CMI

CONSOLIDATED MINERALS, INC.
FEED SUPPLEMENT DIVISION

DER
DEC 08 1987
BAQM

November 23, 1987

Mr. William A. Thomas, P.E.
Stationary Source Control Group
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Mr. Thomas:

Please find enclosed an application and fee for a construction permit of a third holding bin at the CDP Truck Loading Facility with Baghouse, Permit No. A029-130178.

At the present time we have two holding bins for CDP product which are controlled by a Micro Pulsaire Dust Collector. With this construction permit we would build a third holding bin between the two existing bins. The same pollution control equipment that is presently being used for the two existing bins would be used for the third bin also.

When the original permit, A029-130178, was issued in 1982 the load out facility was declared a state of the art facility by DER. This facility has continued to operate at or above expected levels. With the addition of the third bin it would fall under this same dust collector.

Should you have any questions or comments concerning this application, please contact me.

Sincerely,

Robert L Harrison Jr

Robert L. Harrison, Jr.
Enviromental Supervisor

RLH:cr

Enclosure

cc: Dan A. Williams/DER
Jerry Campbell/HCEPC
Frank W. Cheesman

1031

RECEIVED
DER-MAIL ROOM
1987 DEC -8 AM 9:38

P. O. Box 790 • Plant City, Florida 34289-0790 • (813) 752-1161

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

Sub Code 05
$100.00
Receipt #117508
AC 29-143106

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

RECEIVED
DER - MAIL ROOM
1987 DEC -8 AM 9:38

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Point Source (Air Pollution) [ ] New[1] [X] Existing[1]

APPLICATION TYPE: [ ] Construction [ ] Operation [X] Modification

COMPANY NAME: Consolidated Minerals, Inc. COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) CDP Truck Loading with Bag House

SOURCE LOCATION: Street Coronet Road City Plant City

UTM: East 17-393.8 North 3096.3

Latitude ____° ____' ____"N Longitude ____° ____' ____"W

APPLICANT NAME AND TITLE: F. W. Cheesman, President

APPLICANT ADDRESS: P. O. Box 790, Plant City, FL 34289

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Consolidated Minerals, Inc.

I certify that the statements made in this application for a construction permit are true, correct and complete to the best of my knowledge and belief. Further, I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

*Attach letter of authorization

Signed: F. W. Cheesman

F. W. Cheesman/President - Feed Supplement Div.
Name and Title (Please Type)

Date: 11/19/87 Telephone No. (813)752-1161

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.

Signed Anthony R. Lenkei

Anthony R. Lenkei
Name (Please Type)

Consolidated Minerals, Inc.
Company Name (Please Type)

P. O. Box 790 Plant City, FL 34289
Mailing Address (Please Type)

Florida Registration No. 8716 Date: 12/02/87 Telephone No. 813-752-1161

SECTION II: GENERAL PROJECT INFORMATION

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

See attached sheet

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction 12/15/87 Completion of Construction 2/15/88

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Duct work, tank construction and miscellaneous - $42,000

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

This loading facility is under FDER permit number A029-130178 issued 4/1/87 and expires on 4/16/92

E. Requested permitted equipment operating time: hrs/day_____; days/wk_____; wks/yr_____; if power plant, hrs/yr N/A; if seasonal, describe: Intermittent operation due to market conditions and plant production. The emissions control equipment will be operated continuously during loading periods. The operating time will not exceed 1400 hours on an annual basis.

F. If this is a new source or major modification, answer the following questions. (Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? N/A

   a. If yes, has "offset" been applied? N/A

   b. If yes, has "Lowest Achievable Emission Rate" been applied? N/A

   c. If yes, list non-attainment pollutants. N/A

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No*

3. Does the State "Prevention of Significant Deterioration" (PSD) requirement apply to this source? If yes, see Sections VI and VII. No

4. Do "Standards of Performance for New Stationary Sources" (NSPS) apply to this source? No

5. Do "National Emission Standards for Hazardous Air Pollutants" (NESHAP) apply to this source? No

G. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source?

   a. If yes, for what pollutants?_____

   b. If yes, in addition to the information required in this form, any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justification for any answer of "No" that might be considered questionable.

*A BACT determination was made on this unit prior to issuance of the construction permit, A029-130178.

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Defluorinated	Particulate	N/A	250,000	See attachment D
Animal Feed				

B. Process Rate, if applicable: (See Section V, Item 1)

1. Total Process Input Rate (lbs/hr): N/A (Product Loading Facility)

2. Product Weight (lbs/hr): 250,000 lb/hr Defluorinated Animal Feed

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	2.15	1.5	17-2.23*	2.15*	393.2	275	D

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard.

[4]Emission, if source operated without control (See Section V, Item 3).

