

July 12, 1999

MEMORANDUM

TO: Orville D. Green, Administrator
Air Quality Permit Program

FROM: Susan J. Richards, Program Manager 
Air Quality Permit Program

SUBJECT: Issuance of Tier II Operating Permit (#051-00016) to
Sebs Feed & Supply; Terreton, Idaho

PROJECT DESCRIPTION

This project is for the issuance of a Tier II Operating Permit (OP) for Sebs Feed & Supply (Sebs) located in Terreton, Idaho. The emissions sources of the facility are: a Kisco boiler, a grinder, two rotary hammer mills, a pellet mill, a cooler, a loadout area, and a rolling bin.

DISCUSSION

On October 7, 1998, DEQ received an application for a Tier II OP from Sebs. On October 9, 1998, the application was declared incomplete. On March 10, 1999, DEQ received a Tier II application update from Sebs. On March 18, 1999, the application was declared complete. On May 4, 1999, a proposed Tier II OP was issued for public comment. The public comment period was from May 12, 1999, through June 11, 1999. (No comments were received).

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470 (*Rules for the Control of Air Pollution in Idaho*). The facility is subject to permit application fees for Tier II permits of five hundred dollars (\$500.00). The facility has submitted such payment.

RECOMMENDATIONS

Based on the review of the information provided by the company, and all applicable state and federal rules and regulations concerning the issuance of a Tier II OP, staff recommends that Sebs Feed & Supply be issued a Tier II OP for the sources that exist at the facility.

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cc: Idaho Falls Regional Office
Source File (#051-00016)
COF

July 12, 1999

MEMORANDUM

TO: Susan J. Richards
Program Manager
Air Quality Permit Program

FROM: Thomas Lundahl, Air Quality Engineer *TL*
Civil/Environmental Engineering
State Technical Services

THROUGH: Daniel Salgado, Discipline Lead *DS*
Process Engineering
State Technical Services

SUBJECT: Technical Analysis for Tier II Operating Permit (#051-00016)
Sebs Feed & Supply (Terreton)

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Section 400 (Rules for the Control of Air Pollution in Idaho) (Rules) for issuance of Tier II Operating Permits.

PROJECT DESCRIPTION

This project is for the issuance of a Tier II Operating Permit (OP) for Sebs Feed & Supply (Sebs) located in Terreton, Idaho. The emissions sources of the facility are: a Kisco boiler, a grinder, two rotary hammer mills, a pellet mill, a cooler, a loadout area, and a rolling bin.

FACILITY DESCRIPTION

Sebs manufactures and sells alfalfa products. The alfalfa processing from whole, baled hay to pellets consists of double grinding, making the pellet, cooling, and load out. Double grinding consists of a primary grinder (W.H.O. tub grinder) accepting the whole hay and forcing it through a one-half inch screen by way of a rotary hammer mill. The product is then augered into the second hammer mill and forced through a quarter inch screen. Pneumatics then lift the ground hay into an overhead surge bin.

In the second step, making the pellet, the ground hay is augered from a surge bin directly into each pellet mill where the steam is added in a mixing chamber to create a damp meal-like substance. This "meal" then enters the pellet chamber where metal rolls force the meal into holes in the pellet die. As the die fills, meal continues to be pushed into the holes until it is forced out the other side of the die, creating a pellet.

In the cooling process, the hot pellet is dropped directly out of the mill into the cooling chamber. The pellets are in a continuous flow through the eight foot cooling chamber where ambient air is forced over the pellets to extract any additional heat and moisture. Cooled pellets are then transferred from the cooling chamber to overhead storage bins by way of an elevator leg. The final step is to load-out the finished product from overhead storage bins into trucks below using gravity flow.

The rolling process begins with moving whole grain from a storage bin into a rolling bin. The grain passes over a shaker screen and then directly into a steam chamber. While in the steam chamber, hot steam cooks the grain as it slowly passes through the chamber into the rolls. The rolls flatten it into steam-rolled grain. The rolled grain is then transferred pneumatically to a cooler where excess heat and moisture are drawn out. The cooled rolled grain then passes through an elevator leg to overhead storage bins.

In the unloading grain process, trucks are driven inside a building where the truck hoppers are positioned directly over a grated pit. The trucks off-load into the pit where an auger carries the grain to an elevator leg. The leg then transfers the grain to a variety of optional bins.

This project is for a Tier II OP for the following existing point sources.

Point Sources:

- (1) Pelletizing and grinding: Emissions from this stack are controlled by the Torit Baghouse.

The stack data are the following:

UTM-X Coordinate (KM)	382.61
UTM-Y Coordinate (KM)	4856.70
Stack Exit Height (ft)	15
Stack Exit Diameter (ft)	2.0
Stack Exit Flow Rate (ACFM)	Unknown
Stack Exit Temperature (°F)	70

- (2) Kisco Boiler: Emissions from this stack are uncontrolled.

The stack data are the following:

UTM-X Coordinate (KM)	382.61
UTM-Y Coordinate (KM)	4856.70
Stack Exit Height (ft)	20.0
Stack Exit Diameter (ft)	1.0
Stack Exit Flow Rate (ACFM)	Unknown
Stack Exit Temperature (°F)	100

- (3) Cooler: Emissions from this stack are controlled by the CPM Cyclone.

