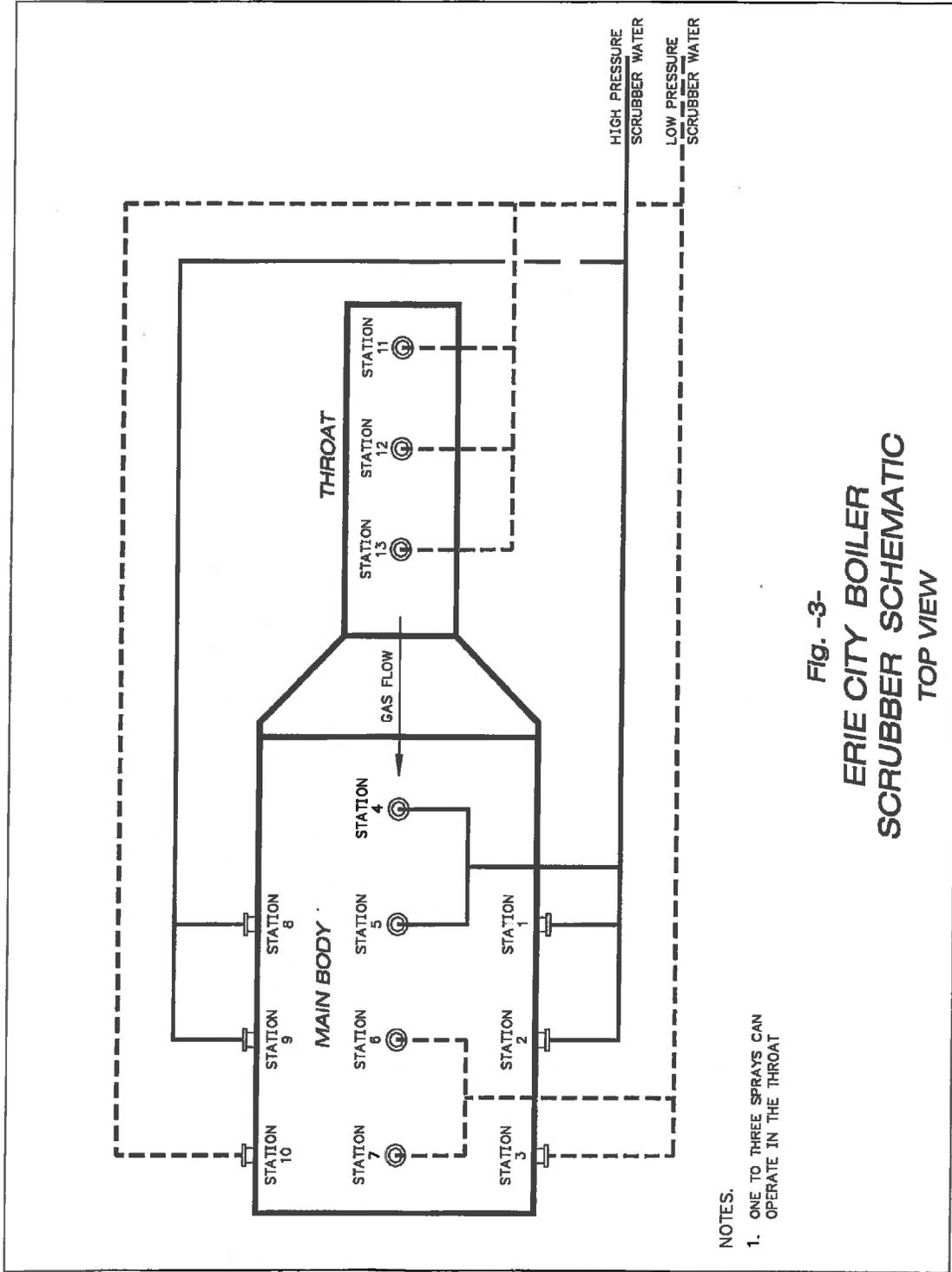
**Figure 2**



**FIGURE -2-**

**ERIE CITY BOILER  
MULTI-CLONE SCHEMATIC**

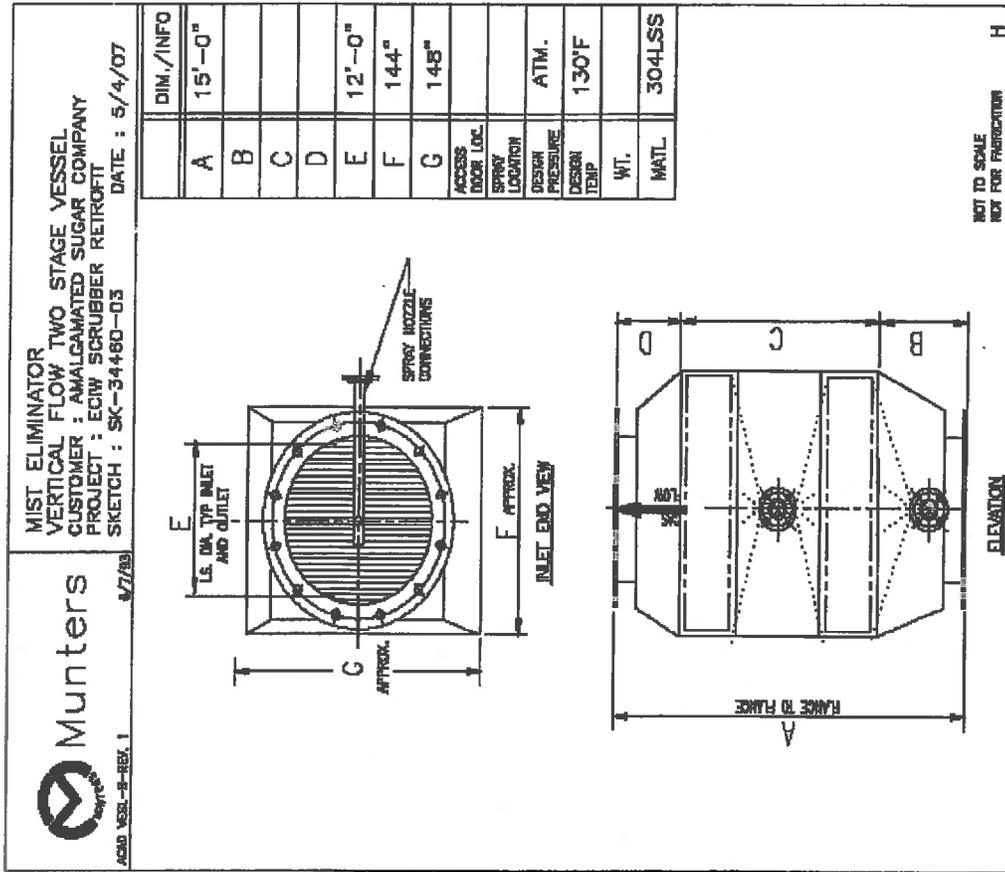
**Figure 3**



NOTES.  
 1. ONE TO THREE SPRAYS CAN OPERATE IN THE THROAT

**Fig. -3-  
 ERIE CITY BOILER  
 SCRUBBER SCHEMATIC  
 TOP VIEW**

**Figure 4**  
**Munters Demister**



NOT TO SCALE  
 NOT FOR FABRICATION

ELEVATION

## **Operating Procedures**

Operating procedures for the Erie City boiler scrubber and multiclone are based on manufacturer data, visible emissions observations, and particulate stack tests. Key operating parameters for the wet scrubber are water flow and water quality. As per the requirements of the Tier I permit referenced above, the operating ranges for these parameters are:

- Water Flow 660- 1200 gpm
- Water Quality Total Solids 141,870 mg/l maximum

The above total solids concentration limit changed after compliance stack testing performed February 27, 2008, DEQ approved the limit June 6, 2008. Scrubber water flow rate increased with the most recent compliance stack test performed February 9, 2010 to a maximum of 1200 gpm, DEQ approved the limit June 24, 2010.

Operation of the multiclone fluctuates based on the steam loading of the boiler. As a result, no operational adjustments can be made to the multiclone. The typical pressure drop of this multiclone is greater than 4.5 inches water column at a steam loading rate of 180,000 pounds of steam per hour.

## **Monitoring**

Periodic monitoring of the Erie City boiler emissions control equipment is conducted in accordance with the Tier I permit. This includes visible emissions observations, parametric monitoring and stack tests. The frequency of the monitoring is as follows:

- Water Flow (gpm) Weekly
- Visible Emissions Observations Weekly (or monthly as the permit allows)
- Water Quality (TDS & TSS ) Monthly then Bi-Weekly
- Particulate Stack Tests Once per permit term

Listed below is a description of the monitoring methods and sampling locations.

### **Scrubber Water Flow**

Water flows to the low pressure and high pressure sprays are continuously monitored and recorded weekly. The magnetic flow meters are located on the inlet to the scrubber.

### **Scrubber Water Quality**

The inlet water to the scrubber is sampled monthly from September to December, then bi-weekly from January to the end of campaign for total solids (suspended solids + dissolved solids) using EPA Methods 2540-B or the sum of Standard

Methods 2540-C and 2540-D. The scrubber sample is collected at the main header feeding the scrubber pumps.

#### **Visible Emissions**

Visible emissions (VE) are conducted by a certified VE inspector using see/no see criteria in accordance with the air permit. Observations are conducted weekly to determine whether there are any visible emissions. If visible emissions are observed, a Method 9 opacity test is required. If four consecutive weekly visible emissions inspections indicate that visible emissions are not present, or opacity is below 20%, the frequency of visible emissions inspections can be decreased to monthly until such time that any Method 9 evaluation indicates emissions in excess of 20%. At such time, the visible emission inspections return to a weekly basis.

#### **Stack Testing**

Particulate stack tests are conducted at least once during the life of the Tier I permit to ensure compliance with the permit limits and to assess the performance of the emissions control equipment. Source testing for particulate matter for permit compliance will be conducted in accordance with Test Method 5B.

### **Maintenance Procedures**

Maintenance is an important component for the proper operation of the emission control equipment. TASC0 has identified the following daily and annual tasks to be completed to ensure proper operation of the Erie City scrubber.

#### **Daily Inspections and Maintenance**

The normal daily maintenance procedures call for inspection of the following at a minimum of once each shift:

##### **Inspection of scrubber pumps**

- Check pump packing, tighten as needed.
- Observe pump pressure.

##### **Inspection of Clemons Filters**

- Observe filter pressure on the inlet and outlet of the filter, change filter when there is greater than a 10 psi difference.

##### **Inspection of spray system**

- At least once per shift, remove two spray bars and clean if necessary.
- Inspect spray nozzles for wear.
- Observe pressure at the spray bars to ensure adequate scrubber water flow.

Observe scrubber water flow

- If flow is reduced, inspect pumps, filters and spray nozzles to ensure adequate flow.
- If system is not plugged and the flow is still reduced, inspect the flow meter for any scale build-up.

Replace pressure gauges when necessary.

### **Annual Maintenance**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, the multiclone and scrubber will be inspected for physical degradation that could affect the performance of the control device. Once per year during the intercampaign period, or as needed during operation the following maintenance activities will be performed.

#### Water Pressure Gauges

- Clean
- Replace

#### Scrubber Spray Nozzles

- Clean
- Repair
- Replace worn nozzles
- Adequate water pressure to sprays
- Adequate water flow to sprays
- Proper spray pattern observed

#### Scrubber Demister

- Inspect and Clean

#### Ducts

- Check and, if needed, repair leaks
- Check for thin or weak metal
- Replace or repair worn metal

#### Scrubber Housing

- Inspect for damage
- Repair as necessary

#### Instrumentation

- Inspect and service all scrubber system instrumentation including water flow meters

### Stack

- Inspect stack for any damage that may have occurred
- Repair as necessary

## **Startup and Shutdown Procedures**

The Erie City boiler is initially started up using natural gas only. At this time, the system is exhausted to atmosphere after the air heater and multiclone. After the boiler is operational and before coal is applied, the scrubber is placed in operation. Subsequently, the system is exhausted through the scrubber and the Erie City is placed in a combination of coal and natural gas combustion or coal alone.

Prior to starting normal operation, the following steps should be taken to ensure that all elements of the scrubber are in proper working order.

- Nozzles
  - Verify that all nozzles in the spray system are clear and functioning properly.
- Filters
  - Clean all filters in the high pressure system and low pressure system.
- Plumbing
  - Verify that the high and low pressure plumbing is intact and clear. Each spray nozzle header should be pre-tested outside of the scrubber to ensure that all nozzles are functioning properly.
- Emergency Spray
  - With both the high and low pressure systems off, test the emergency spray system.

### **Startup Procedures**

The Scrubber may be placed in operation with or without the boiler being in operation. The Scrubber must always be in operation when the boiler is operating with coal as the fuel source. The Scrubber may be placed in operation through the following steps:

- Open inlet and outlet valves to the high and low pressure systems
- Open all valves to the nozzle headers.
- Turn on both high pressure and low pressure pumps
- Verify sludge drain is clear and the scrubber is draining properly. If it is not draining, shut off the water systems and locate and remove the stoppage.
- Check pressure gauges on high and low sides and verify they are in the normal operating ranges as follows:
  - High Pressure System stations around 150 psig.
  - Low Pressure Systems stations around 80 psig.

### **Shutdown Procedures**

The Scrubber may be shut down by simply turning off the high pressure and low pressure pumps. Emergency water sources located in the throat of the scrubber should be isolated.

## **Upset Conditions and Corrective Procedures**

The Mini Cassia facility is committed to minimizing upsets which can lead to an excess emission event. The following information should be used for properly responding to upset conditions that can lead to an excess emission.

