Section 5C
Current Compliance Demonstration Methods

For current compliance demonstration methodology, please see Appendix J, Tier I Operating Permit T1-03-0415.

SECTION 5D
Request for Permit Condition Change

Item 1.

General Comments

For the permit renewal, Amalgamated proposes to work with IDEQ to eliminate the redundant language and to develop a concise Tier I permit for the Mini-Cassia facility. Amalgamated requests that IDEQ change the format and structure of the renewed Tier I permit. The current Tier I permit contains many redundant requirements and unnecessary wording. For example the following requirements, with essentially the same language, are repeated throughout the permit:

- Emissions and visible emissions (VE) standards.
- General air pollution control equipment operating requirements.
- VE monitoring frequencies.
- Record keeping requirements.

Repetitive language unnecessarily increases the number of compliance certification requirements and provides no regulatory benefit to the IDEQ. Additionally, incorporating the full content of rules into the Tier I permit, such as the Idaho's excess emissions requirements, is unreasonable. Streamlining Title V permits is also supported by EPA (see Title V Permit Writer's Tips–Streamlining Applicable Requirements www.epa.gov/reg3artd/permitting/t5_streamlining.htm).

SECTION 5D
Request for Permit Condition Change

Item 2.

General Comment

– Reduced Monitoring

Amalgamated requests to reduce the monitoring requirements for all sugar dust sources and non-combustion sources controlled by baghouses. These sources include the pulp dryer material handling baghouse and lime kiln building material handling baghouses. Particulate emissions from these sources are estimated to be below 1 lb/h and have very little if any measurable impact on air quality. For these emissions sources, Amalgamated requests to have all parametric monitoring requirements for the emission control devices (i.e., pressure drop, etc.) eliminated from the permits. Amalgamated proposes to continue to periodically monitor these sources based on the see/no see visible emissions evaluation in Section 1.8 and annual inspection and maintenance provisions. The reduced monitoring is justified due to the insignificant air quality impacts associated with these sources.

SECTION 5D
Request for Permit Condition Change

Item 3.

Subject:

Listing of operating ranges in the operating permit.
(Permit Conditions 2.26, 3.4, 5.8, 5.9, 7.2, 9.2, & 11.4.)

Requested change:

TASCO requests the operating ranges for pollution control equipment be listed in the O&M Manuals instead of the permit. This would facilitate a mechanism for updating the ranges without submitting a permit modification request. Operating range updates could be submitted to IDEQ for approval prior to being changed in the O&M Manual.

Discussion:

Occasionally operating ranges will need to be changed and updated. Listing the ranges in the operating permit will create difficulties when updates are needed. Updating a range may require submitting a permit modification which would create unnecessary work for both IDEQ and TASCO. By having all the ranges noted in the O&M Manual and allowing range updates following IDEQ approval would provide an efficient mechanism for updating while reducing unnecessary paperwork.

SECTION 5D
Request for Permit Condition Change

Item 4.

Subject:

Monitoring record keeping requirements

Requested change:

Create a Permit condition that allows 90% availability of monitoring data to be sufficient to establish compliance with record keeping requirements.

Discussion:

Collecting and organizing monitoring data is a big part of assuring compliance with the Tier I Operating Permit. Occasionally, a reading sheet may inadvertently be misplaced. Allowing for 90% of availability of monitoring data to establish compliance will account for the human factor of occasionally misplacing a piece of monitoring data without being out of compliance with the operating permit.

SECTION 5D
Request for Permit Condition Change

Item 5.

Subject: Opacity standards.

Request: The current permit notes two separate opacity standards for the Foster Wheeler boiler (S-B1). The two listed standards are as follows:

a.) Permit Condition 2.1. "……no owner or operator subject to the provisions of 40 CFR 60, Subpart D shall cause to be discharged to the atmosphere form any affected facility an gases which: Exhibit greater than 20% opacity, except for one six-minute periods per hour for not more than 27% opacity" [40CFR60.42(a)(2)].
b.) Permit Condition 1.8. 20% opacity for no more than three minutes in any 60 minute period (IDAPA 58.01.01.625).

To avoid confusion with compliance on the opacity standard for the Foster Wheeler boiler TASCO requests that a statement be added to the permit that states although there is a slight difference in the averaging times between the federal [40CFR60.42(a)(2)] and the state (IDAPA 58.01.01.625) standards, compliance with the federal standard will be considered as compliance with the state standard.

Section 5D
Request for Change in Permit Condition

Item 6.

Subject: Request for change in operating parameters on the baghouse associated with the B&W Boiler (SB2).