The stack data are the following:

UTM-X Coordinate (KM)	382.61
UTM-Y Coordinate (KM)	4856.70
Stack Exit Height (ft)	25.0
Stack Exit Diameter (ft)	3.0
Stack Exit Flow Rate (ACFM)	Unknown
Stack Exit Temperature (°F)	70

- (4) Rolling Operation: Emissions from this stack are controlled by a cyclone.

The stack data are the following:

UTM-X Coordinate (KM)	382.61
UTM-Y Coordinate (KM)	4856.70
Stack Exit Height (ft)	25.0
Stack Exit Diameter (ft)	2.0
Stack Exit Flow Rate (ACFM)	Unknown
Stack Exit Temperature (°F)	70

Fugitive Sources

- (1) Alfalfa and Barley Loadout.

A more detailed process description can be found in the Tier II OP application materials and in the facility's source file.

SUMMARY OF EVENTS

On October 7, 1998, DEQ received an application for a Tier II OP from Sebs. On October 9, 1998, the application was declared incomplete. On March 10, 1999, DEQ received a Tier II application update from Sebs. On March 18, 1999, the application was declared complete. On May 4, 1999, a proposed Tier II OP was issued for public comment. The public comment period was from May 12, 1999, through June 11, 1999. (No comments were received).

DISCUSSION

1. Emission Estimates

Emission estimates were provided by Sebs. DEQ also estimated the emissions from all the sources at the facility (see Appendix A). All emissions from equipment/processes were estimated using emissions factors furnished by AP-42, 4th and 5th edition. The annual emissions calculations were based on 8,760 hours per year operation.

2. Modeling

Because PM emissions were reduced from over 400 tons per year to 21.3 tons, no modeling was required for this Tier II OP.

3. Area Classification

Sebs, Jefferson County, Idaho, is located in AQCR 61. The area is classified as attainment or unclassifiable for all federal and state criteria air pollutants (i.e., PM, CO, NO_x, VOCs, and SO_x).

4. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.006.25. The facility is classified as an A2 source because the actual emissions of any criteria pollutant is less than 100 tons per year.

5. Regulatory Review

This OP is subject to the following permitting requirements:

a.	<u>IDAPA 16.01.01.401</u>	Tier II Operating Permit
b.	<u>IDAPA 16.01.01.403</u>	Permit Requirements for Tier II Sources
c.	<u>IDAPA 16.01.01.404.01(c)</u>	Opportunity for Public Comment
d.	<u>IDAPA 16.01.01.404.04</u>	Authority to Revise or Renew Operating Permits
e.	<u>IDAPA 16.01.01.406</u>	Obligation to Comply
f.	<u>IDAPA 16.01.01.470</u>	Permit Application Fees for Tier II Permits
g.	<u>IDAPA 16.01.01.625</u>	Visible Emission Limitation
h.	<u>IDAPA 16.01.01.650</u>	General Rules for the Control of Fugitive Dust

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.470. The facility is subject to permit application fees for Tier II permits of five hundred dollars (\$500.00). The facility has submitted such payment.

RECOMMENDATIONS

Based on the review of the information provided by the company, and all applicable state and federal rules and regulations concerning the issuance of a Tier II OP, the Bureau recommends that Sebs Feed & Supply be issued a Tier II OP for the sources that exist at the facility.

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Attachment

cc: Idaho Falls Regional Office
Source File (#051-00016)
COF

APPENDIX A

Company: Sebs Feed and Supply
Location: Terreton

		Fuel Type	Capacity MM Btu/h	PM / PM10	Emission Factor [lb/1000 gal] (1)			VOC	
					SOx	NOx	CO		
#2 Fuel Oil Combustion Emission Factors		#2 Fuel Oil	3.01	2.00	42.60	20.00	5.00	0.56	
Average Heating Value of #2 Fuel Oil		137000.00	Btu/gal						
		Product	Capacity Tons/h	PM / PM10	Emission Factor [lb/Ton] (2)			VOC	
					SOx	NOx	CO		
Pelletizer Emission Factors		Tons Pellets	5.0	10.00					
Grinder Emission Factors		Tons Pellets	5.0	8.00					
Cooler Emission Factors		Tons Pellets	5.0	3.00					
Rolling Bin Emission Factors		Tons Pellets	4.0	8.00					
Alfalfa and Barley Loadout Emission Factors		Tons Pellets	1.14	0.10					
Source	Fuel Type	Max. Fuel 1000 gal/yr	Control Efficiency	PM / PM10	Emission [tons/year]			VOC	Total tons/yr
					SOx	NOx	CO		
Kisco Diesel Boiler	Fuel Oil	192.46	0.00	0.19	4.10	1.92	0.48	0.054	6.75
Pelletizer	Tons Pellets	5.0	99.99	0.022					0.02
Grinder	Tons Pellets	5.0	99.99	0.018					0.02
Cooler	Tons Pellets	5.0	90.00	6.6					6.57
Rolling Bin	Tons Pellets	4.0	90.00	14.0					14.02
Alfalfa and Barley Loadout	Tons Pellets	1.14	0.00	0.5					
TOTAL				21.3	4.10	1.92	0.48	0.054	27.4

(1): Tables 1.3-2,&4 AP-42 5th Edition

(2): Table 6.1-1 AP-42 4th Edition