### **Cause / Corrective Action**

An upset condition has the potential to occur when one or more of the following conditions occur:

- **Upsets to the scrubber system.** Scrubber system upsets can occur from nozzle wear, nozzle plugging or pump malfunction. In order to minimize these events, operators promptly replace nozzles on the spray system, clean the Clemons filters, clean spray bars and/or switch pumps to increase scrubber water flow.

## **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective measures are necessary, maintenance personnel are available to repair the equipment. If the pollution equipment cannot be repaired in a timely manner natural gas can be utilized on the Erie City boiler or the natural gas-fired Nebraska can be started.

## **Record Keeping**

Maintenance and monitoring records for the Erie City boiler emissions control system shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained:

- The water flow to the Erie City boiler scrubber will be monitored continuously and recorded at least once per week during the Erie City Boiler operation and archived in facility files.
- Scrubber water must be sampled monthly from September to December (when the Erie City Boiler is operating) and biweekly from January until the end of each campaign. The samples shall be analyzed for TSS and TDS and the results recorded and archived in facility files.

- Annual scrubber maintenance records will be recorded and maintained in the facility files.
- Weekly and/or monthly visible emissions will be recorded and maintained in the facility files.

# **Operation & Maintenance**

## **Pellet Cooler Cyclones**

**The Amalgamated Sugar Company, LLC**

**Paul Facility**

Revised February 2008

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# **Pellet Cooler Cyclone**

## **Introduction**

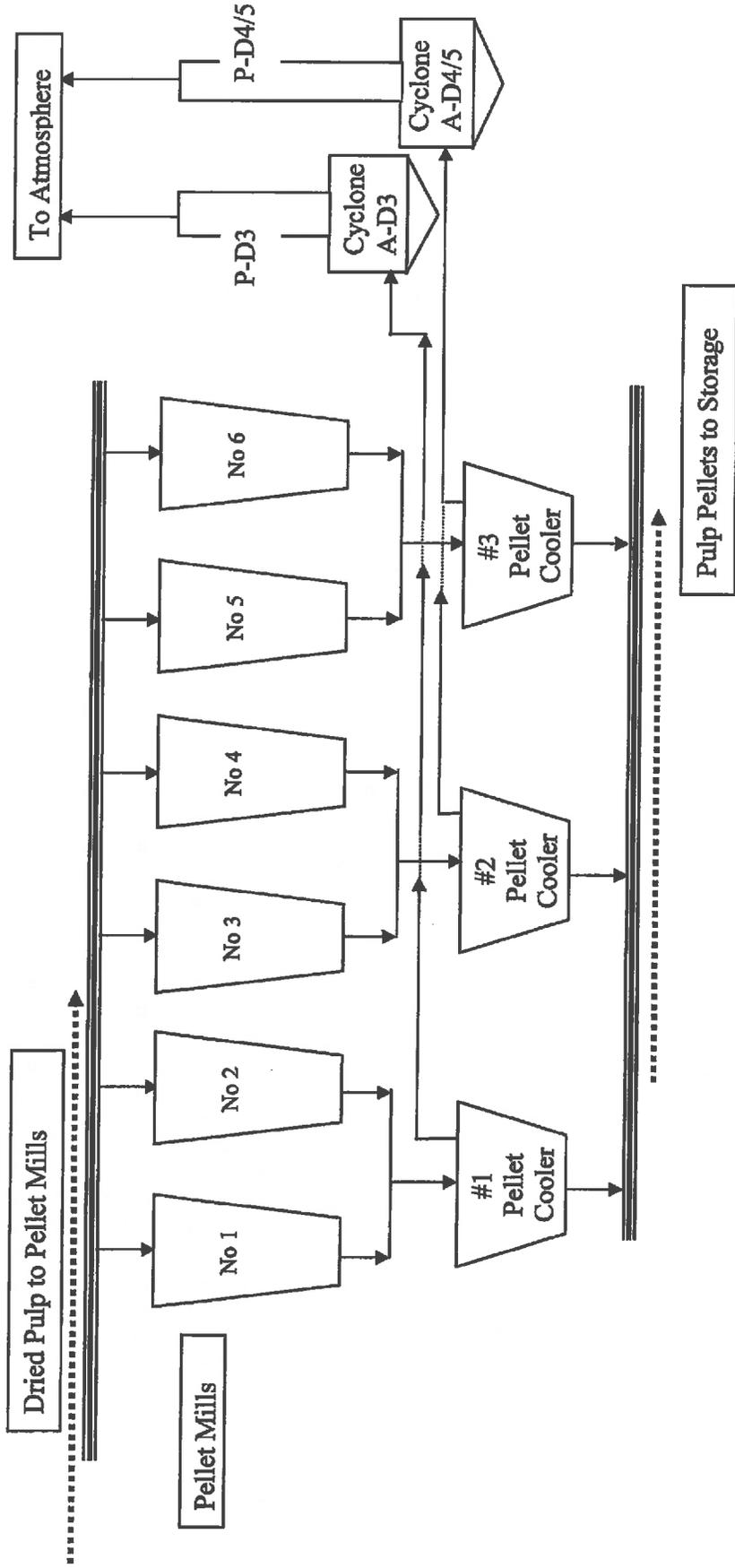
This Operation & Maintenance Manual (O&M Manual) for Pellet Cooler system emission control equipment has been prepared in accordance with the Mini Cassia Tier I Operating Permit (No. T1-030416 issued September 23, 2005). The O&M Manual includes the following:

- General Description of the Control Equipment
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Pellet Cooler Start-up, Shutdown Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

## **General Description**

Pellets are produced from dried beet pulp in six pellet mills (Figure 1). The pellet mills are configured to work in pairs. Each pair of mills discharges hot pellets to a common cooler. Three coolers (No. 1, 2 and 3) serve the six pellet mills. Each cooler has a fan that exhausts the air used to cool the pellets. Dust or particulate matter (PM) in the pellet cooler exhaust is controlled by two cyclones which are located on the roof of the building. Cyclone A-D3 controls PM emitted from the No. 1 Pellet Mill. Cyclone A-D4/5 controls PM emitted from Pellet Mill No's. 2 and 3. The two cyclones separate the dust from the air by whirling the gas very rapidly inside the collector creating centrifugal forces that cause the particles to be thrown against the walls of the cyclone and drop by gravity into a hopper. The cyclones are equipped with air lock rotary valves to facilitate removal of the collected dust. The collected dust is recycled to the pellet mills by a conveyor.

**Figure 1. Pellet Mill Flow Diagram**



## **Operating Procedures**

During the pellet cooling process, the cyclones cannot be adjusted. As a result there are no parametrics for cyclone operations. Procedures for operating the Pellet Cooler Cyclones are based on experience and visible emissions.

## **Monitoring**

Periodic monitoring of the pellet cooler emission control equipment is conducted in accordance with the Tier I permit. This includes visible emission (VE) observations. The frequency of the monitoring is as follows:

### **Visible Emissions**

The pellet mill cyclone exhaust is checked for visible emissions (VE) by a certified VE inspector monthly. The VE inspector conducts see/no-see inspections and documents the findings in a compliance log. Daily inspections are performed by the Dryer Foreman.

## **Maintenance Procedures**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, Pellet Cooler Cyclones will be inspected for physical degradation that could affect the performance of the control device. Once per year during the inter-campaign period, or as needed during operation the following maintenance activities will be performed.

### **Ducts to Cyclones**

- Check and if needed, repair leaks
- Check for thin or weak metal
- Replace or repair worn metal

### **Cyclones**

- Clean Cyclones
- Check and if needed, repair leaks
- Replace or repair worn metal

### **Air Locks**

- Remove guard and chains
- Remove air lock
- Remove and Replace bearings
- If needed, replace air lock.

## **Startup and Shutdown Procedures**

During startup, exhaust from the Pellet Mill Coolers is passed through the Cyclones.

### **Cyclone Startup**

Prior to startup, perform a check to ensure the cyclone will operate properly:

1. Check that the air lock valves rotate.
2. Check fan operation.
3. Check the sight glass to see rotation of dust. Inspect often.
4. Examine that the coolers are operating and cooling correctly.
5. Check for leaks in the ducted air system.
6. Make sure cyclone is clear of any plugging.

### **Pellet Mill Shutdown**

1. Shut off air lock valves.
2. Lock-out tag-out system.

Perform necessary inspections.

## **Upset Conditions and Corrective Procedures**

The Mini Cassia facility is committed to minimizing upsets and eliminating excess emissions events as quickly as possible. If an excess emissions event occurs because of this unit, the facility will promptly notify IDEQ and prepare a written report in accordance with IDAPA 58.01.01.130 thru 136

## **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective measures are necessary, maintenance personnel are available to repair the equipment. If the pollution equipment cannot be repaired in a timely manner the pellet mills are shut down.

## **Record Keeping**

Maintenance and monitoring records for the Pellet Cooler Cyclone shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained

- Documentation of monthly visible emission inspections using see/no-see criteria.
- Records of all maintenance performed on the ductwork to the cyclones, the cyclones, and the air lock rotary valves will be archived in facility files.

**Operation & Maintenance  
Manual**

**North and South Pulp Dryer  
Cyclones and Scrubbers**

**The Amalgamated Sugar Company, LLC**

**Paul Facility**

**Revised February 2008**

**Revised June 2008**

**Revised March 2012**

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# North & South Pulp Dryer Cyclones & Scrubbers

This Operation & Maintenance Manual (O&M Manual) for the North and South Pulp Dryer emission control equipment has been prepared in accordance with the Mini Cassia Tier I Operating Permit (No. T1-030416, issued September 23, 2005). The O&M Manual includes the following:

- General Description of the Control Equipment
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Dryer Start-up, Shutdown Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

## General Description

The North and South Pulp Dryers are direct-fired units, which produce animal feed by drying pressed beet pulp. The direct-fired dryers consist of a furnace and a rotating drum utilizing pulverized coal as the primary fuel with natural gas used as a back up (Figure 1). The exhaust gases from each pulp dryer are drawn through two cyclones in parallel by a single induction fan; the gas stream is joined together and then divided into two streams with each stream passing through an impingement type scrubber. The treated flue gas is dewatered using cyclonic turning vanes in the final ductwork section of each scrubber stack. A portion of the exhaust gases from each cyclone is recirculated back to the furnace and used as combustion air.

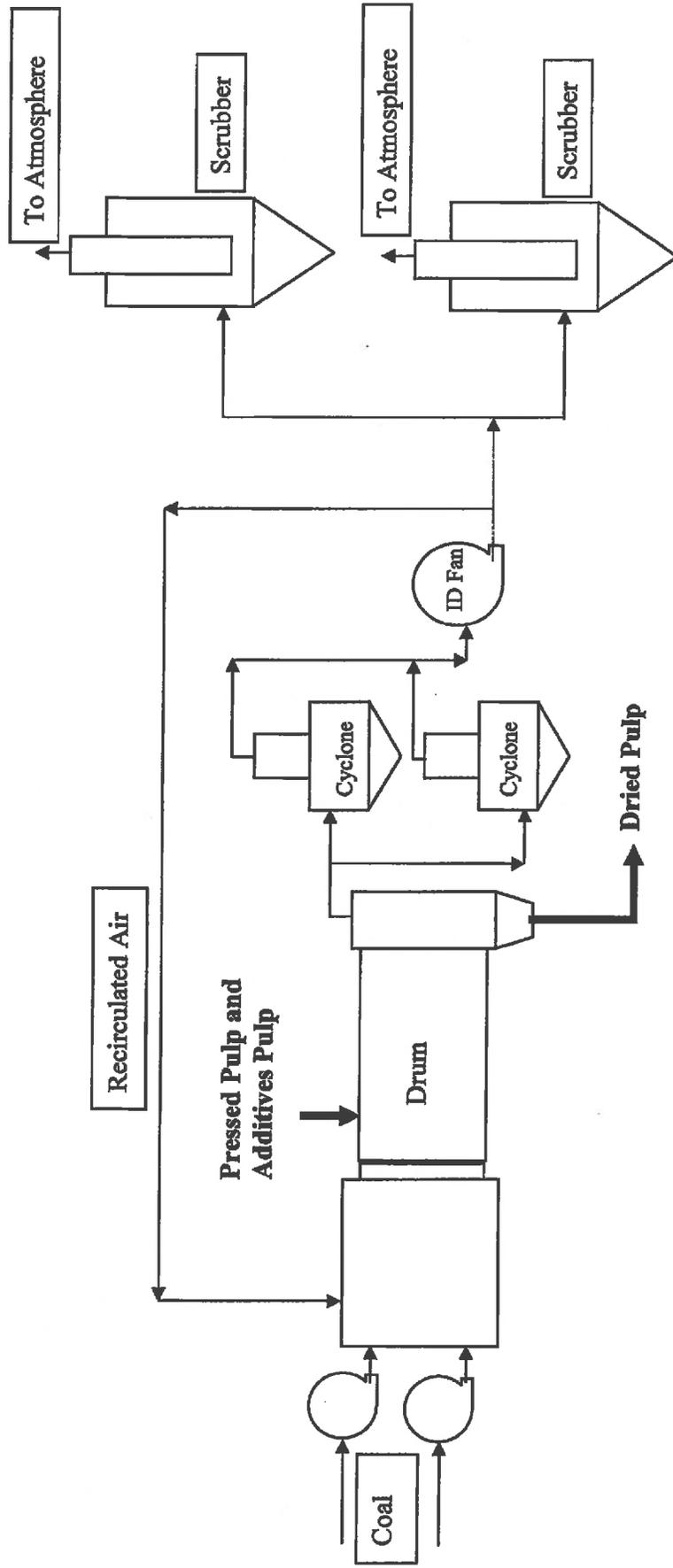
As per the Tier I permit application, the pulp dryer scrubbers and associated stacks are labeled as follows:

- 1) South Pulp Dryer West Scrubber (A-D1B) and Stack (P-D1A);
- 2) South Pulp Dryer West Center Scrubber (A-D1B) and Stack (P-D1B);
- 3) North Pulp Dryer East Scrubber (A-D2B) and Stack (P-D2A) and
- 4) North Pulp Dryer East Center Scrubber (A-D2B) and Stack (P-D2B).