Permit Condition 3.4 requires that the pressure drop across the baghouse be maintained within the range from 1.0 – 10.0 inches of water. During the 2004/05 operating year, increased pressure drops were recorded. Whenever the increased pressure drop occurred, visible emissions observations were performed. No excess emissions were recorded during these events.

Based upon the visible emissions observations, TASCO requests that the operating range be amended to:

- 1.0 to 12.0 inches of water (an increase of 20%).

As per Permit Condition 1.21.1, this new operating range will be incorporated into the O & M manual for the pollution control equipment (Baghouse) associated with the B&W Boiler (SB2) at the Twin Falls facility. TASCO requests that Permit Condition 3.4 be updated to reflect this change.

Item 6, continued

THE AMALGAMATED SUGAR COMPANY LLC

TWIN FALLS FACIILITY

B&W Boiler

Table 1. Comparison of Pressure Drop across the Baghouse and Visible Emissions Observations

Date	Pressure Drop	Visible Emissions Observations	Observer
11/4/04	10.2	None observed	Phyllis Beard
11/27/04	10.5	None observed	Phyllis Beard
12/10/04	11.8	None observed	Phyllis Beard
12/16/04	10.4	None observed	Phyllis Beard
12/21/04	11.4	None observed	Phyllis Beard
12/22/04	11.5	None observed	Phyllis Beard
12/23/04	10.2	<5% (Full VE taken)	Phyllis Beard

The baghouse cleaning program was modified during the week of 12/28/04. After the new program came on line, the pressure drop readings were below 10 inches of water.

Based upon the opacity observations taken by certified opacity readers and visible emissions checks performed by the boiler operators, TASCO requests that the ranges identified in the permit be modified to be 1 – 12 inches water.

Section 5D

Request for Permit Condition Change

Item 7.

Subject: Request for change in operating parameters on the scrubbers associated with the pulp dryer (SD1**).**

Permit Condition 5.2 requires that the water flow for each scrubber be maintained within the range from 100 to 500 gallons per minute. During source testing performed on December 8, 2003, the scrubber flow to the North scrubber ranged from 497 gpm to 506 gpm (see attached table). The particulate sampling results (submitted to the Department on January 9, 2004 for review) showed that the emission levels were well below the process weight rate emission limits (58% of the allowable emissions). Additionally, visible emissions observations taken during times that the flows to the scrubbers exceeded the 500 gpm indicated that visible emissions were significantly less than 20%.

Based upon the particulate sampling results, The Amalgamated Sugar Company LLC, Twin Falls facility, requests that the water flow range for the scrubbers associated with the Pulp Dryer (SD1) be amended to:

- 100 to 550 gpm (an increase of 10%).

As per Permit Condition 1.21.1, this new operating range will be incorporated into the O & M manual for the pollution control equipment (North and South Scrubbers) associated with the Pulp Dryer (SD1) at the Twin Falls facility. TASCO requests that Permit Condition 5.2 be updated to reflect this change.

Section 5D
Request for Change in Permit Conditions

Item 8.

Subject: Main Mill Vents and Sulfur Stove, Visible Emissions Observations:

In previous discussions with the Idaho Department of Environmental Quality (IDEQ), TASCO has stated that, since the emissions associated with the Main Mill Vents and the Sulfur Stove are VOCs and sulfur dioxide, respectively, no visible emissions are likely to be seen from these sources. Since no visible emissions are anticipated from these sources, performing VE observations are not necessary.

Permit Condition 11.6 (Operating Permit T1-040415) allows TASCO to waive these monitoring requirements, under certain conditions. "In the event that no visible emissions are detected from the main mill vents and sulfur stove during the first year after issuance of this permit, the permittee may waive the monitoring requirements of Permit Condition 1.8, for these sources, for the remainder of the permit duration." The results of the visible emissions observations for these sources from December 2002 through March 2005 are recorded in Table 2.

Based upon Permit Condition 11.6 and the recorded visible emissions observations (Table 2), TASCO requests that, for the duration of Operating Permit T1-030415 the monitoring requirements of Permit Condition 1.8 be waived. TASCO also requests that, when a new permit is issued, that the visible emissions observations requirement for these sources be removed

Section 5D
Request for Change in Permit Conditions

Item 9.

Subject: Material Handling Baghouses

Permit Condition 11.3 (Operating Permit T1-030415) requires that TASCO install, operate, calibrate and maintain operating devices to continuously measure the pressure drop across the Material Handling Baghouses in the pulp dryer and lime kiln at the TASCO Twin Falls Facility. These devices were installed during the 2004 maintenance season and were operated during the 2004/05 beet campaign.