*This allowable was jointly agreed upon by FDER and the company when this unit was initially installed.

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Micro Pulsaire	Particulate	+99.5%	40 to 45	manufacture specification
Model IFI-48				
Serial #81433HI				
Type 2-TR-1-60				

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
N/A			

*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

Other Fuel Contaminants (which may cause air pollution): _____

F. If applicable, indicate the percent of fuel used for space heating. N/A

Annual Average _____ Maximum _____

G. Indicate liquid or solid wastes generated and method of disposal.

All collected dust will be returned to the process.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: 62 ft. Stack Diameter: 20.5" x 16.88" ft.

Gas Flow Rate: 12500 ACFM _____ DSCFM Gas Exit Temperature: Ambient °F.

Water Vapor Content: N/A % Velocity: 86.7 FPS

SECTION IV: INCINERATOR INFORMATION

N/A

Type of Waste	Type 0 (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq.& Gas By-prod.)	Type VI (Solid By-prod.)
Actual lb/hr Incinerated							
Uncontrolled (lbs/hr)							

Description of Waste _____

Total Weight Incinerated (lbs/hr) _____ Design Capacity (lbs/hr) _____

Approximate Number of Hours of Operation per day _____ day/wk _____ wks/yr. _____

Manufacturer _____

Date Constructed _____ Model No. _____

	Volume $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ Stack Temp. _____

Gas Flow Rate: _____ ACFM _____ DSCFM* Velocity: _____ FPS

*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device: [ ] Cyclone [ ] Wet Scrubber [ ] Afterburner

[ ] Other (specify) _____

Brief description of operating characteristics of control devices: _____

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
   See Attachment A
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made. See Attachment B
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
   See Attachment C
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.) See Attachment F
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency). N/A
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained. See Attachment D
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
   See Attachment E
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.
   See Attachment E

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.

10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source? N/A

[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy)

[ ] Yes [ ] No

Contaminant	Rate or Concentration

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:

*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant	Rate or Concentration

10. Stack Parameters

a. Height: ft.

b. Diameter: ft.

c. Flow Rate: ACFM

d. Temperature: °F.

e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy [2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

5. Describe the control technology selected:

1. Control Device:

2. Efficiency:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

1. Company Monitored Data N/A

1. _____ no. sites _____ TSP _____ ( ) SO^{2*} _____ Wind spd/dir

Period of Monitoring _____/_____/_____ to _____/_____/_____
month day year month day year

Other data recorded _____

Attach all data or statistical summaries to this application.

*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No

b. Was instrumentation calibrated in accordance with Department procedures?

[ ] Yes [ ] No [ ] Unknown

B. Meteorological Data Used for Air Quality Modeling

1. _____ Year(s) of data from ____/____/____ to ____/____/____
month day year month day year

2. Surface data obtained from (location)_____

3. Upper air (mixing height) data obtained from (location)_____

4. Stability wind rose (STAR) data obtained from (location)_____

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate	
TSP	_____	grams/sec
SO^2	_____	grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

ATTACHMENT A

Total Process Input Weight

Not Applicable

Product Weight

Tons per hour of CDP (Defluorinated Animal Food Product) limited by the size of the storage bin discharge opening
maximum rate = 125 tons per hour

D: Mr. Joe Floyd DATE: January 28, 1982

ROM: George Townsend

UBJECT: Bulk Truck Loading Baghouse Emissions

As per your request, tests were conducted on January 27, 1982, to determine the particulate emission levels at the recently modified bulk truck loading baghouse. The additional information requested from baghouse instrumentation was also collected. During the test three samples were taken and the baghouse instruments were read at the beginning of each test. Test results and readings taken are summarized below. For additional information see attached data.

BULK TRUCK LOADING BAGHOUSE OUTLET DATA

	OUTLET CONDITIONS			PARTICULATE EMISSIONS	
Run	DSCFM	Temp °F	S.P. "H_2O	Lbs./Hr.	Grains/DSCF
1	10,919	54	10.4	0.52	.0056
2	11,402	58	10.8	0.48	.0049
3	12,032	62	10.8	0.64	.0062
Avg.	11,451	58	10.7	0.55	.0056

Allowable Particulate Emissions - .02 Grains/DSCF

BAGHOUSE INSTRUMENT READINGS

Run	Fan Ammeter	Monometer - "H_2O
1	29.5	0.8
2	29.5	0.9
3	29.5	0.9
Avg.	29.5	0.87

George Townsend

GT/rit

cc: Mr. J. J. Lewis/Without Attachment
Mr. N. W. Lowrey/With Attachment
[redacted]
Mr. G. P. Uebelhoer/Without Attachment

Coronet Truck

"Stack Loading Outlet Date 1-27-82"