In September 2004 a dual alkali scrubber water treatment system was installed. This system was required under the 2002 TASC0/ IDEQ compliance agreement and was a prerequisite to discontinued operation of the lime pond.

In the 2010-2011 campaign the scrubber water flow to the boilers was affected by the scrubber water from the dryers. The dryer scrubber water was separated from the dual alkali system. The scrubber water source is the flume water system; this water source is similar to the scrubber water system prior to the dual alkali system.

**Figure 1**



## Operating Procedures

Operating procedures for the North and South Pulp Dryer emissions control equipment are based on particulate stack testing and visible emissions data. During pulp drying operations, the cyclones cannot be adjusted. As a result there are no monitoring parameters for the cyclones. Key operating parameters focus on the wet impingement scrubbers on each pulp dryer. As per the requirements of the Tier I permit, the parameters and operating ranges for each scrubber are:

- Scrubber Water Flow (gpm)                      100-400
- Scrubber Pressure Drop (in H<sub>2</sub>O)              4 inches H<sub>2</sub>O minimum
- Water Quality Total Solids                      North 128,520 mg/l maximum
- Water Quality Total Solids                      South 143,370 mg/l maximum

The above total solids concentration limit changed after compliance stack testing performed February 25 & 26, 2008, DEQ approved the limit June 6, 2008.

Differential pressure across the scrubber impingement zone is set by raising and lowering the water level in the scrubber tubs.

## Monitoring

Periodic monitoring of the pulp dryer emissions control equipment is conducted in accordance with the Tier I permit. This includes parametric monitoring, visible emissions observations and stack tests. The frequency of the monitoring is as follows:

- Water Flow (gpm)                                      Weekly
- Pressure Drop ( inches of water)                Weekly
- Visible Emissions Observations                Weekly (monthly as the permit allows)
- Water Quality (TDS & SS )                      Monthly, then Bi-Weekly
- Particulate Stack Tests                              Once per permit term

Listed below is a description of the monitoring methods and sampling locations.

### **Differential Pressure Drop**

The differential pressure drop (DPD) across the scrubber is continuously monitored and recorded once per week.

### **Scrubber Water Flow and Pressure**

Water flows to the scrubbers are continuously monitored and recorded once per week. The water pressure to the scrubber sprays is monitored and checked on a routine basis.

### **Scrubber Water Quality**

The discharge water from scrubber is sampled monthly from September to December, then bi-weekly from January to the end of campaign for total solids (suspended solids + dissolved solids) using EPA Methods 2540-B or the sum of Methods 2540-C and 2540-D.

### **Visible Emissions**

Visual emissions are conducted by a certified visual emissions inspector using see, no see criteria in accordance with the air permit. Initially observations are conducted weekly to determine whether there are any visible emissions. If emissions are observed, a Method 9 opacity test is required. If four consecutive weekly visible emissions inspections indicate that visible emissions are not present, or opacity is below 20%, the frequency of visible emissions inspections can be decreased to monthly until such time that any Method 9 evaluation indicates emissions in excess of 20%. At such time, the visible emission inspections return to a weekly basis.

### **Stack Testing**

Particulate stack tests are conducted at least once during the life of the Tier I permit to ensure compliance with the permit limits and to assess the performance of the emissions control equipment. Source testing for particulate matter for permit compliance will be conducted in accordance with Method 5.

## **Maintenance Procedures**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, the cyclone and scrubber will be inspected for physical degradation that could affect the performance of the control device. Once per year during the intercampaign period, or as needed during operation the following maintenance activities will be performed.

- **Ducts to Scrubber**
  - Check, and if needed, repair leaks
  - Check for thin or weak metal
  - Replace or repair thin metal
  
- **Scrubber Tub**
  - Check, and if needed repair leaks
  - Check for thin or weak metal
  - Replace or repair worn metal
  - Check level control
  - Calibrate level control
  
- **Skirt to Tub**
  - Check for proper location and level
  - Repair leaks
  - Replace or repair worn mental

- **Demisters**
  - Clean
  - Check blades for wear
  - Repair and replace blades as necessary
  - Check blades for correct angle
  
- **Sprays**
  - Clean
  - Replace worn sprays
  - Check for adequate water pressure and flow to sprays.
  - Inspect spray pattern
  
- **Water Flow Gauges and Pressure Gauges**
  - Clean equipment
  - Repair as necessary
  - Calibrate all scrubber system instrumentation as needed
  
- **Pressure drop across Scrubber**
  - Inspect and clean equipment
  - Insure lines are open
  - Inspect manometer for fluid level
  
- **Inspect Stacks.**
  - Check and repair leaks
  - Check for thin or weak metal
  - Repair or replace worn metal
  - Inspect and repair sampling platforms.
  - Insure sampling port flanges and D-rings are solid and ready for sampling.

Maintenance and repairs are also conducted on other equipment including pumps, pipelines, and the pulp drying system.

### **Startup and Shutdown Procedures**

Prior to drying pressed pulp, the pulp dryer furnace is heated up using natural gas for approximately one day. After the furnace is heated, pressed pulp, pulp additives, and pulverized coal are gradually added and the natural gas is shut off. The wet scrubber system will be placed in service with full design scrubber water flow when feed materials are added to the dryer. During the initial start-up of the dryers, the airflow to the air pollution control is lower than the design flows. As a result of the low airflows, the collection efficiency of the air pollution control equipment is reduced. Listed below are procedures to be followed to minimize emissions at all times during start-up.

#### **Furnace heating**

- Start scrubber system.
- Start both FD and ID fans.
- Light the natural gas burners.
- Heat the firebox gradually.

### **Pulp Dryer Start-Up**

- Gradually switch the firing from gas to pulverized coal.
- Gradually add pressed pulp and additives into the dryer.
- Adjust I.D. and F.D. fans, recirculation air, and scrubber tub levels gradually based on the temperatures, pressures, pulp dryer throughput, and pressed pulp moistures.

As the pulp dryer reaches maximum design input rates, the scrubber will be placed into process control modes that ensure maximum particulate capture rates. During dryer shutdown, the scrubbers remain on-line until the drums have been completely removed from service. The scrubber can then be removed from service after all pulp has cleared the drum.

### **Upset Conditions and Corrective Procedures**

The Mini-Cassia facility is committed to minimizing upsets and eliminating excess emission events as quickly as possible. If an excess emission occurs, the facility promptly notifies IDEQ and prepares written reports in accordance with IDAPA 58.01.01.130 thru 136.

### **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective measures are necessary, maintenance personnel are available to repair the equipment. If the pollution equipment cannot be repaired in a timely manner natural gas can be utilized on the dryer or the dryer will be shutdown.

### **Record Keeping**

Maintenance and monitoring records for the pulp dryer emissions control system shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained:

- The water flow to the scrubbers will be monitored continuously and recorded at least once per week during pulp dryer operation and archived in facility files.
- The pressure drop across the scrubbers will be monitored continuously and recorded at least once per week during pulp dryer operation and archived in facility files.
- Scrubber water will be sampled monthly from September to December (when dryer is operating) and biweekly from January until the end of each campaign. The samples shall be analyzed for TSS and TDS and the results recorded and archived in facility files.

- Annual scrubber maintenance records will be recorded and maintained in the facility files.

**Operation & Maintenance  
Manual**

**Sugar Handling Baghouses**

**The Amalgamated Sugar Company, LLC**

**Paul Facility**

Revised February, 2008

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# Sugar Handling Baghouses

## Introduction

This Operation & Maintenance Manual (O&M Manual) for the Sugar Handling emission control equipment has been prepared in accordance with the Mini-Cassia Tier I Operating Permit (No. T1-030416, issued September 23, 2005). The O&M Manual includes the following:

- General Description
- Operating Procedures
- Monitoring
- Maintenance Procedures
  - Daily Inspections
  - Annual Maintenance
- Start-up, Shut-down Procedures
- Upset Conditions and Corrective Procedures
- Preventing Malfunctions and Corrective Procedures
- Record Keeping

## General Description

The Sugar Handling Baghouses collect sugar dust from key process and working areas. Sugar dust air enters the baghouse under negative pressure and is distributed by an inlet baffle. The inlet baffle decreases inlet gas velocity, which improves distribution and reduces the impact of high velocity particles on filter bags. The technical specifications are listed below.

Air flows from the bottom inside of the bag to the top outside of the bag filtering sugar dust from the flow. As the bag builds up with sugar dust (filter cake), the differential pressure increases across the baghouse. Filter cake is removed from the bags periodically by pulsejet air that breaks up the filter cake and allows the sugar dust to drop to the hopper. The dust is removed from the hoppers using air lock rotary valves. Recovered sugar dust is collected and sent to the melter for use in the process.

	Process Baghouse	Bulk Loading
Manufacturer	Mikro-Pulsaire	Mikro-Pulsaire
Number of Bags	192	340
Type of Bags	Polyester or felt bags	Polyester or felt bags
Maximum Operating Temperature	Ambient (N/A)	Ambient (N/A)
Model	1F2-48	TRH 340
Dimensions	4.5 " X 96"	4.5 " X 96
Differential Pressure Range	≥1 in. H <sub>2</sub> O	≥1 in. H <sub>2</sub> O
Dust Removal	Pulse Jet	Pulse Jet

## **Operating Procedures**

Operating procedures for the sugar handling baghouses are based on manufacturer's data, visible emission observations and operational experience.

## **Monitoring Procedures**

Periodic monitoring of the Sugar End emission control equipment is conducted in accordance with the Tier I permit. This includes parametric monitoring and visible emissions observations. The frequency of the monitoring is as follows:

### **Differential Pressure Drop Monitoring**

Differential pressure drop (DPD) is required to be monitored by the Tier I permit. Differential pressure data is recorded weekly and archived in facility records for compliance reporting purposes.

### **Visible Emissions**

Visible emissions (VE) of the baghouses are conducted monthly by a certified visual emissions inspector using see/no-see criteria in accordance with the air permit. The findings are documented in a log sheet. If an emission is detected, then corrective action is implemented as soon as possible to resolve the problem.

## **Maintenance Procedures**

As required by the Tier I Operating Permit, at least once each year during a planned maintenance outage, or as needed during operation, the Sugar End baghouse system will be inspected for physical degradation that could affect the performance of the control device. Once per year during the inter-campaign period, or as needed during operation the following maintenance activities will be performed.

- **Bags**
  - Inspect
  - Replace worn bags
- **Cages**
  - Inspect
  - Replace damaged cages
- **Bag Cleaning System**
  - Inspect System
  - Replace worn equipment
  - Repair rams, dampers and controls

- **Pressure Drop Equipment**
  - Leak determination
  - Inspect, clean, and in needed, calibrate
  - Replace worn or leaking lines
  
- **General Physical Condition**
  - Check and repair housing leaks
  - Check for leaks around access hatches, repair if needed
  - Check and repair ducting leaks
  - Replace thin or worn metal

## **Start-up and Shut-down Procedures**

The following is a summary of the start-up and shut-down procedures. These procedures must be followed for scheduled and non-scheduled start-ups and shut-downs:

Perform a “pre-start check” to ensure the baghouse will operate properly:

- Compressed Air System
- Check for leaks in the compressed air system.
- Ensure that air is available.
- Open main air valve momentarily to ensure that solenoid and diaphragm valves are operating correctly.

Timer Circuit

- Ensure that line voltage is within 10% of specified range.
- Apply power to timer and listen to ensure that solenoid valves are cycling properly.

Auxiliary Equipment

- Check for proper operation of exhaust fan, conveyor, and air locks.
- When the production equipment has been placed in service initiate cleaning cycles by starting the timer and valving in compressed air.

Start-up Procedure

- Apply power to all auxiliary equipment (except fan).
- Energize timer and valve in compressed air.
- Introduce air to the baghouse by starting the fan.

Shut-down Procedure

- Shut down fans.
- After sugar production equipment shut-down, cycle timers for 15 to 30 minutes to remove all sugar dust from the baghouses.
- Shut down timer and compressed air systems
- Shut down auxiliary equipment.

## **Upset Conditions and Corrective Procedures**

The Mini-Cassia facility is committed to minimizing upsets and eliminating excess emissions events as quickly as possible. For each excess emissions event, the facility promptly notifies IDEQ and prepares written reports in accordance with IDAPA 58.01.01.130 thru 136.

## **Preventing Malfunctions and Corrective Actions**

Preventive maintenance along with redundancy of equipment helps to eliminate down time on the pollution control equipment. When corrective measures are necessary, maintenance personnel are available to repair the equipment. If the pollution equipment cannot be repaired in a timely manner the equipment will be shutdown.

## **Record Keeping**

Maintenance and monitoring records for the Sugar Handling baghouse system shall be maintained in accordance with the Tier I Operating Permit. The following is a summary of the records, which will be maintained:

- The pressure drop for each baghouse will be recorded weekly during baghouse operations and archived in facility files.
- Visible emissions using see/no-see criteria will be conducted monthly on the baghouse vents and logged.
- Annual baghouse maintenance records will be maintained in the facility files.

**APPENDIX C – SUPERSEDED PERMIT**

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
Location:	MiniCassia Facility		Date Expires:	December 12, 2006

**1. FACILITY-WIDE CONDITIONS**

Table 1.1 summarizes the facility-wide requirements that generally apply to emissions units at the facility.