As per Permit Condition 11.4 (Operating Permit T1-030415), TASCO has developed proposed operating ranges for these devices, based upon the recorded pressure drops and the Visible Emissions observations that were performed during the 2004/05 beet campaign.

Pulp Dryer Material Handling Baghouse:

During the 2004/05 operating period, the average pressure drop was 9.0 inches water. The minimum recorded pressure drop was 7.5 inches water and the maximum recorded pressure drop was 11.5 inches water. Visible emissions observations were performed at regular intervals during the 2004/05 operating campaign. No emissions were observed during these inspections. Based upon the recorded operating ranges and the VE observations, the following operating ranges are proposed for the Pulp Dryer Material Handling Baghouse:

7.0-13.0 inches water

TASCO believes that these baghouses are an inherent part of the process and are utilized to collect product. TASCO is requesting to remove Permit Conditions 11.3 and 11.4 from the new permit, based upon the analysis performed following the EPA Cost Control Manual (EPA/452B-02-001), Section 1, Chapters 1 and 2. This analysis can be found in Pulp Dryer Material Handling Baghouse, attached.

Section 5D
Request for Change in Permit Conditions

Item 9, continued.

Permit Condition 11.3 (Operating Permit T1-030415) requires that TASCO install, operate, calibrate and maintain operating devices to continuously measure the pressure drop across the Material Handling Baghouses in the pulp dryer and lime kiln at the TASCO Twin Falls Facility. These devices were installed during the 2004 maintenance season and were operated during the 2004/05 beet campaign.

As per Permit Condition 11.4 (Operating Permit T1-030415), TASCO has developed proposed operating ranges for these devices, based upon the recorded pressure drops and the Visible Emissions observations that were performed during the 2004/05 beet campaign.

Lime Kiln Material Handling Baghouse:

During the 2004/05 operating period, the average pressure drop was 9.7 inches water. The minimum recorded pressure drop was 7.0 inches water and the maximum recorded pressure drop was 11.5 inches water. Visible emissions observations were performed at regular intervals during the 2004/05 operating campaign. No emissions were observed during these inspections. Based upon the recorded operating ranges and the VE observations, the following operating ranges are proposed for the Lime Kiln Material Handling Baghouses:

5.0-13.0 inches water

TASCO believes that these baghouses are an inherent part of the process and are utilized to collect product. TASCO is requesting to remove Permit Conditions 11.3 and 11.4 from the new permit, based upon the analysis performed following the EPA Cost Control Manual (EPA/452B-02-001), Section 1, Chapters 1 and 2. This analysis can be found in Lime Kiln Material Handling Baghouse, attached.

Lime Kiln Material Handling Baghouse Economic Analysis

This analysis follows methodologies set forth in the EPA Air Pollution Cost Control Manual (EPA/452/B-02-001) Section 1, Chapters 1 and 2

Circumference

$C = \pi d$

π =	3.142857	
C =	19.48571	in.
d =	6.2	in.

Area of cylinder

Area= C * L

A =	13.5	sq. ft.
A =	1,949	sq. in.
C =	19.48571	in.
L =	100	in.

in. to ft.	
128	in.
12	in.
10.66667	ft.

# bags =	242	
total area =	**3,275**	ft^2

GCA factor	
1	***3,275*** ***ft^2***

note: as per footnote 7, Page 1-50. Other information can be found in Table 1.2

Bare Baghouse cost:

utilizing the formula found in figure 1.8, pg 1-38, equipment costs for pulse jet baghouses (common Housing)

$2,307	+	7.163	x	GCA	=	***$25,763.55***

Bag Cost:

Utilizing Table 1.8

0.53	x	3,274.68	=	***1,735.58***	total cost of bags
				7.17	cost per bag

Cages

7.844	x	10.1	exp	0.0355	=	10.46	x	50	=
6.0211	x	10.1	exp	0.0423	=	10.54	x	200	=
									$4,104.37
									$12,688.14
									$16,792.51

note : as per Table 1.8

Auxiliary equipment

Table 1.10 was utilized to determine a ratio for the cost of the installed eqipment

Item	Cost
Baghouse	$25,763.55
Bags	$1,735.58
Cages	$16,792.51
auxilliary equipment	$8,249.57
original cost	$52,541.21
Instrumentation (10%)	$5,254.12
Taxes (3% of orig. cost)	$1,576.24
Freight (5% of orig cost)	$2,627.06
total =	**$61,998.63**

Total Purchased cost

Auxilliary equipment = fan, motor, starter, dampers and conveyor. Existing equipment utilized for all other applications.

Table 1.10 utilized to estimate the ratio of the auxilliary equipment.

Assume that 30% of the original cost for the auxilliary equipment.