"Run 1 Time 9:15 - 9:23 "

Barometric Pressure (corrected)	30.31	"Hg
Average ΔH	.8900	"H_2O
Metered Volume	4.5	Cu. Ft.
Meter Temperature	53.1	°F
Stack Temperature	53.6	°F
Average $\sqrt{\Delta P}$	1.8295	"H_2O
Ml H_2O Increase	0	Grams
Silica gel wt. gain	1.1	Grams
Stack Area "I.D. 18	1.7672	Sq. Ft.
Probe Area "I.D. .126	.000087	Sq. Ft.
Probe Wash Particulate	1.7	Milligrams
Filter wt. gain	0.0	Milligrams
Time "Theta"	8	Minutes
Pitot Corr.	.8336	Factor

RESULTS

CONDITIONS		EMISSION	
SCFM	TEMP. °F	LBS/HR	GRAINS/DSCF
10,919	54	0.52	.0056

FLA STATE DER
GENERAL
PARTICULATE
METHOD

TEST?

CORONET TRUCK
LOADING OUTLET
1-27-82 R 1
9:15-9:23

DATA SUMMARY:

BAR. PRESS.?
30.31
AVG DELTA H?
0.8900
METERED VOL?
4.50
METER TEMP?
53.10
STACK TEMP?
53.60
SQRT DELTA P?
1.8295
ML. H2O INC?
0.00
SIL GEL WT GAIN?
1.10
STACK AREA?
1.7672
PROBE AREA?
8.70 -05
PROBE WASH PART?
1.70
FILTER WT GAIN?
0.00
TIME THETA?
8.00
PITOT FACTOR?
0.83

DRY GAS VOL=
4.70 S.C.F.

VOLUME OF
H2O VAPOR=
0.05 S.C.F.

MOISTURE
CONTENT= 0.0109
PROPORTION BY
VOLUME

PARTICULATE
CONCENTRATION=
0.0056
GRAINS/S.C.F.

PARTICULATE
CONCENTRATION=
7.9688 -07
LBS/S.C.F.

AVG STACK GAS
VELOCITY=
99.9117 FT/SEC

VOLUMETRIC FLOW
RATE DRY=
6.5515 05
S.C.F.H.

VOLUMETRIC FLOW
RATE DRY=
10919.11
S.C.F.M.

VOLUMETRIC FLOW
RATE=
10593.83
A.C.F.M.

PARTICULATE
OUTPUT=
0.52 LBS/HR

ISOKINETIC
CONDITION=
109.60%

Coronet Truck

"Stack/Loading Outlet Date 1-27-82"

"Run 2 Time 10:00 - 10:08"

Barometric Pressure (corrected)	30.31	"Hg
Average ΔH	.9900	"H_2O
Metered Volume	4.6	Cu. Ft.
Meter Temperature	60.4	°F
Stack Temperature	57.6	°F
Average $\sqrt{\Delta P}$	1.9253	"H_2O
Ml H_2O Increase	0	Grams
Silica gel wt. gain	1.6	Grams
Stack Area "I.D. 18	1.7672	Sq. Ft.
Probe Area "I.D. .126	.000087	Sq. Ft.
Probe Wash Particulate	1.5	Milligrams
Filter wt. gain	0.0	Milligrams
Time "Theta"	8	Minutes
Pitot Corr.	.8336	Factor

RESULTS

CONDITIONS		EMISSION	
SCFM	TEMP. °F	LBS/HR	GRAINS/DSCF
11,402	58	0.48	.0049

FLA STATE DER -
GENERAL
PARTICULATE
METHOD

TEST?

CORONET TRUCK
LOADING OUTLET
1-27-82 R 2
10:00-10:08

DATA SUMMARY:

BAR. PRESS.?
30.31
AVG DELTA H?
0.9900
METERED VOL?
4.60
METER TEMP?
60.40
STACK TEMP?
57.60
SQRT DELTA P?
1.9253
ML. H2O INC?
0.00
SIL GEL WT GAIN?
1.60
STACK AREA?
1.7672
PROBE AREA?
8.70 -05
PROBE WASH PART?
1.50
FILTER WT GAIN?
0.00
TIME THETA?
8.00
PITOT FACTOR?
0.83

DRY GAS VOL=
4.74 S.C.F.

VOLUME OF
H2O VAPOR=
0.08 S.C.F.

MOISTURE
CONTENT= 0.0157
PROPORTION BY
VOLUME

PARTICULATE
CONCENTRATION=
0.0049
GRAINS/S.C.F.

PARTICULATE
CONCENTRATION=
6.9746 -07
LBS/S.C.F.

AVG STACK GAS
VELOCITY=
105.6477 FT/SEC

VOLUMETRIC FLOW
RATE DRY=
6.8410 05
S.C.F.H.