**Table 1.1 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.1	Fugitive emissions	Reasonable control	IDAPA 58.01.01.650-651	1.2, 1.3, 1.4, 1.11
1.5	Odors	Reasonable control	IDAPA 58.01.01.775-776	1.6, 1.11
1.7	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11
1.9	Excess emissions	Compliance with IDAPA 58.01.01.130-136	IDAPA 58.01.01.130-136	1.9-1.9.5, 1.11
1.12	Open burning	Compliance with IDAPA 58.01.01.600-616	IDAPA 58.01.01.600-616	1.11
1.13	Renovation or demolition	Compliance with 40 CFR 61, Subpart M	40 CFR 61, Subpart M	1.11
1.14	Chemical accidental release	Compliance with 40 CFR 68	40 CFR 68	1.11
1.15	Air quality standards	EPA reference test methods	IDAPA 58.01.01.157	1.11, 1.20
1.16	Coal sulfur content limit	No greater than 1% by weight	IDAPA 58.01.01.729	1.11, 1.17
1.18, 1.19	Fuel-burning equipment	Compliance with IDAPA 58.01.01.676-677	IDAPA 58.01.01.676-677	1.11
1.20	Criteria air pollutants, opacity	Compliance testing	IDAPA 58.01.01.157	1.11, 1.15
1.21	O&M Manuals	Development and maintenance	IDAPA 58.01.01.322.06; Permit No. 13-1480-0001	1.11

**Fugitive Emissions**

- 1.1 All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651.  
[IDAPA 58.01.01.650-651, 5/1/94]
- 1.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (e.g., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.  
[IDAPA 58.01.01.322.06, 07, 5/1/94]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
Location:	MiniCassia Facility		Date Expires:	December 12, 2006

- 1.3 The permittee shall maintain records of all fugitive emissions complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

- 1.4 The permittee shall conduct a monthly facility-wide inspection of potential sources of fugitive emissions during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each monthly fugitive emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions are present (if observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

**Odors**

- 1.5 No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[IDAPA 58.01.01.775-776, 5/1/94]

- 1.6 The permittee shall maintain records of all odor complaints received. If a complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[IDAPA 58.01.01.322.06, 07 (state-only), 5/1/94]

**Visible Emissions**

- 1.7 No person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gases are the only reason(s) for the failure of the emission to comply with the requirements of this section.

[IDAPA 58.01.01.625, 4/5/00]

- 1.8 The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions that are not covered by Permit Conditions 2.6, 3.7, and 4.6 during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each monthly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the

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date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

[IDAPA 58.01.01.322.06, 07 (state-only), 5/1/94]

**Excess Emissions**

1.9 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions. The provisions of IDAPA 58.01.01.130-136 shall govern in the event of conflicts between Permit Condition 1.9 and the regulations of IDAPA 58.01.01.130-136.

1.9.1 The person responsible for, or in charge of, a facility during an excess emissions event shall, with all practicable speed, initiate and complete appropriate and reasonable action to correct the conditions causing the excess emissions events, to reduce the frequency of occurrence of such events, and to minimize the amount by which the emission standard is exceeded. In addition, this person shall, as provided below or upon request of DEQ, submit a full report of such occurrence including a statement of all known causes and of the scheduling and nature of the actions to be taken.

[IDAPA 58.01.01.132, 4/5/00]

1.9.2 In all cases where startup, shutdown, or scheduled maintenance of any equipment or emissions unit is expected to result or results in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.133.01(a) through (d), including, but not limited to the following:

[IDAPA 58.01.01.133, 4/5/00]

- Prohibiting any scheduled startup, shutdown, or maintenance resulting in excess emissions during any period in which an Atmospheric Stagnation Advisory and/or a Wood Stove Curtailment Advisory has been declared by DEQ.
- Notifying DEQ of an excess emissions event as soon as reasonably possible, but no later than two hours prior to the start of the excess emissions event unless the owner or operator demonstrates to DEQ's satisfaction that a shorter advanced notice was necessary.
- Reporting and recording the information required pursuant to Permit Conditions 1.9.4 and 1.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event due to startup, shutdown, or scheduled maintenance.

[IDAPA 58.01.01.133.01.a, 3/20/97]

[IDAPA 58.01.01.133.01.b, 4/5/00]

[IDAPA 58.01.01.133.01.c, 3/20/97]

1.9.3 In all cases where upset or breakdown of equipment or an emissions unit, or the initiation of safety measures, results or may result in an excess emissions event, the owner or operator of the facility or emissions unit generating the excess emissions shall demonstrate compliance with IDAPA 58.01.01.134.01(a) and (b) and the following:

[IDAPA 58.01.01.134, 4/5/00]

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1.9.3.1 For all equipment or emissions units from which excess emissions result during upset or breakdown conditions, or for other situations that may necessitate the implementation of safety measures that cause excess emissions, the facility owner or operator shall comply with the following:

[IDAPA 58.01.01.134.02, 4/5/00]

- The owner or operator shall immediately undertake all appropriate measures to reduce and, to the extent possible, eliminate excess emissions resulting from the event and to minimize the impact of such excess emissions on the ambient air quality and public health.

[IDAPA 58.01.01.134.02.a, 4/5/00]

- The owner or operator shall notify DEQ of any upset, breakdown, or safety event that results in excess emissions. Such notification shall identify the time, specific location, equipment or emissions unit involved, and (to the extent known) the cause(s) of the occurrence. The notification shall be given as soon as reasonably possible, but no later than 24 hours after the event, unless the owner or operator demonstrates to DEQ's satisfaction that the longer reporting period was necessary.

[IDAPA 58.01.01.134.02.b, 4/5/00]

- The owner or operator shall report and record the information required pursuant to Permit Conditions 1.9.4 and 1.9.5 and IDAPA 58.01.01.135 and 136 for each excess emissions event caused by an upset, breakdown, or safety measure.

[IDAPA 58.01.01.134.02.c, 3/20/97]

1.9.3.2 During any period of excess emissions caused by upset, breakdown, or operation under facility safety measures, DEQ may require the owner or operator to immediately reduce or cease operation of the equipment or emissions unit causing the excess emissions until such time as the condition causing the excess emissions has been corrected or brought under control. Such action by DEQ shall be taken upon consideration of the factors listed in IDAPA 58.01.01.134.03 and after consultation with the facility owner or operator.

[IDAPA 58.01.01.134.03, 4/5/00]

1.9.4 The owner or operator shall submit a written report for each excess emissions event to DEQ no later than 15 days after the beginning of such an event. Each report shall contain the information specified in IDAPA 58.01.01.135.02.

[IDAPA 58.01.01.135.01, 3/20/97; IDAPA 58.01.01.135.02, 4/5/00]

1.9.5 The owner or operator shall maintain excess emissions records at the facility for the most recent five-calendar-year period. The excess emissions records shall be made available to DEQ upon request. The excess emissions records shall include the information required by IDAPA 58.01.01.136.03(a) and (b), as summarized in the following:

[IDAPA 58.01.01.136.01, 02, 3/20/97; IDAPA 58.01.01.136.03, 4/5/00]

- An excess emissions record book for each emissions unit or piece of equipment containing copies of all reports that have been submitted to DEQ pursuant to IDAPA 58.01.01.135 for the particular emissions unit or equipment; and

[IDAPA 58.01.01.136.03.a, 4/5/00]

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- Copies of all startup, shutdown, and scheduled maintenance procedures and upset/breakdown/ safety preventative maintenance plans that have been developed by the owner or operator in accordance with IDAPA 58.01.01.133 and 134, and facility records as necessary to demonstrate compliance with such procedures and plans.

[IDAPA 58.01.01.136.03.b, 3/20/97]

**Reports and Certifications**

- 1.10 All periodic reports and certifications required by this permit shall be submitted to DEQ within 45 days of the end of each specified reporting period. Excess emissions reports and notifications shall be submitted in accordance with IDAPA 58.01.01.130-136. The annual reporting period for the permittee starts on September 1 of each year and ends on August 31 of the next calendar year. The semiannual reporting periods for the permittee will be September 1 through February 28 (or 29 in a leap year) and March 1 through August 31. Reports, certifications, and notifications shall be submitted to:

Department of Environmental Quality  
Twin Falls Regional Office  
Air Quality Permit Compliance  
601 Pole Line Rd., Suite 2  
Twin Falls, Idaho 83301  
Tel.: (208) 736-2190

Fax: (208) 736-2194

The periodic compliance certification required by permit General Provision 14.21 shall also be submitted within 45 days of the end of the specified reporting period to:

EPA Region 10  
Air Operating Permits, OAQ-107  
1200 Sixth Avenue  
Seattle, WA 98101

[IDAPA 58.01.01.322.08, 4/5/00; IDAPA 58.01.01.322.11, 4/6/05]

**Monitoring and Recordkeeping**

- 1.11 The permittee shall maintain sufficient recordkeeping to assure compliance with all of the terms and conditions of this operating permit. Recording of monitoring information shall include, but not be limited to: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.322.07, 5/1/94]

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**Open Burning**

1.12 The facility shall comply with the requirements of IDAPA 58.01.01.600-616, *Rules for Control of Open Burning*.

[IDAPA 58.01.01.600-616, 3/21/03]

**Renovation and Demolition**

1.13 The permittee shall comply with all applicable portions of 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

[40 CFR 61, Subpart M]

**Regulated Substances for Accidental Release Prevention**

1.14 An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115, shall comply with the requirements of the Chemical Accident Prevention Provisions in 40 CFR 68 no later than the latest of the following dates:

- Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130.
- The date on which a regulated substance is first present above a threshold quantity in a process.

[40 CFR 68.10(a)]

**Test Methods**

1.15 If testing is required, the permittee shall use the test methods listed in Table 1.2 to measure the pollutant emissions.

**Table 1.2 EPA REFERENCE TEST METHODS**

Pollutants	Test Methods*	Special Conditions
PM	EPA Method 5	
	EPA Method 5B for B&W Coal-fired Boiler and Erie City Boiler while fired by coal only	
PM <sub>10</sub>	EPA Method 201.a and EPA Method 202	
NO <sub>x</sub>	EPA Method 7	
SO <sub>2</sub>	EPA Method 6	
CO	EPA Method 10	
VOC	EPA Method 25	
Opacity	EPA Method 9	Sources subject to NSPS use IDAPA 58.01.01.625 and Method 9; otherwise, use IDAPA 58.01.01.625 only.

\* Or approved alternative in accordance with IDAPA 58.01.01.157

**Sulfur Content**

1.16 No person shall sell, distribute, use, or make available for use any coal containing greater than 1% sulfur by weight.

[IDAPA 58.01.01.729, 5/1/94; Permit Condition]

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- 1.17 The permittee shall maintain documentation of the actual sulfur content in percent by weight for each shipment of coal received. The documentation must identify the supplier of the coal, the date of delivery, and the coal sulfur content in percent by weight.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

**Fuel-burning Equipment**

- 1.18 No person shall discharge to the atmosphere from any fuel-burning equipment with a maximum rated input of 10 MMBtu/hr or more, and commencing operation on or after October 1, 1979, PM in excess of the concentrations shown in the following table:

**Table 1.3 GRAIN-LOADING STANDARDS FOR NEW SOURCES**

Fuel Type	Allowable Particulate (gr/dscf)	Oxygen
Gas	.015	3%
Liquid	.050	3%
Coal	.050	8%
Wood Product	.080	8%

The effluent gas volume shall be corrected to the oxygen concentration shown.

[IDAPA 58.01.01.676, 5/1/94]

- 1.19 A person shall not discharge to the atmosphere from any fuel-burning equipment in operation prior to October 1, 1979, or with a maximum rated input of less than 10 MMBtu/hr, PM in excess of the concentrations shown in Table 1.4.

**Table 1.4 GRAIN-LOADING STANDARDS FOR MINOR AND EXISTING SOURCES**

Fuel Type	Allowable Particulate (gr/dscf)	Oxygen
Gas	.015	3%
Liquid	.050	3%
Coal	.100	8%
Wood Product	.200	8%

The effluent gas volume shall be corrected to the oxygen concentration shown.

[IDAPA 58.01.01.677, 5/1/94]

**Compliance Testing**

- 1.20 The permittee shall provide a notice of intent to test to DEQ at least 15 days prior to the scheduled test unless a shorter time period has been provided in a permit, order, or consent decree, or the permittee has prior DEQ approval. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

All testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, prior to conducting any compliance test, the permittee is encouraged to submit in writing to DEQ, at least 30 days in advance, the following for approval:

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- The type of test method to be used
- Any extenuating or unusual circumstances regarding the proposed test
- The proposed schedule for conducting and reporting the test

Within 30 days following the date on which a compliance test required by this permit is concluded, the permittee shall submit to DEQ a compliance test report for the respective test. The compliance test report shall include all process operating data collected during the test period as well as the test results, raw test data, and associated documentation, including any approved test protocol.