TOTAL CAPITAL INVESTMENT (TCI) Section 1.4.3

Purchased Cost plus direct installation cost plus indirect installation cost

Item	Cost
Total Purchased cost	$61,998.63
Installation (D·and I)	$12,399.73
Building cost	0
TCI	***$74,398.35***

building costs not included, since the unit was installed in an existing building

LIME KILN MATERIAL HANDLING BAGHOUSE(S) DIRECT ANNUAL COST (DAC)

Utilizing formulas found in Table 1.11

Operating labor (including benefits) $17.28 per hour
(from existing union contract)
time spent per shift base upon dryer foreman estimates

operator labor

17.28 per hour	x	0.25 hrs/shift	x	2 shifts/day	x	160 days/year	
17.28	x	0.5	x	2	x	160	***$2,764.80***

Supervisor labor

$414.72

Maintenance (labor and material):
estimated

$1,390.40

$1,390.40

Bag Replacement:
5 year average (from storeroom records)
137.8bags/yr
bag cost 7.17

$988.03

Utilities:
electrical cost based upon facility generating costs

0.00018 x 9930 x 6.0 in x 60min/hr x 3840 hrs/yr x 0.015/kwh

$617.73

Compressed air:

2 scfm/1000acfm x 1454 acfm x .25/1000scf x 60 min/hr x 3840 hr/yr

$1,143.94

Total (in 2002 dollars):

$7,319.61

Total (in 1998 dollars):
cost calculation done with the GDP deflation calculator
http://jsc/nasa/gov/bu2/inflate.html

$6,842.37 DAC

LIME KILN MATERIAL HANDLING BAGHOUSE(S) DIRECT ANNUAL COST

Overhead:

60 % of operator, supervisor and maintenance labor plus maintenance material (total)

	$ 2,741.95

Administrative Charges:

2 % of the TCI

TCI	74,398.35	$1,487.97

Property taxes:

1% of the TCI

$743.98

Insurance:

1% of the TCI

$743.98

Capital Recovery (CRC):

Installed Capital Cost - (cost of bags + labor charges) * factor

Factor taken from Chapter 2, Table A2 0.07455

labor:
10 person minutes per bag change (as per Sections 1.4 and 1.5)
using hourly labor plus overhead 29.15
5 year average bag usage 137.8 bags/year

37.4 bags/year x 10min/bag x 1hr/60 min x 29.15/hr

$669.48

$5,496.49

IC =

overhead	$ 2,741.95
Admin. Charges	$1,487.97
Property taxes	$743.98
insurance	$743.98
CRC	$5,496.49
INDIRECT COSTS	***$ 11,214.37***

LIME KILN MATERIAL HANDLING BAGHOUSE(s) TOTAL ANNUAL COSTS

Total Annual Cost (TAC) = Direct cost (DC) + Indirect cost (IC) Recovery Credits (RC)

Direct cost	$6,842.37
Indirect Cost	$11,214.37
Recovery credits	$64,229.66
TAC	$46,172.92
	$46,172.92 Return on investment

Recovery costs based on:

combined emission factor	
lbs/ton lime rock	18.7
tons per day lime rock	281
tons	2.63
lbs/ ton coke	0.396
tons per day coke	22.7
	0.00
lbs/ton lime	12.7
lbs/ton lime	157
	1.00
pebbled lime cost:	
per ton	100
campaign length	
days per year	177
total tons per year	642.297

See Attached documentation for development of the combined emission factor
Assume baghouse 99% efficient

Lime Kiln Material Handling Baghouses(s)
Uncontrolled emissions

COKE:

1. **Six Coke Transfer points (includes 4 conveyors to scales, skip hoist and coke bin).**
2. **AP 42, Table 8.24-4 (coal handling, uncontrolled emissions) emission factor is 0.066lb/ton coal. The emission factor for this activity is 0.066 lbs/ton of coke**
3. **6*0.066lbs/ton coke = *0.396 lbs/ton coke.***

LIMEROCK:

1. **5 limerock transfer points (includes 3 conveyors to scales, skip hoist and limerock bin).**
2. **AP 42, Table 11.17-4 (Product transfer and conveying, uncontrolled) emission factor is 2.2 lbs/ton product. Assume that 50% of the emissions go to each portion of the combined emission factor. The emission factor for this activity is 1.1 lbs/ ton of limerock.**
3. **5*1.1 lbs/ton limerock = *5.5 lbs/ton limerock.***

BURNT LIMEROCK:

1. **12 burnt limerock transfer points (4 bottom of south kiln, 4 bottom of north kiln, and 4 conveyors to lime crusher).**
2. **AP 42, Table 11.17-4 (Product transfer and conveying, uncontrolled) emission factor is 2.2 lbs/ton product. Assume that 50% of the emissions go to each portion of the combined emission factor. The emission factor for this activity is 1.1 lbs/ ton of limerock.**
3. **12*1.1 lbs/ton limerock = *13.2 lbs/ton limerock.***

LIME CRUSHING:

1. **Primary Crushing. AP 42, Table 11.17-4, the emission factor is 0.017 lbs/ton product (lime).**
2. **Secondary Crusher, AP 42, Table 11.17-4, the emission factor is 0.62 lbs/ton product (lime).**

LIME HANDLING:

1. **11 lime transfer points (2 at the bottom of the crusher, 1 at the bottom of the lime elevator, 1 at the top of the lime elevator, 1 top of the crushed lime bin #2, and 6 lime conveyors to crushed lime bin #1).**

2. **AP 42, Table 11.17-4 (Product transfer and conveying, uncontrolled) emission factor is 2.2 lbs/ton product. Assume that 50% of the emissions go to each portion of the combined emission factor. The emission factor for this activity is 1.1 lbs/ ton of lime.**
3. **11*1.1 lbs/ton lime *= 12.1 lbs/ton lime .***

Assume that the baghouse(s) are 99% efficient.

Combined emission factor will be:

- **0.396 lb/ton coke**
- **5.5 lbs/ton limerock + 13.2 lbs/ton limerock = 18.7 lbs/ton limerock**
- **0.637lbs/ton lime (crushing)**
- **12.1 lbs/ton lime (handling)**

COKE: **0.396 lbs/ton coke**

LIMEROCK HANDLING: **18.7 lbs/ton lime rock**

LIME CRUSHING AND HANDLING: **0.637 lbs/tons lime**

APPENDIX E
PROPOSED INSIGNIFICANT ACTIVITIES

The Amalgamated Sugar Company has identified several insignificant activities at the Twin Falls facility. Below is a representative list of those activities. This list includes, but is not limited to, the insignificant activities at the Twin Falls facility.

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
BEET END		
Fresh H_20 Tank Vent	19	ai93
Abandoned	20	NA
Condensate Supply Tank Vent	25	ai93
Softener Backwash Tank Vent	26	ai93
Raw Juice Screen Vent	27	ai4
Cossette Mixer Fan Vent	28	ai4
Sludge Tank Vent	29	ai4
30 lb Steam Relief Valve	45A	ai77
30 lb Steam Relief Valve	45B	ai77
#1 Evaporator Dome Relief Vent	47A	ai77
#1 Evaporator Dome Relief Vent	47B	ai77
#1 Evaporator Dome Relief Vent	47C	ai77
Dorr Tank (clarifier) Mud Pump Vent	50	ai4
Dorr Tank (clarifier) Vent	51	ai4
150 lb Steam Vent	52	ai77
Abandoned	53	NA
Sewer Vent	59	ai43
Vacuum Pump Vent	62	ai78
Abandoned	64	NA
Press Wash Tank Vent	74	ai93
Diffuser Supply Tank Vent	75	ai93
Sulfur Stove Hood Vent	91	bi30
Evaporator Supply Tank Vent	92	ai93
Kelly Supply Tank Vent	94	ai4
Abandoned	97	NA
Milk of Lime Tank Vent	98	ai4
Ceiling Vent	215	ai9
Ceiling Vent - Beet Elevator	216	ai9
Ceiling Vent - Diffuser Bldg.	217	ai9
Ceiling Vent - Diffuser Bldg.	218	ai9
Ceiling Vent - W Kelly Floor Roof	221	ai9

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
Ceiling Vent - Center Kelly Floor Roof	222	ai9
Ceiling Vent - E Kelly Floor Roof	223	ai9
Ceiling Vent - Dorr Bldg.	226	ai9
Ceiling Vent - Beet Washer Bldg.	233	ai9
Beet Washer Pit Vent	234	ai9
Beet Washer Area Vent	235	ai9
Abandoned	236	NA
Beet Flume Wheel House Vent	237	ai9
Machine Shop Vent	249	ai64
#2 Evaporator Pressure Valve	250A	ai77
#2 Evaporator Pressure Valve	250B	ai77
#2 Evaporator Pressure Valve	250C	ai77
#2 Evaporator Pressure Valve	250D	ai77
#2 Evaporator Pressure Valve	250E	ai77
Evaporator Y-Strainer Blowdown Flash/Vent	251	ai18
Tempered Water Tank Vent	253	ai86
SUGAR END		
Natural Gas Heater Vent	6	ai3
Natural Gas Heater Vent	7	ai3
Centrifical Wash H_20 Tank Vent	12	ai4
Abandoned	13	NA
Abandoned	14	NA
Ceiling Vent	15	ai9
Bathroom Vent	16	ai43
Bathroom Vent	17	ai43
Standard Liquor Precoat Tank Vent	22	ai4
Abandoned	23	NA
Bathroom Vent	24	ai43
Sugar Vacuum System Vent	30	ai78
Ceiling Vent	39	ai9
Abandoned	40	NA
High Green Tank Vent	48	ai4