The proposed test date(s), test date rescheduling notice(s), compliance test report, and all other correspondence shall be sent to:

Air Quality Permit Compliance  
Department of Environmental Quality  
Twin Falls Regional Office  
601 Pole Line Rd., Suite 2  
Twin Falls, ID 83301

[IDAPA 58.01.01.157, 4/5/00; IDAPA 58.01.01.322.06, 08.a, 09, 5/1/94]

***Operations and Maintenance Manual Requirements***

- 1.21 The permittee shall develop an O&M manual for the appropriate emissions control device(s) for each of the following sources: (a) the B&W boiler; (b) the Erie City boiler; (c) the pulp dryers; (d) the pellet coolers, (e) the lime kilns; (f) the flume and process slakers, (g) the drying granulator; (h) the cooling granulators; (i) the sugar handling systems, (h) lime kiln building material handling system. The permittee shall develop each O&M manual within 18 months of issuance of this permit.
- 1.21.1 After the initial O&M manual development, the permittee shall update the control device monitoring program in the O&M manuals as necessary after each DEQ-approved performance test.
- 1.21.2 The O&M manuals shall address the operation, maintenance, and repair of applicable control device(s) for each source to ensure good working order and operation as efficiently as practicable. The manuals shall include, at a minimum, a general description of the control device(s); normal operating conditions and procedures; startup, shutdown, and maintenance procedures; upset conditions and corrective action procedures; methods of preventing malfunctions; appropriate corrective actions to be taken; and provisions for annual inspections during planned maintenance outages. The permittee shall keep records of maintenance activities for a period of five years, in accordance with Permit Condition 1.11.
- 1.21.3 The O&M manuals shall include a control device monitoring program that establishes control device operating parameters to be monitored, their acceptable operating ranges where applicable, corrective action levels, monitoring equipment and procedures, monitoring frequency, and frequency of recordkeeping. The monitoring parameters shall include, but are not limited to, any specific control device monitoring parameter(s) required under any permit condition in this permit, unless DEQ approves their removal from this permit condition. The control device monitoring program shall be developed by the permittee based on performance test results, vendor data, and/or other supporting documentation.

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- 1.21.4 The O&M manual shall be maintained onsite and shall be made available to DEQ representatives upon request.
  
- 1.21.5 Whenever an operating parameter is outside the operating range specified by the control device monitoring program in an O&M manual, the permittee shall take corrective action as expeditiously as practicable to bring the operating parameter back within the operating range. Deviations from the operating range may not by themselves be considered deviations from applicable emissions standards, unless DEQ determines that the frequency, duration, or magnitude of the deviations indicates that additional action is required.

**[IDAPA 58.01.01.322.06, 5/1/94; Permit Condition]**

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**2. B&W COAL-FIRED BOILER (P-B1)**

The following is a narrative description of the B&W coal-fired boiler, identified as emission point P-B1, regulated in this Tier I operating permit. This description is for informational purposes only.

The B&W boiler has a rated steam production capacity of 200,000 pounds of steam per hour. The boiler is a coal-fired stoker boiler, which produces 200 psi, 500°F, super-heated steam for power production and evaporation water for sugar beet juices. The B&W boiler, in conjunction with the Erie City boiler, provides steam for electricity and for sugar production processes in the main mill.

Table 2.1 describes the devices used to control emissions from the B&W coal-fired boiler.

**Table 2.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emissions Control Device(s)
P-B1	B&W coal-fired boiler	One multiclone (A - B1A) and one spray-chamber scrubber (A - B1B) in series

Table 2.2 contains a summary of requirements that apply generally to the B&W boiler. Specific permit requirements are listed below Table 2.2.

**Table 2.2 APPLICABLE REQUIREMENTS SUMMARY FOR B&W BOILER**

Permit Conditions	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
2.1	PM	0.100 gr/dscf at 8% O <sub>2</sub>	IDAPA 58.01.01.677; Permit No. 13-1020-0001-00	2.5, 2.8, 2.9, 2.10, 2.11
2.2	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625; Permit No. 13-1020-0001-00	2.7

Table 2.3 contains a summary of requirements that apply to the B&W boiler's spray-chamber scrubber.

**Table 2.3 APPLICABLE REQUIREMENTS SUMMARY FOR B&W BOILER CONTROL DEVICES**

Control Device	Operating Parameter	Operating Range	Monitoring and Recordkeeping Requirements
Spray-chamber scrubber	Water flow	460 to 690 gpm	2.8, 2.9, 2.10, 2.11
	TDS and suspended particulate	57,900 mg/l	

**Permit Limits/Operating Requirements**

2.1 A person shall not discharge to the atmosphere from any fuel-burning equipment in operation prior to October 1, 1979, or with a maximum rated input of less than 10 MMBtu/hr, PM in excess of 0.100 gr/dscf corrected to 8% oxygen.

[Permit Condition 81]

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2.2 The permittee shall comply with the visible emissions requirements listed in Permit Condition 1.7. **[Permit Condition]**

2.3 The permittee shall operate the scrubber within the specified operating range for each operating parameter specified below.

- The water flow rate to the scrubber shall be maintained within the range of 460 to 690 gpm.
- The concentration of suspended particulate and total dissolved solids (TDS) in the recirculated water shall not exceed 57,900 mg/l of water.

**[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]**

2.4 The permittee shall, at all times, maintain and operate the multiclone and scrubber in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

**[IDAPA 58.01.01.322.01 (state-only), 3/19/99]**

**Compliance Testing**

2.5 A compliance test shall be conducted within the first 12 months of this permit term to demonstrate compliance with Permit Condition 2.1. Testing shall be conducted in accordance with IDAPA 58.01.01.157, Permit Condition 1.20, and the following:

- The permittee shall conduct a PM compliance test using the test outlined in 40 CFR 60, Appendix A, Method 5B, or such comparable and equivalent method approved in accordance with IDAPA 58.01.01.157. Test methods and procedures shall comply with IDAPA 58.01.01.157.
- Prior to conducting the test, the permittee shall address the required averaging period specified in accordance with IDAPA 58.01.01.679 and the altitude correction in IDAPA 58.01.01.680.
- A visible emissions evaluation shall be performed during each compliance test. The visible emissions evaluation shall be conducted in accordance with the procedures contained in IDAPA 58.01.01.625.
- The permittee shall monitor and record the steam production rate of the boiler, coal feed rate in tons per hour, pressure drop across the multiclone, and water flow rate to the scrubber during each test.
- For the coal used during the source test, the permittee shall record the coal's highest heating value and coal's analysis result, including ash content.
- If the PM measured in the initial compliance test is less than or equal to 75% of the emission standard in Permit Condition 2.1, no further testing shall be required during this term of the permit. If the PM measured during the initial compliance test is greater than 75%, but less than or equal to 90%, of the emission standard in Permit Condition 2.1, a second test shall be required in the third year of the permit term. If the PM measured during the initial compliance test is greater than 90% of the emission standard in Permit Condition 2.1, the permittee shall conduct a compliance test annually.

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- The permittee shall collect a representative sample of recirculated water from the scrubber during each test. The concentration of suspended particulate and TDS of the sample recirculated water shall be analyzed, recorded, and expressed in milligrams of solids per liter of water.
- The permittee shall record and maintain the information required under Permit Condition 2.5 in accordance with Permit Condition 1.11.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 09, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]

2.6 The permittee may conduct additional compliance tests during the permit term to revise the operational parameters in Permit Condition 2.3 and/or parameters developed under Permit Conditions 2.5, so long as the compliance tests conform to all requirements of this permit.

[IDAPA 58.01.01.322.01, 3/19/99]

**Monitoring and Recordkeeping**

2.7 The permittee shall conduct weekly visible emissions inspections during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for the boiler stack. If any visible emissions are present, the permittee shall perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each weekly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

- During a week that a compliance test required by Permit Condition 2.5 is scheduled, the weekly visible emissions evaluation shall be performed during the compliance test. Results of the visible emissions evaluation shall be submitted with the compliance test report.
- If four consecutive weekly visible emissions inspections indicate that visible emissions are not present, or opacity is below 20%, respectively, the frequency of visible emissions inspections decreases to monthly. If any monthly Method 9 observation indicates opacity is greater than 20%, the frequency of the visible emissions inspections reverts to weekly.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

2.8 The permittee shall install, operate, calibrate, and maintain monitoring devices to continuously measure the scrubber water flow rate. The flow rate shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event the monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]

2.9 At least once each year during a planned maintenance outage, or as needed during operation, the multiclone and the spray-chamber scrubber shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the multiclone and the scrubbers to ensure efficient operation.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

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- 2.10 The permittee shall collect a representative sample of recirculated water from the scrubber monthly from September to December and biweekly from January to the end of the campaign. The concentration of suspended particulate and TDS in the sample recirculated water shall be analyzed and recorded.  
[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]
- 2.11 All the records shall be recorded and maintained in accordance with Permit Condition 1.11. The permittee shall record the starting and ending dates of each campaign.  
[IDAPA 58.01.01.322.06, 07, 5/1/94]

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**3. ERIE CITY BOILER (P-B2A AND P-B2B)**

The following is a narrative description of the Erie City boiler, identified as emission point S-B2, regulated in this Tier I operating permit. This description is for informational purposes only.

The Erie City boiler has a rated steam production capacity of 200,000 pounds of steam per hour when fired with coal and 250,000 pounds of steam per hour when fired with natural gas. The Erie City boiler is a coal pulverized/natural gas, horizontally-fired boiler that produces 400 psi, 600°F, super-heated steam for power production and evaporation water for sugar beet juices.

Table 3.1 describes the control devices used to control emissions from the Erie City boiler.

**Table 3.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emissions Unit(s)/ Process(es)	Emission Control Device
P-B2A	200,000 pounds steam per hour boiler when fired with coal	Boiler (S-B2) while fired with coal, or the combination of coal and natural gas	One multiclone (A - B2A) and one spray-chamber (A - B2B) scrubber in series
P-B2B	250,000 pounds steam per hour boiler when fired with natural gas	Boiler (S-B2) while fired by natural gas only	Multiclone (A - B2A)

Table 3.2 contains a summary of requirements that apply generally to the Erie City boiler. Specific permit requirements are listed below Table 3.2.

**Table 3.2 APPLICABLE REQUIREMENTS SUMMARY FOR EMISSIONS UNIT**

Permit Conditions	Affected Emission Point	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
3.1	P-B2A (while the boiler is fired with coal, or the combination of coal and natural gas)	PM	0.100* X + 0.011 *Y at 8% O <sub>2</sub>	IDAPA 58.01.01.677-678; Permit No. 13-1020-0001-00	3.2, 3.4, 3.6, 3.9, 3.10, 3.11
	P-B2B (while the boiler is fired by natural gas only)	PM	0.015 gr/dscf at 3% O <sub>2</sub>	IDAPA 58.01.01.677	3.2, 3.4, 3.6
3.3	P-B2A and P-B2B	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625; Permit No. 13-1020-0001-00	3.8

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Table 3.3 contains a summary of requirements that apply to Erie City boiler's multiclone and spray-chamber scrubber. Specific permit requirements are listed below.

**Table 3.3 APPLICABLE REQUIREMENTS SUMMARY FOR EMISSIONS CONTROL DEVICES**

Control Device	Operating Parameter	Operating Range	Monitoring
Spray-chamber scrubber	Water flow	660 to 990 gpm	3.9, 3.10, 3.11
	TDS and suspended particulate	57,900 mg/l	

**Permit Limits/Operating Requirements**

3.1 A person shall not discharge to the atmosphere from any fuel-burning equipment in operation prior to October 1, 1979, or with a maximum rated input of less than 10 MMBtu/hr, PM in excess of the concentrations shown in Table 3.4. The effluent gas volume shall be corrected to the oxygen concentration shown.

**Table 3.4 FUEL-BURNING EQUIPMENT GRAIN-LOADING STANDARDS**

Fuel Type	Allowable Particulate Emissions	Percent Oxygen
Coal, or the combination of coal and natural gas	$0.100^* X + 0.011 * Y^1$	8%
Gas only	0.015 gr/dscf	3%

<sup>1</sup>X is the percentage of total heating input derived from the combustion of coal; Y is the percentage of total heating input derived from the combustion of natural gas.

When two or more types of fuel are burned concurrently, the allowable emission shall be determined by proportioning the gross heat input and emission standards for each fuel.

[Permit Condition]

3.2 The permittee shall monitor and record the boiler fuel type whenever the fuel type is changed. The records shall be maintained in accordance with Permit Condition 1.11. Fuel type in this section means natural gas only, coal only, or the combination of natural gas and coal.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

3.3 The permittee shall comply with the visible emissions requirements listed in Permit Condition 1.7.

[Permit Condition]

3.4 The permittee shall operate the scrubber within the specified operating range for each operating parameter specified below.

- The water flow rate to the scrubber shall be maintained within the range from 660 to 990 gpm.
- The concentration of suspended particulate and TDS in the recirculated water shall not exceed 57,900 mg/l of water.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]

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3.5 The permittee shall, at all times, maintain and operate the multiclone and scrubber in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

**Compliance Testing**

3.6 A compliance test shall be conducted within the first 12 months of this permit term to demonstrate compliance with Permit Condition 3.1. Testing shall be conducted in accordance with IDAPA 58.01.01.157, Permit Condition 1.20, and the following:

- The permittee shall conduct a PM compliance test using the test outlined in 40 CFR 60, Appendix A, Method 5B, or such comparable and equivalent method approved in accordance with IDAPA 58.01.01.157. Test methods and procedures shall comply with IDAPA 58.01.01.157.
- Prior to conducting the test, the permittee shall address the required averaging period specified in accordance with IDAPA 58.01.01.679 and the altitude correction in IDAPA 58.01.01.680.
- A visible emissions evaluation shall be performed during each compliance test. The visible emissions evaluation shall be conducted in accordance with the procedures contained in IDAPA 58.01.01.625.
- The permittee shall monitor and record the steam production rate of the boiler, coal feed rate in tons per hour, pressure drop across the multiclone, and water flow rate to the scrubber during each test.
- For the coal used during the source test, the permittee shall record the coal's highest heating value and coal's analysis result, including ash content.
- If the PM measured in the initial compliance test is less than or equal to 75% of the emission standards in Permit Condition 3.1, no further testing shall be required during this term of the permit. If the PM measured during the initial compliance test is greater than 75%, but less than or equal to 90%, of the emission standards in Permit Condition 3.1, a second test shall be required in the third year of the permit term. If the PM measured during the initial compliance test is greater than 90% of the emission standards in Permit Condition 3.1, the permittee shall conduct a compliance test annually.
- The permittee shall collect a representative sample of recirculated water from the scrubber during each test. The concentration of suspended particulate and TDS of the sample recirculated water shall be analyzed, recorded, and expressed in milligrams of solids per liter of water.
- The permittee shall record and maintain the information required under Permit Condition 3.6 in accordance with Permit Condition 1.11.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 09, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]

3.7 The permittee may conduct additional compliance tests during the permit term to revise the operational parameters in Permit Condition 3.4 and/or parameters developed under Permit Conditions 3.6, so long as the compliance tests conform to all requirements of this permit.

[IDAPA 58.01.01.322.01, 3/19/99]

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**Monitoring and Recordkeeping**

- 3.8 When combusting coal only, or any combination of coal and natural gas, the permittee shall conduct weekly visible emissions inspections during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for the boiler stack(s). If any visible emissions are present, the permittee shall perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each weekly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.
- During a week that a compliance test required by Permit Condition 3.6 is scheduled, the weekly visible emissions evaluation shall be performed during the compliance test. Results of the visible emissions evaluation shall be submitted with the compliance test report.
  - If four consecutive weekly visible emissions inspections indicate that visible emissions are not present, or opacity is below 20%, respectively, the frequency of visible emissions inspections decreases to monthly. If any monthly Method 9 observation indicates opacity is greater than 20%, the frequency of the visible emissions inspections reverts to weekly.  
[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]
- 3.9 The permittee shall install, operate, calibrate, and maintain monitoring devices to continuously measure the scrubber water flow rate. This operating parameter shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event the monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.  
[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]
- 3.10 At least once each year during a planned maintenance outage, or as needed during operation, the multiclone and the spray-chamber scrubber shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the multiclone and the scrubbers to ensure efficient operation.  
[IDAPA 58.01.01.322.01 (state-only), 3/19/99]
- 3.11 The permittee shall collect a representative sample of recirculated water from the scrubber monthly from September to December and biweekly from January to the end of the campaign. The concentration of suspended particulate and TDS in the sample recirculated water shall be analyzed and recorded.  
[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]
- 3.12 All the records shall be recorded and maintained in accordance with Permit Condition 1.11. The permittee shall record the starting and ending dates of each campaign.  
[IDAPA 58.01.01.322.06, 07, 5/1/94]

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**4. PULP DRYING (P-D1A, P-D1B, P-D2A, P-D2B)**

The following is a narrative description of the pulp dryers regulated in this Tier I operating permit. This description is for informational purposes only.

Emissions Unit Group 3 consists of the South pulp dryer and North pulp dryer. These are two direct-fired pulp dryers are used to dry pressed beet pulp. The two dryers are primarily coal-fired. Exhaust gasses from each dryer split into two streams. Each stream passes through a cyclone and a spray-impingement-type scrubber in series.

Table 4.1 describes the control devices used in controlling emissions from the pulp dryers.

**Table 4.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point Identification	Emissions Unit(s) / Process(es)	Emission Control Device
P-D1A	48.5 tons per hour process weight input rate south pulp dryer (S-D1)	A pair of cyclones (A - D1A) operated in parallel and then exhausted to a pair of spray-impingement-type scrubbers (A - D1B) operated in parallel
P-D1B		
P-D2A	56.9 tons per hour process weight input rate north pulp dryer (S-D2)	A pair of cyclones (A - D2A) operated in parallel and then exhausted to a pair of spray-impingement-type scrubbers (A - D2B) operated in parallel
P-D2B		

The following table contains a summary of requirements that generally apply to the pulp dryers. Specific permit requirements are listed below Table 4.2.

**TABLE 4. 2 APPLICABLE REQUIREMENTS SUMMARY FOR PULP DRYERS**

Permit Conditions	Affected Emissions Unit	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
4.1	Each scrubber of each dryer	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625; Permit No. 1020-0001	4.7, 4.11
4.2	South pulp dryer	PM	Process weight	IDAPA 58.01.01.703	4.5, 4.8, 4.11
	North pulp dryer				

Table 4.3 contains a summary of requirements that apply to each dryer's scrubber. Specific permit requirements are listed below.

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**Table 4.3 APPLICABLE REQUIREMENTS SUMMARY FOR CONTROL DEVICES**

Control Device	Operating Parameter	Operating Range	Monitoring and Recording Requirements
Each scrubber	Pressure drop	4" of water column or greater	4.9, 4.11
	Water flow	100 to 400 gpm	
	Concentration of TDS and suspended particulate in the scrubber's recirculated water	57,900 mg/l	4.10, 4.11

**Permit Limits/Operating Requirements**

4.1 The permittee shall comply with visible emissions requirements specified in Permit Condition 1.7. [Permit Condition]

4.2 No person with process exempt under IDAPA 58.01.01.702.02.b shall emit particulate matter to the atmosphere from any process or process equipment in excess of the amount shown in the following equations, where E is the total rate of emission from all emission points from the source in pounds per hour, and PW is the process weight rate in pounds per hour. The averaging period for this limit is one hour in accordance with IDAPA 58.01.01.700.03.

a. If PW is less than 60,000 lb/hr,

$$E = 0.02518(PW)^{0.67}$$

b. If PW is greater than or equal to 60,000 lb/hr,

$$E = 23.84(PW)^{0.11} - 40$$

[Permit Condition]

4.3 The permittee shall operate each scrubber within the specified operating range for each control device operating parameter specified below.

- The water flow of each scrubber shall be maintained within the range from 100 to 400 gpm.
- The pressure drop across each scrubber shall be maintained at 4 inches of water column or greater.
- The concentration of suspended particulate and TDS in the recirculated water shall not exceed 57,900 mg/l of water.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]

4.4 The permittee shall, at all times, maintain and operate the cyclones and scrubbers in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

**Compliance Testing**

4.5 A compliance test shall be conducted within the first 12 months of this permit term to demonstrate compliance with Permit Conditions 4.1 and 4.2. Testing shall be conducted in accordance with IDAPA 58.01.01.157, Permit Condition 1.20, and the following:

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- The permittee shall conduct a PM compliance test using the test outlined in 40 CFR 60, Appendix A, Method 5, or such comparable and equivalent method approved in accordance with IDAPA 58.01.01.157. Test methods and procedures shall comply with IDAPA 58.01.01.157.
- A visible emissions evaluation shall be performed during each compliance test. The visible emissions evaluation shall be conducted in accordance with the procedures contained in IDAPA 58.01.01.625.
- For each pulp dryer, the process weight input (tons per hour) shall be calculated using the methodology described in Appendix A of this permit, *Pulp Dryer Material Input Rate Calculation*, or as otherwise approved in writing by DEQ. Parameters and operating data used to calculate the process weight input must also be recorded for each compliance test run. These parameters and operating data include total dried pulp produced (tons per day), dried pulp moisture content (percent by weight), pressed pulp moisture content (percent by weight), fuel heating value (Btu/lb), fuel input per ton of dried pulp (therms per ton), quantity of additives (percent of dry substance per ton of dry pulp), solids content of the additives, and throughput to each dryer (percent).
- The permittee shall collect a representative sample of recirculated water from the scrubber during each compliance test. The total concentration of total dissolved solids and suspended solids of the recirculated water sample shall be analyzed and recorded and expressed in milligrams of solids per liter of water.
- For each scrubber, the permittee shall record the pressure drop across the scrubber, water flow of the scrubber, and water pressure of sprays.
- If the PM measured during the initial compliance test is less than or equal to 75% of the emission standards in Permit Condition 4.2, no further testing shall be required during this term of this permit. If the PM measured during the initial compliance test is greater than 75%, but less than or equal to 90%, of the emission standard in Permit Condition 4.2, a second test shall be required in the third year of the permit term. If the PM measured during the initial compliance test is greater than 90% of the emission standard in Permit Condition 4.2, the permittee shall conduct a compliance test annually.
- The permittee shall record and maintain information required under Permit Condition 4.5 in accordance with Permit Condition 1.11.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94;  
IDAPA 58.01.01.322.08, 4/5/00]

4.6 The permittee may conduct additional compliance tests during the permit term to revise the operational parameters in Permit Condition 4.3 and/or parameters developed under Permit Conditions 4.5, so long as the compliance tests conform to all requirements of this permit.

[IDAPA 58.01.01.322.01, 3/19/99]

**Monitoring and Recordkeeping Requirements**

4.7 The permittee shall conduct weekly visible emissions observations during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for dryer stacks. If any visible emissions are present, the permittee shall perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with

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IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each weekly visible emission inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

- During a week that a compliance test required by Permit Condition 4.5 is scheduled, the weekly visible emissions evaluation shall be performed during the compliance test. Results of the visible emissions evaluation shall be submitted with the compliance test report.
- If four consecutive weekly visible emissions inspections indicate that visible emissions are not present, or opacity is below 20%, respectively, the frequency of visible emissions inspections decreases to monthly. If any monthly Method 9 observation indicates opacity is greater than 20%, the frequency of the visible emissions inspections reverts to weekly.

[IDAPA 58.01.01.322.06, 07, 5/1/94; IDAPA 58.01.01.322.08, 4/5/00]

4.8 The permittee shall record the process weight input rate for each dryer monthly. It shall be calculated in accordance with the Pulp Dryer Throughput Calculation Spreadsheet in the appendix of this permit, or as otherwise approved in writing by DEQ.

[Permit Condition]

4.9 The permittee shall install, operate, calibrate, and maintain monitoring devices to continuously measure the scrubber water flow rate and pressure drop across the scrubber. The flow rate and pressure drop shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event the monitoring device(s) becomes inoperable, it/they shall be repaired or replaced as soon as practicable.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

4.10 The permittee shall collect a representative sample of recirculated water from the scrubber monthly from September to December and biweekly from January to the end of each campaign. The concentration of suspended particulate and total dissolved solids in the recirculated water sample shall be analyzed and recorded. The result shall be expressed in milligrams of solids per liter of water.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

4.11 All the records shall be recorded and maintained in accordance with Permit Condition 1.11. The permittee shall record the starting and ending dates of each campaign.

[IDAPA 58.01.01.322.06, 07, 5/1/94]

4.12 At least once each year during a planned maintenance outage, or as needed during operation, each cyclone and scrubber shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to cyclone(s) and scrubber(s) to ensure efficient operation.

[IDAPA 58.01.01.322.01, 03/19/99]

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**5. PELLET COOLING (P-D3, P-D4, P-D5)**

The following is a narrative description of the pellet cooling process regulated in this Tier I operating permit. This description is for informational purposes only.

The pellet coolers are all manufactured by California Pellet Mill (model 2GA3). Each pellet cooler is rated at 7.4 T/hr. Emissions from the pellet coolers consist of PM and PM<sub>10</sub>. The three pellet coolers' emissions are controlled by two cyclones.

Table 5.1 describes the devices used to control emissions from the pellet coolers.

**Table 5.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point Identification	Emissions Unit(s)/ Process(es)	Emission Control Device
P-D3	Pellet cooler No. 1 (S-D3)	Cyclone A-D3
P-D4/5	Pellet cooler No. 2 (S-D4)	Cyclone A-D4/5
	Pellet cooler No. 3 (S-D5)	

Table 5.2 contains a summary of requirements that apply generally to pellet coolers. Specific permit requirements are listed below Table 5.2.

**Table 5.2 APPLICABLE REQUIREMENTS SUMMARY FOR PELLET COOLER NO.'S 1 AND 2**

Permit Conditions	Affected Emissions Unit	Parameter	Permit Limit/Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Each emission point	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11
5.1	Pellet Cooler No. 1, Pellet Cooler No. 2, Pellet Cooler No. 3	PM	Process weight	IDAPA 58.01.01.702	5.2, 5.3

**Permit Limits/Operating Requirements**

5.1 No person shall emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 17,000 lb/hr,  

$$E = 0.045(PW)^{0.60}$$

b. If PW is equal to or greater than 17,000 lb/hr,  

$$E = 1.12(PW)^{0.27}$$

[IDAPA 58.01.01.702, 4/5/00]

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- 5.2 The permittee shall, at all times, maintain and operate the cyclones in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

***Monitoring and Recordkeeping Requirements***

- 5.3 At least once each year during a planned maintenance outage, or as needed during operation, each cyclone shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the cyclone(s) to ensure efficient operation.

[IDAPA 58.01.01.322.01, 03/19/99]

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**6. LIME KILNS (P-K1/2A, P-K1/2B, P-K1/2C, P-K1/2D, P-K1/2E, P-K1/2F, P-K2B)**

The following is a narrative description of the lime kilns regulated in this Tier I operating permit. This description is for informational purposes only.

The gas kiln, manufactured by Union Carbide and rated at 200 tons, was installed prior to 1970. The coke kiln, manufactured by Larrowe Construction and is a 100-ton Belgium model, was also installed prior to 1970.

The exhaust gas from the kilns is pulled from the top of the kilns and passes through gas washers and carbonation tanks, or can be routed through a scrubber in specific instances. For permitting purposes, the gas washers and carbonation tanks are considered process equipment, while the scrubber is considered control equipment.

Table 6.1 describes the control devices used in controlling emissions from the lime kilns.

**Table 6.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point/Source Identification	Emissions Unit(s) Identification	Emission Control Device
P-K1/2A, P-K1/2B, and P-K1/2C; and/or P-K1/2D, P-K1/2E, and P-K1/2F	362 tons lime rock per day natural gas-fired lime kiln; 0.93 million cubic feet of natural gas per day Gas Kiln (S-K1)	None
P-K1/2A, P-K1/2B, and P-K1/2C;	168 tons lime rock per day coke-fired lime kiln, 12 tons coke per day Coke Kiln (S-K2)	None
P-K2B		One scrubber (A - K2B) while charging the kiln

Table 6.2 contains a summary of requirements that apply generally to the lime kilns. Specific permit requirements are listed below Table 6.2.