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
Melter Tank Vent	49	ai4
Massecuite Fill to Granny Vent	202	ai4
Gas Water Heater Vent	203	bi18
Sump Vent	204	ai106
Sewer Vent	205	ai106
Sewer Vent	206	ai106
Sewer Vent	207	ai106
Sewer Vent	208	ai106
Ceiling Vent - #1 W Pan Floor	219	ai9
Ceiling Vent - #2 E Pan Floor	220	ai9
Juice Run Brix Tank	231	ai4
Ceiling Vent - S Pan Floor	232	ai9
SUGAR END - CSB-B & #1 - #2 SEPARATOR		
Condensate Tank Vent	1	ai86
Dust Collection & Expansion Tank Vent	2	ai4
Molasses Filtration Tank & Lime Neutralization	3	ai4
South Sewer Vent	4	ai106
Exhaust Steam Vent	5	ai77
Condensate Tank Vent (outside tank)	43	ai86
Abandoned	104	NA
Abandoned	106	NA
Abandoned	107	NA
Abandoned	108	NA
Abandoned	109	NA
Water Tank - South of Bldg	240	ai4
North Wall Bldg Vent	245A	ai9
North Wall Bldg Vent	245B	ai9
North Wall Bldg Vent	245C	ai9
North Wall Bldg Vent	246A	ai9
North Wall Bldg Vent	246B	ai9
North Wall Bldg Vent	246C	ai9
North Wall Bldg Vent	247	ai9

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
Air Compressor Relief Vent	248	ai78
SUGAR END - CSB-A AND #3 SEPARATOR		
Concentrator Safety Relief	182	ai77
Concentrator Supply Tank Vent	183A	ai4
Concentrator Supply Tank Vent	183B	ai4
Non-Contact Water Vent and Vacuum Pump Vent	187	ai77
1st Evaporator (CSB-A) Pressure Relief	188	ai77
South Wall of Separator Bldg Vent	241A	ai9
South Wall of Separator Bldg Vent	241B	ai9
South Wall of Separator Bldg Vent	241C	ai9
South Wall of Separator Bldg Vent	241D	ai9
South Wall of Separator Bldg Vent	241E	ai9
South Wall of Separator Bldg Vent	242A	ai9
South Wall of Separator Bldg Vent	242B	ai9
South Wall of Separator Bldg Vent	242C	ai9
South Wall of Separator Bldg Vent	242D	ai9
South Wall of Separator Bldg Vent	242E	ai9
South Wall of Separator Bldg Vent	243A	ai9
South Wall of Separator Bldg Vent	243B	ai9
South Wall of Separator Bldg Vent	243C	ai9
South Wall of Separator Bldg Vent	243D	ai9
South Wall of Separator Bldg Vent	243E	ai9
South Wall of Separator Bldg Vent	244A	ai9
South Wall of Separator Bldg Vent	244B	ai9
South Wall of Separator Bldg Vent	244C	ai9
South Wall of Separator Bldg Vent	244D	ai9
South Wall of Separator Bldg Vent	244E	ai9
DRY LIME HANDLING BUILDING		
South Ceiling Vent	254	ai9
North Ceiling Vent	255	ai9
Filtrate Overflow Tank Vent	256	ai4

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
Filtrate Tank Vent	257	ai4
Cake Wash Tank Vent ITK-44D	258	ai4
Slurry Tank Vent ITK-48B	259	ai4
Muriatic Acid Tank Vent ITK-26G	260	bi19
BOILER HOUSE		
B&W DA Tank Vent	54	ai85
1500 Generator Drain	55	ai85
1500 Generator Emergency Oil Pump Pressure Relief	56	ai77
2500 Generator Emergency Oil Pump Pressure Relief	57	ai77
2500 Generator Drain	58	ai85
1500 Generator Exhaust Vent	60	ai77
2500 Generator Exhaust Vent	61	ai77
Emergency Generator Exhaust Release	63	ai77
Emergency Boiler Feed Tank Vent	76	ai77
Abandoned	113	NA
Blow Down Tank Vent	114	ai80
Keeler Boiler Pressure Relief Vent	115	ai77
Keeler Boiler Pressure Relief Vent	116	ai77
Keeler Boiler Pressure Relief Vent	117	ai77
Natural Gas Relief Vent	118	ai3
Abandoned	119	NA
Abandoned	121	NA
Foster Wheeler DA Tank Vent	122A	ai85
Foster Wheeler DA Tank Safety Relief	122B	ai77
Foster Wheeler Pressure Relief Vent	123A	ai77
Foster Wheeler Pressure Relief Vent	123B	ai77
Foster Wheeler Pressure Relief Vent	124	ai77
B & W Pressure Relief Vent	127	ai77
B & W Pressure Relief Vent	128	ai77
B & W Pressure Relief Vent	129	ai77
B & W Pressure Relief Vent	130	ai77
B & W Pressure Relief Vent	131	ai77