**Table 6.2 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Affected Emission Unit	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Each emission point	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11, 6.4
6.1	Gas kiln Coke kiln	PM	Process weight	IDAPA 58.01.01.702	6.2-6.5

**Permit Limits/Operating Requirements**

6.1 No person shall emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

<b>Permittee:</b>	TASCO	<b>Facility ID No. 067-00001</b>	<b>Date Issued:</b>	September 23, 2005
<b>Location:</b>	MiniCassia Facility		<b>Date Expires:</b>	December 12, 2006

- a. If PW is less than 17,000 lb/hr,  
 $E = 0.045(PW)^{0.60}$
- b. If PW is equal to or greater than 17,000 lb/hr,  
 $E = 1.12(PW)^{0.27}$

[IDAPA 58.01.01.702, 4/5/00]

6.2 The permittee shall, at all times, maintain and operate the scrubber in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

**Monitoring and Recordkeeping Requirements**

6.3 Within one year of permit issuance, the permittee shall install, operate, calibrate, and maintain a monitoring device to continuously measure the water pressure on the spray nozzles in the scrubber. After the monitoring device is operable, the water pressure shall be recorded weekly and the records maintained in accordance with Permit Condition 1.1 I. In the event that a monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

6.4 Within six months of installation of the scrubber monitoring devices required by Permit Condition 6.3, the permittee shall develop proposed water pressure ranges for the scrubber. The proposal shall be submitted to DEQ as an administrative amendment request, per IDAPA 58.01.01.381, to incorporate the water pressure ranges as an operating limit in the Tier I permit. This proposal shall include monitoring data and any other documentation necessary to substantiate that the proposed water pressure ranges will ensure compliance with Permit Conditions 1.7 and 6.1.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

6.5 At least once each year during a planned maintenance outage, or as needed during operation, the scrubber shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the scrubber to ensure efficient operation.

[IDAPA 58.01.01.322.01, 03/19/99]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
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**7. FLUME SLAKER AND PROCESS SLAKER (P-K3)**

The following is a narrative description of the flume slaker and process slaker regulated in this Tier I operating permit. This description is for informational purposes only.

The facility operates two lime slakers to produce milk of lime from crushed calcium oxide (CaO) rocks and water. Lime slakers are batch processes, per the application. Slaker emissions are controlled by a common spray-chamber type scrubber.

Table 7.1 describes the control devices used in controlling emissions from the slakers.

**Table 7.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point/Source Identification	Emissions Unit(s) Identification	Emissions Unit(s) Identification	Emission Control Device
P-K3	Rated total 367 tons CaO per day	Flume slaker (S-K3)	One spray chamber scrubber
		Process slaker (S-K3)	

Table 7.2 contains a summary of requirements that apply generally to the slakers. Specific permit requirements are listed below Table 7.2.

**Table 7.2 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Affected Emission Unit	Parameter	Permit Limit/Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Flume slaker and process slaker	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11, 7.4
7.1	Flume slaker and process slaker	PM	Process weight rate	IDAPA 58.01.01.701	7.2-7.5

**Permit Limits/Operating Requirements**

7.1 No person shall emit to the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

- a. If PW is less than 9,250 lb/hr,  

$$E = 0.045(PW)^{0.60}$$
- b. If PW is equal to or greater than 9,250 lb/hr,  

$$E = 1.10(PW)^{0.27}$$

[IDAPA 58.01.01.701, 4/5/00]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
Location:	MiniCassia Facility		Date Expires:	December 12, 2006

- 7.2 The permittee shall, at all times, maintain and operate the scrubber in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

**Monitoring and Recordkeeping Requirements**

- 7.3 Within one year of permit issuance, the permittee shall install, operate, calibrate, and maintain a monitoring device to continuously measure the water pressure on the spray nozzles in the scrubber. After the monitoring device is operable, the water pressure shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event that a monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

- 7.4 Within six months of installation of the scrubber monitoring devices required by Permit Condition 7.3, the permittee shall develop proposed water pressure ranges for the scrubber. The proposal shall be submitted to DEQ as an administrative amendment request, per IDAPA 58.01.01.381, to incorporate the water pressure ranges as an operating limit in the Tier I permit. This proposal shall include monitoring data and any other documentation necessary to substantiate that the proposed water pressure ranges will ensure compliance with Permit Conditions 1.7 and 7.1.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

- 7.5 At least once each year during a planned maintenance outage, or as needed during operation, the scrubber shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the scrubber to ensure efficient operation.

[IDAPA 58.01.01.322.01, 03/19/99]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
Location:	MiniCassia Facility		Date Expires:	December 12, 2006

**8. DRYING GRANULATOR (P-W1)**

The following is a narrative description of the drying granulator, identified as emission point P-W1, regulated in this Tier I operating permit. This description is for informational purposes only.

The facility operates a drying granulator to dry wet sugar. The drying granulator was manufactured by TASCO and installed prior to 1952. Emissions from the drying granulator are controlled by a dust box type scrubber.

Table 8.1 describes the devices used to control emissions from the drying granulator.

**Table 8.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point/Source Identification	Emissions Unit(s) Identification	Emission Control Device
P-W1	65 tons sugar per hour drying granulator (S-W1)	Scrubber (A-W1)

Table 8.2 contains a summary of requirements that apply generally to the drying granulator. Specific permit requirements are listed below Table 8.2.

**Table 8.2 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Parameter	Permit Limit/Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11, 8.4
8.1	PM	Process weight	IDAPA 58.01.01.702	8.2-8.5

**Permit Limits/Operating Requirements**

8.1 No person shall emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour:

- a. If PW is less than 17,000 lb/hr,  
 $E = 0.045(PW)^{0.60}$
- b. If PW is equal to or greater than 17,000 lb/hr,  
 $E = 1.12(PW)^{0.27}$

[IDAPA 58.01.01.702, 4/5/00]

8.2 The permittee shall, at all times, maintain and operate the scrubber in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

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***Monitoring and Recordkeeping Requirements***

- 8.3 Within one year of permit issuance, the permittee shall install, operate, calibrate, and maintain a monitoring device to continuously measure the water pressure on the spray nozzles in the scrubber. After the monitoring device is operable, the water pressure shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event that a monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.  
[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]
- 8.4 Within six months of installation of the scrubber monitoring devices required by Permit Condition 8.3, the permittee shall develop proposed water pressure ranges for the scrubber. The proposal shall be submitted to DEQ as an administrative amendment request, per IDAPA 58.01.01.381, to incorporate the water pressure ranges as an operating limit in the Tier I permit. This proposal shall include monitoring data and any other documentation necessary to substantiate that the proposed water pressure ranges will ensure compliance with Permit Conditions 1.7 and 8.1.  
[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]
- 8.5 At least once each year during a planned maintenance outage, or as needed during operation, the scrubber shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the scrubber to ensure efficient operation.  
[IDAPA 58.01.01.322.01, 03/19/99]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

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**9. COOLING GRANULATORS (P-W2, P-W3)**

The following is a narrative description of the cooling granulators regulated in this Tier I operating permit. This description is for informational purposes only.

The facility operates two cooling granulators to cool hot sugar from the drying granulator. Each cooling granulator is rated at 65T/hr. Emissions from the cooling granulators are controlled by baghouses.

Table 9.1 describes the devices used to control emissions from the cooling granulators.

**Table 9.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point/Source Identification	Emissions Unit(s) Identification	Emission Control Device
P-W2	Cooling granulator No. 1 (S-W2)	Baghouses (A - W2)
P-W3	Cooling granulator No. 2 (S-W3)	Baghouses (A - W3)

The following table contains a summary of requirements that apply generally to the cooling granulators. Specific permit requirements are listed below Table 9.2.

**Table 9.2 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Affected Emissions Unit	Parameter	Permit Limit/Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Cooling granulator No. 1 and cooling granulator No. 2	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11, 9.5
9.1, 9.2	Cooling granulator No. 1; Cooling granulator No. 2	PM	Process weight	IDAPA 58.01.01.701; IDAPA 58.01.01.702	9.3-9.6

**Permit Limits/Operating Requirements**

9.1 No person shall emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

a. If PW is less than 17,000 lb/hr,  

$$E = 0.045(PW)^{0.60}$$

b. If PW is equal to or greater than 17,000 lb/hr,  

$$E = 1.12(PW)^{0.27}$$

[IDAPA 58.01.01.702, 4/5/00]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
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9.2 No person shall emit to the atmosphere from any process or process equipment commencing operation on or after October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

- a. If PW is less than 9,250 lb/hr,  

$$E = 0.045(PW)^{0.60}$$
- b. If PW is equal to or greater than 9,250 lb/hr,  

$$E = 1.10(PW)^{0.25}$$

[IDAPA 58.01.01.701 4/5/00]

9.3 The permittee shall, at all times, maintain and operate the baghouses in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

***Monitoring and Recordkeeping Requirements***

9.4 Within one year of permit issuance, the permittee shall install, operate, calibrate, and maintain a monitoring device to continuously measure the pressure drop across the baghouses. After the monitoring device is operable, the pressure drops shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event that a monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

9.5 Within six months of installation of the baghouse monitoring devices required by Permit Condition 9.4, the permittee shall develop proposed pressure drop ranges for the baghouses. The proposal shall be submitted to DEQ as an administrative amendment request, per IDAPA 58.01.01.381, to incorporate the pressure drop ranges as an operating limit in the Tier I permit. This proposal shall include monitoring data and any other documentation necessary to substantiate that the proposed pressure drop ranges will ensure compliance with Permit Conditions 1.7, 9.1, and 9.2.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

9.6 At least once each year during a planned maintenance outage, or as needed during operation, the baghouses shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the baghouses to ensure efficient operation.

[IDAPA 58.01.01.322.01, 03/19/99]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
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**10. SUGAR HANDLING SYSTEM (P-W4, P-W5)**

The following is a narrative description of the sugar handling system regulated in this Tier I operating permit. This description is for informational purposes only.

Particulate matter is emitted from process sugar handling and sugar handling bulk loading systems. Emissions are controlled by baghouses.

Table 10.1 describes the devices used to control emissions from the sugar handling system.

**Table 10.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point/ Source Identification	Emissions Unit(s) Identification	Emission Control Device
P-W4	Process sugar-handling system with ventilation of 16,600 acfm to baghouses (Process S-W4)	Baghouses (A-W4)
P-W5	Bulk loadout sugar-handling system with ventilation of 17,000 acfm to baghouses (Bulk Loadout S-W5)	Baghouses (A-W5)

Table 10.2 contains a summary of requirements that apply generally to sugar handling. Specific permit requirements are listed below Table 10.2.

**Table 10.2 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Affected Emission Unit/Source	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Baghouse vents	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11, 10.4
10.1	Sugar-handling (Process)	PM	Process weight	IDAPA 58.01.01.702	10.2-10.5
10.1	Sugar-handling (Bulk Loadout)	PM	Process weight	IDAPA 58.01.01.702	10.2-10.5

**Permit Limits/Operating Requirements**

10.1 No person shall emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

- a. If PW is less than 17,000 lb/hr,  

$$E = 0.045(PW)^{0.60}$$
- b. If PW is equal to or greater than 17,000 lb/hr,  

$$E = 1.12(PW)^{0.27}$$

[IDAPA 58.01.01.702, 4/5/00]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
Location:	MiniCassia Facility		Date Expires:	December 12, 2006

- 10.2 The permittee shall, at all times, maintain and operate the baghouses in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]

***Monitoring and Recordkeeping Requirements***

- 10.3 Within one year of permit issuance, the permittee shall install, operate, calibrate, and maintain a monitoring device to continuously measure the pressure drop across the baghouses. After the monitoring device is operable, the pressure drops shall be recorded weekly and the records maintained in accordance with Permit Condition 1.11. In the event that a monitoring device becomes inoperable, it shall be repaired or replaced as soon as practicable.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

- 10.4 Within six months of installation of the baghouse monitoring devices required by Permit Condition 10.3, the permittee shall develop proposed pressure drop ranges for the baghouses. The proposal shall be submitted to DEQ as an administrative amendment request, per IDAPA 58.01.01.381, to incorporate the pressure drop ranges as an operating limit in the Tier I permit. This proposal shall include monitoring data and any other documentation necessary to substantiate that the proposed pressure drop ranges will ensure compliance with Permit Conditions 1.7 and 10.1.

[IDAPA 58.01.01.322.01, 3/19/99; IDAPA 58.01.01.322.06, 07, 5/1/94]

- 10.5 At least once each year during a planned maintenance outage, or as needed during operation, the baghouses shall be inspected for physical degradation that could affect the performance of the control device. The permittee shall make all necessary repairs to the baghouses to ensure efficient operation.

[IDAPA 58.01.01.322.01, 03/19/99]

**AIR QUALITY TIER I OPERATING PERMIT NUMBER: T1-030416**

Permittee:	TASCO	Facility ID No. 067-00001	Date Issued:	September 23, 2005
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**11. LIME KILN BUILDING MATERIAL HANDLING BAGHOUSES**

The following is a narrative description of the lime kiln building material handling baghouses regulated in this Tier I operating permit. This description is for informational purposes only.

Particulate matter emissions from the lime kiln building material handling are controlled by four baghouses.

Table 11.1 describes the devices used to control emissions from the lime kiln building.

**Table 11.1 EMISSIONS UNITS AND EMISSIONS CONTROL DEVICES**

Emission Point/ Source Identification	Emissions Unit(s) Identification	Emission Control Device
None identified	Lime kiln building material handling	Four baghouses

Table 11.2 contains a summary of requirements that apply generally to the four lime kiln building material handling baghouses. Specific permit requirements are listed below Table 11.2.