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
B & W Pressure Relief Vent	132	ai77
Coal Bunker Vent	133	bi30
Continuous Boiler Blow Down	148	ai80
Startup and Emergency Relief Valve	173	ai77
Safety Relief Valve	174	ai77
Safety Relief Valve	175	ai77
Safety Relief Valve	176	ai77
Water Tank Boiler Area.	209	ai4
Ceiling Vent - SE of FW Boiling Blgd.	224	ai9
Ceiling Vent - NE of FW Boiler Bldg.	225	ai9
Ceiling Vent - FW Boiler Bldg.	227A	ai9
Ceiling Vent - FW Boiler Bldg.	227B	ai9
Ceiling Vent - FW Boiler Bldg.	227C	ai9
Ceiling Vent - FW Boiler Bldg	227D	ai9
Ceiling Vent - FW Boiler Bldg.	228A	ai9
Ceiling Vent - FW Boiler Bldg.	228B	ai9
Ceiling Vent - W Side BW Boiler Bldg.	230A	ai9
Ceiling Vent - E Side BW Boiler Bldg.	230B	ai9
RAFEX AND BETUP EVAPORATORS		
Raffinate Evaporator Supply Tank Vent ZTK-670R	263	ai4
Extract Evaporator Supply Tank Vent ETK-658E	264	ai4
Betaine Evaporator Supply Tank Vent ZTK-658B	265	ai4
Upgrade Evaporator Supply Tank ETK-658U	266	ai4
Betaine Concentrator Supply Tank Vent ZTK-668B	267	ai4
LIME KILN		
Rotobelt Exhaust Vent	66	ai4
Limerock Supply Tank Vent	67	ai95
North Emergency Lime Kiln Stack	70	ai77
South Emergency Lime Kiln Stack	71	ai77
Sweet H2O Anti-Siphon Vent	72	ai4

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
Abandoned	100	NA
Abandoned	101	NA
PULP DRYER		
Chimney Stack	139	ai9
Natural Gas Vent	142	ai3
Press H2O Steam Vent	143	ai77
Space Heater Exhaust	144	ai9
Space Heater Exhaust	145	ai9
Space Heater Exhaust	146	ai9
Natural Gas Pressure Relief	239	ai3
JUICE TANK VENTS		
Juice Tank #1 Vent	164	ai4
Juice Tank #2 Vent	165	ai4
Juice Tank #3 Vent	166	ai4
Juice Tank #4 Vent	167	ai4
Juice Tank #5 Vent (26 vents)	168	ai4
Juice Tank #6 Vent	169A	ai4
Juice Tank #6 Vent	169B	ai4
Juice Tank #6 Vent	169C	ai4
Juice Tank #7 Vent (26 vents)	170	ai4
Juice Tank #8 Vent (26 vents)	189	ai4
Juice Tank #9 Vent (26 vents)	190	ai4
Juice Tank #10 Vent (26 vents)	191	ai4
Juice Tank #11 Vent N.	192	ai4
Juice Tank #12 Vent S.	193	ai4
Juice Tank #13 Vent (8 vents)	194	ai4
Juice Tank #14 Vent	185A	ai4
Juice Tank #14 Vent	185B	ai4
Juice Tank #15 Vent	186A	ai4
Juice Tank #15 Vent	186B	ai4
Molasses Weigh Tank Vent	238	ai4

INSIGNIFICANT ACTIVITY	VENT - STACK ID NO. (See Appendix F)	SUBSECTION OF IDAPA 58.01.01.317.01
FRONT OFFICE		
ABANDONED	152	NA
Natural Gas Furnace	158	bi18
ENGINEERING BUILDING		
Sewer Vent Engineering building	181	ai43
CHEMICAL STORAGE TANKS		
Ammonium Bisulfite Tank (not used)	184	bi19
Muriatic Acid Tank	195	bi19
Caustic Tank	196	bi19
Muriatic Acid Tank	197	bi19
Sulfuric Acid Tank	198	bi19
Caustic Tank	199	bi19
South Ammonium Bisulfite Tank	200	bi19
MISCELLANEOUS		
Coal handling and pulverizing within the Boiler House	NA	ai 102
Coal handling, coal pulverizing, and dried pulp handling in the pulp dryer building	NA	ai 9
Limerock handling, coke handling, CaO handling, and CaO crushing in the lime kiln building	NA	ai 9
Pond dredging during maintenance	NA	ai 102
All process waste water ponds	NA	ai 109
Propane lances for heating rail cars	NA	bi5
Wet and pressed pulp handling	NA	bi30
Pebble lime pneumatic conveyance system	NA	bi30
Lime rock and coke handling from rail cars and storage piles into lime kiln building	NA	bi30
Sugar baghouse handling	NA	bi30
Coke unloading and storage pile	NA	bi30
Lime rock unloading and storage pile	NA	bi30
Pellet cooler fan vents P-D2 and P-D3	NA	bi30
Process slaker	NA	bi30
Beet hauling	NA	bi30

Pellet Coolers Steam Vent Insignificant Determination

Twin Falls

Emission Factor for Steam Vents

- 5 wheel barrels per day are collected

- 10 pounds of dry particulate are collected in each wheel barrel

Assume 2/3 of the emissions from vents are collected on roof:

- 75 lb/day emissions from vents and 50 lb/day collected

- 25 lb/day is airborne

For a maximum production of 11.6 tons pellets/hr the emission factor is:

(25 lb/day x day/24 hr) / (11.6 tons pellets/hr) = 0.0898 lb/ton pellets

Assume PM-10 is 10% of TSP, because of the high moisture content of the exhaust steam.

0.0898 lb/ton pellets x 11.6 ton pellets/hr x 24 hr/day x 190 days/year x 1 ton/2000 lb =
2.38 tons/year TSP

2.38 tons/year x 0.10 = 0.238 tons/year PM-10

The insignificant limit is less than 1.25 tons/year TSP and 0.75 tons/year PM-10. The worst case emissions from this source is less than the insignificant limit.

Pebble lime handling

Twin Falls

Use EPA AP-42, Chapter 11.2.3 Aggregate Handling.

1) Maximum Daily Emission Factors
AssumeU = mean wind speed 30mph
M = material moisture content 0.7 % (Table 11.2.3-1, for crushed limestone)
k = particle size multiplier 0.74 for TSP and 0.35 for PM-10

The emission factor is: $E = k(0.0032)\ [(U/5)^{1.3} / (M/2)^{1.4}]$ (lb/ton)

E = 0.11 lb/ton , for TSP
E = 0.05 lb/ton , for PM-10

2) Average Daily Emission Factors
Assume U = mean wind speed 10mph
M = material moisture content 0.7 % (Table 11.2.3-1, for crushed limestone)
k = particle size multiplier 0.74 for TSP and 0.35 for PM-10

The emission factor is: $E = k(0.0032)\ [(U/5)^{1.3} / (M/2)^{1.4}]$ (lb/ton)

E = 0.03 lb/ton , for TSP
E = 0.012 lb/ton , for PM-10

1) Maximum daily emissions

25 tons/day x 3 transfers x 0.11 lb/ton = 8.25 lb/day TSP

25 tons/day x 3 transfers x 0.05 lb/ton = 3.75 lb/day PM-10

2) Average annual emissions

10 tons/day x 75 days/year x 3 transfers x 0.03 lb/ton x 1 ton/2000 lb = 0.03 tons/yr TSP

10 tons/day x 75 days/year x 3 transfers x 0.012 lb/ton x 1 ton/2000 lb = 0.014 tons/yr PM-10

Sugar baghouse handling
Twin Falls

The sugar baghouse consists of three compartments:

1) Collects dust from the bagging room;

2) Collects dust from the bottom of the silos;

3) Collects dust from the top of the silos.

The total maximum flow from the fans is 15,500 cfm.

Assume 0.02 gr/dscf, as the grain loading for a sugar baghouse and assume 310 days of operation/year.

15,500 cfm x 0.02 gr/dscf x 1 lb/7000 gr x 60 min/hr = 2.66 lb/hr

2.66 lb/hr x 310 days/year x 24 hr/day x 1 ton/2000 lb = 9.9 tons/year

This baghouse vents in the building and if assuming a 95% control efficiency of the building:

9.9 tons/year x (1-0.95) = 0.495 tons/year

The insignificant limit is less than 1.25 tons/year TSP and less than 0.75 tons/year PM-10. The worst case emissions from this source are less than the insignificant limit.