**Table 11.2 APPLICABLE REQUIREMENTS SUMMARY**

Permit Conditions	Affected Emission Unit	Parameter	Permit Limit/ Standard Summary	Applicable Regulatory Requirement	Monitoring and Recordkeeping Requirements
1.7	Each baghouse	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625	1.8, 1.11, 11.4
11.1	All four baghouses	PM	Process weight	IDAPA 58.01.01.702	11.2-11.5

**Permit Limits/Operating Requirements**

11.1 No person shall emit to the atmosphere from any process or process equipment operating prior to October 1, 1979, PM in excess of the amount shown by the following equations, where E is the allowable emission from the entire source in pounds per hour, and PW is the process weight in pounds per hour.

- a. If PW is less than 17,000 lb/hr,  
 $E = 0.045(PW)^{0.60}$
- b. If PW is equal to or greater than 17,000 lb/hr,  
 $E = 1.12(PW)^{0.27}$

[IDAPA 58.01.01.702, 4/5/00]

11.2 The permittee shall, at all times, maintain and operate the baghouses in accordance with the O&M manual, or as efficiently as practicable. Determinations of whether acceptable operating and maintenance procedures are being used will be based on information available to DEQ which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

[IDAPA 58.01.01.322.01 (state-only), 3/19/99]



## THE AMALGAMATED SUGAR COMPANY LLC

50 SOUTH 500 WEST • P.O. BOX 700 • PAUL, ID 83347  
PHONE: (208) 438-2115 • FAX: (208) 438-5485



July 21, 2014

Morrie Lewis  
Air Quality Permit Analyst, Air Quality Division  
Idaho Department of Environmental Quality  
1410 N. Hilton Street  
Boise, ID 83706-1255

RE: TASCO – Paul Draft Permit to Construct (PTC) P-2011.0040 PROJ 61314 & Draft Tier I  
Operating Permit T1-050414 PROJ 0414 Comments

Dear Mr. Lewis;

The Amalgamated Sugar Company LLC appreciates the opportunity to comment on the draft PTC and draft Tier I Operating Permit made available for public comment on June 24, 2014. The following are comments on the draft Tier I Operating Permit.

### Condition 5.9 – Erie City Boiler Particulate Matter (PM) Performance Testing

TASCO requests that the performance testing requirement while firing natural gas be deleted. Attachment #1 provides a comparison of estimated potential to emit PM emissions from the Erie City boiler while firing natural gas versus estimated actual projected emissions. For the December 2013 PTC application, future projected emissions were conservatively estimated based on Idaho's Fuel Burning Emission Standard (0.015 grdscf) and 8760 h/y of operation. Using these assumptions the projected annual PTE emissions are 25.8 tons/y. PM emissions were reevaluated using an EPA AP-42 emissions factor and projected actual hours of operation. Based on these assumptions the estimated annual PM emissions are only 5.2 tons per year. Therefore, performance testing for this minor source of PM emissions is unnecessary.

### Section 10 – No. 1 & No. 2 Cooling Granulator Baghouses

Please delete the No. 1 & No. 2 Granulators from Section 10 since these are insignificant emissions sources. Attachment #2 provides the estimated sugar dust emissions from the No. 1 & No. 2 Cooling Granulator Baghouses. This information was included in Section 5.3.2 of the December 2013 PTC application. The PM sugar dust emissions were previously conservatively estimated based on a 0.005 lbs PM per ton granulated produced and 470,000 tons of sugar produced. Based on these assumptions the estimated sugar dust emissions are 1.18 tons per year each.

Sugar dust emission from the cooling granulator baghouses were reevaluated using more realistic assumptions as follows: 1) The actual emissions factor for these sources is 0.0034 lbs/ton and 2) Assume an annual sugar production of ~400,000 tons per year based on an average of the last two production

years. Based on these assumptions, the estimated annual emissions are only 0.68 tons/y for each cooling granulator baghouse. Therefore, these are insignificant sources of sugar dust.

Section 11 – Sugar Handling Baghouses

Also provided in Attachment 2, are sugar dust emission estimates for the Process Sugar Handling Baghouses (SW-4) and the Bulk Loading Sugar Handling Baghouses (SW-5). Sugar dust emissions were conservatively estimated based on 0.3 lbs PM 10 per hour and 8760 hours per year of operation. Actual hours of operation are less than these conservative assumptions. However, even if emissions are assumed to be 1.31 tons per year, these sugar dust sources are below regulatory concern. Therefore, please delete these insignificant sources from the draft Tier I Operating Permit.

If you have any questions, please contact me at (208) 438-2115 or Dean C. DeLorey at (208) 383-6532.

Sincerely,



Larry Lloyd  
Plant Manager  
Paul Facility

LL/dd/ss

Att.

Cc: Dean C. DeLorey  
Karen Cummings

Attachment #1

Actual PM Emissions  
Erie City Boiler – Natural Gas

Actual Particulate Emission Estimates  
Erie City Boiler Natural Gas Firing  
Mini Cassia Facility

**PTE-PM Emissions**

200 = klbs/h Steam Loading Capacity  
8760 = h/y max  
1752000 = klbs steam  
0.0294 = lbs PM/klbs steam emissions factor Fuel Burning Limit (0.015 gr/dscf)  
25.8 = tons PM/y annual emissions

**Projected Actual Emissions at 8760 h/y**

0.0082 = lbs PM/klbs steam emissions -EPA AP-42  
7.2 = tons PM/y annual emissions

**Projected Actual Emissions at 195 day Beet Campaign & 125 day Juice Run**

175 = klbs/h steam Beet Campaign  
195 = d/y Beet Campaign  
819000 = klbs steam Beet Campaign  
150 = klbs/h steam Juice Run  
125 = d/y Juice Run  
450000 = klbs steam Juice Run  
1269000 = klbs steam Total  
0.0082 = lbs PM/klbs steam emissions -EPA AP-42  
5.2 = tons PM/y annual emissions

**PM Natural Gas Emission Factors Estimates**  
**Erie City Boiler**  
**Mini Cassia Facility**

Reference	Emission Factor		Emission Factor (lbs/Klbs steam)
	Value	Units	
Fuel Burning Limit	0.015	gr/dscf <sup>a</sup>	0.0294
EPA AP-42 Table 1.4-2	7.6	lbs/10 <sup>6</sup> scf	0.0082
Union Boiler PM <sub>10</sub> Compliance Test	0.0036	gr/dscf <sup>a</sup>	0.0068

<sup>a</sup> Correted to 3% O<sub>2</sub>

Attachment #2

Actual PM Sugar Dust Emissions  
Cooling Granulator Baghouses

From: Section 5.3.2 of the December 2013 PTC Application

SECTION 3D. EMISSIONS - SUGAR WAREHOUSE AND SHIPPING

NO.		POLLUTA	Max lbs./hr.	Avg. lbs./hr.	TONS/YR
S-W1	DRYING GRANULATOR - SUGAR (tons)	PM	0.73	0.49	2.35
		PM10	0.73	0.49	2.35
S-W2	NO. 1 COOLING GRANULATOR - SUGAR	PM	0.37	0.24	1.18
		PM10	0.37	0.24	1.18
S-W3	NO. 2 COOLING GRANULATOR - SUGAR	PM	0.37	0.24	1.18
		PM10	0.37	0.24	1.18
S-W4	SUGAR HANDLING (PROCESS)	PM	0.30	0.30	1.31
		PM10	0.30	0.30	1.31
S-W5	SUGAR HANDLING (BULK LOADING)	PM	0.30	0.30	1.31
		PM10	0.30	0.30	1.31

SECTION 3C. EMISSION FACTORS - SUGAR WAREHOUSE AND SHIPPING

NO.		POLLUTANT	UNIT	EMISSION FACTOR (1)		REFERENCE
				UNIT	LB/UNIT	
S-W1	DRYING GRANULATOR - SUGAR	PM	tons	Tons	0.01	11/04 Compliance Test at Nampa Assume 100% of PM = PM10
		PM10	tons	Tons	0.01	
S-W2	NO. 1 COOLING GRANULATOR	PM	tons	Tons	0.005	11/05 Compliance Test at Nampa Assume 100% of PM=PM10
		PM10	tons	Tons	0.005	
S-W3	NO. 2 COOLING GRANU- LATOR - SUGAR	PM	tons	Tons	0.005	11/05 Compliance Test at Nampa Assume 100% of PM=PM10
		PM10	tons	Tons	0.005	
S-W4	SUGAR HANDLING (PROCESS)	PM	lbs/h	lbs/h	0.3	Nov. 2001 Eng. Source test at Nampa Assume 100% of PM=PM10
		PM10	lbs/h	lbs/h	0.3	
S-W5	SUGAR HANDLING (BULK LOADING)	PM	lbs/h	lbs/h	0.3	Nov. 2001 Eng. Source test at Nampa Assume 100% of PM=PM10
		PM10	lbs/h	lbs/h	0.3	

(1) See Appendix G for emission factor documentation.

SECTION 3B. PRODUCTION DATA - SUGAR WAREHOUSE AND SHIPPING

NO.		MATERIAL	UNITS	3500000		ANNUAL
				Max hrly	Hourly	
S-W1	DRYING GRANULATOR	Sugar	Tons	73.0	48.5	470000
S-W2	NO. 1 COOLING GRANULATOR	Sugar	Tons	73.0	48.5	470000
S-W3	NO. 2 COOLING GRANULATOR	Sugar	Tons	73.0	48.5	470000
S-W4	SUGAR HANDLING (PROCESS)	NA	Hours	1.0	1	8760
S-W5	SUGAR HANDLING (BULK LOADING)	NA	Hours	1.0	1	8760

1) Assume max hourly is 15% above average hourly.

Beet Run	206.00	4944 hrs.
Juice Run	125.00	3000 hrs.
totals	331	7944 hrs.



## THE AMALGAMATED SUGAR COMPANY LLC

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August 22, 2014

Morrie Lewis  
Air Quality Permit Analyst  
Department of Environmental Quality  
1410 N. Hilton St.  
Boise, ID 83706

Re: TASC0-Paul Facility  
Draft Tier I Operating Permit T1-050414, Project 0414  
Inherent Process Equipment

Dear Mr. Lewis,

In The Amalgamated Sugar Company LLC (TASCO) letter dated July 21, 2014, the company asked the Department to delete Sections 10 and 11 from the Tier I Operating Permit. Justification for this change was based upon conservative estimates of emissions which qualify the sources as insignificant activity under IDAPA 58.01.01.317. In subsequent communications the Department requested additional justification with reference to the EPA policy concerning inherent process equipment.

The EPA policy concerning inherent process equipment was initially stated in a letter dated November 27, 1995 and signed by David Solomon. The policy was also discussed in the preamble to the agency's compliance assurance monitoring rule (CAM) published in the Federal Register on October 22, 1997. This rule defines control device to exclude inherent process equipment. It also defines inherent process equipment as *equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations.*

Both the policy letter and the preamble to the CAM rule specify three questions to address in determining whether certain devices or practices should be treated as pollution controls or as inherent to the process:

1. Is the primary purpose of the equipment to control air pollution?
2. Where the equipment is recovering product, how do the cost savings from product recover compare to the cost of the equipment?
3. Would the equipment be installed if no air quality regulations are in place?

Sections 10 and 11 of the draft operating permit are intended to regulate emissions from a scrubber and baghouses that are affiliated with the sugar granulator and sugar handling systems.

Collectively these devices are designated as sugar dust recovery equipment. In consideration of the EPA policy and rules TASC0 has concluded that sugar dust recover equipment qualifies as inherent process equipment. TASC0 arrived at this conclusion based upon the following answers to the EPA policy questions.

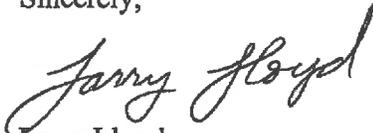
1. No. Sugar dust recovery equipment is used for two purposes: safety and product recovery. Because sugar dust is carbon-based, it can cause fire and explosion hazards. For this reason the sugar granulators and handling systems are subject to National Fire Protection Association (NFPA) Standard 61, "Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities." Standard 61 is a fire safety specification that is routinely reviewed and updated by NFPA and enforced through inspections by local fire agencies. Sugar dust recovery equipment is intended to capture sugar dust in order to reduce the risk of fire and explosion.

Secondly, the refined sugar dust recovered by the sugar dust recovery equipment has economic value to the company, as described below. Recovered sugar dust is melted and reprocessed into granulated sugar.

2. At TASC0 Mini-Cassia facility the sugar dust baghouses are estimated to recover 30,000 pounds of sugar dust per day during the current operating year. On an annual basis assuming 350 operating days, the baghouses will recover about 105,000 hundredweight (cwt) of sugar dust. Assuming the net value of reprocessed sugar is 20 dollars per cwt, the annual benefit to the company is \$2.1 million. The savings in a single year will easily cover the cost of the dust recovery equipment. This estimate does not include sugar dust recovered by the drying granulator scrubber.
3. Yes. Compliance with NFPA 61 is a requisite by fire prevention and insurance agencies for installation and operation of sugar handling systems at all TASC0 facilities. In addition the value of the recovered sugar makes installation and operation of dust recovery systems very cost effective.

The bottom line is that sugar dust recovery equipment will continue to operate at the facility regardless of air pollution control regulations. Thank you for this opportunity to provide additional input to the Department's decision-making process prior to issuing the final Tier I Operating Permit. If you have additional questions or concerns, please contact me at (208) 438-2115 or Dean DeLorey at (208) 383-6532.

Sincerely,



Larry Lloyd  
Plant Manager

cc: Dean DeLorey  
Karen Cummings