VOLUMETRIC FLOW
RATE DRY=
11401.66
S.C.F.M.

VOLUMETRIC FLOW
RATE=
11202.04
A.C.F.M.

PARTICULATE
OUTPUT=
0.48 LBS/HR

ISOKINETIC
CONDITION=
105.82%

Coronet Truck

"Stack Loading Outlet Date 1-27-82"

"Run 3 Time 10:30 - 10:38"

Barometric Pressure (corrected)	30.31	"Hg
Average ΔH	1.0850	"H_2O
Metered Volume	4.9	Cu. Ft.
Meter Temperature	67.2	°F
Stack Temperature	62.3	°F
Average $\sqrt{\Delta P}$	2.0320	"H_2O
Ml H_2O Increase	0	Grams
Silica gel wt. gain	1.1	Grams
Stack Area "I.D. 18	1.7672	Sq. Ft.
Probe Area "I.D. .126	.000087	Sq. Ft.
Probe Wash Particulate	2.0	Milligrams
Filter wt. gain	0.0	Milligrams
Time "Theta"	8	Minutes
Pitot Corr.	.8336	Factor

RESULTS

CONDITIONS		EMISSION	
SCFM	TEMP. °F	LBS/HR	GRAINS/DSC:
12,032	62	0.64	.0062

FLA STATE DER
GENERAL
PARTICULATE
METHOD

TEST?

CORONET TRUCK
LOADING OUTLET
1-27-82 R 3
10:30-10:38

DATA SUMMARY:

BAR. PRESS.?
30.31
AVG DELTA H?
1.0850
METERED VOL?
4.90
METER TEMP?
67.20
STACK TEMP?
62.30
SQRT DELTA P?
2.0320
ML. H2O INC?
0.00
SIL GEL WT GAIN?
1.10
STACK AREA?
1.7672
PROBE AREA?
8.70 -05
PROBE WASH PART?
2.00
FILTER WT GAIN?
0.00
TIME THETA?
8.00
PITOT FACTOR?
0.83

DRY GAS VOL=
4.99 S.C.F.

VOLUME OF
H2O VAPOR=
0.05 S.C.F.

MOISTURE
CONTENT= 0.0103
PROPORTION BY
VOLUME

PARTICULATE
CONCENTRATION=
0.0062
GRAINS/S.C.F.

PARTICULATE
CONCENTRATION=
8.8423 -07
LBS/S.C.F.

AVG STACK GAS
VELOCITY=
111.8939 FT/SEC

VOLUMETRIC FLOW
RATE DRY=
7.2194 05
S.C.F.H.

VOLUMETRIC FLOW
RATE DRY=
12032.27
S.C.F.M.

VOLUMETRIC FLOW
RATE=
11864.34
A.C.F.M.

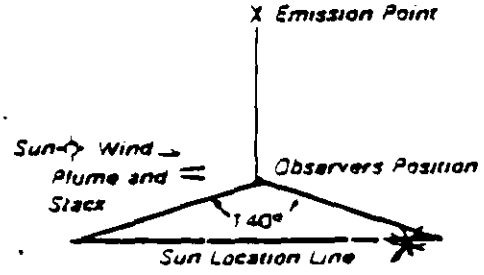
PARTICULATE
OUTPUT=
0.64 LBS/HR

ISOKINETIC
CONDITION=
105.46%

CONSOLIDATED MINERALS, INC.

SOURCE NAME	CDP Bulk Truck Loading
ADDRESS	Consolidated Minerals, Inc.
	P.O. Box 790
CITY	Plant City
STATE	FL
ZIP	33289
PHONE	813-752-1141
SOURCE ID NUMBER	A029-130178
PROCESS EQUIPMENT	
OPERATING MODE	
CONTROL EQUIPMENT	Fabric Filter DC
OPERATING MODE	Filtration
DESCRIBE EMISSION POINT START	Duct
DESCRIBE EMISSION POINT STOP	
HEIGHT ABOVE GROUND LEVEL START	60'
HEIGHT ABOVE GROUND LEVEL STOP	60'
HEIGHT RELATIVE TO OBSERVER START	60'
HEIGHT RELATIVE TO OBSERVER STOP	60'
DISTANCE FROM OBSERVER START	75
DISTANCE FROM OBSERVER STOP	
DIRECTION FROM OBSERVER START	NW
DIRECTION FROM OBSERVER STOP	
DESCRIBE EMISSIONS START	None
DESCRIBE EMISSIONS STOP	
EMISSION COLOR START	
EMISSION COLOR STOP	
PLUME TYPE: CONTINUOUS ☐ FUGITIVE ☐ INTERMITTENT ☐	
WATER DROPLETS PRESENT NO ☑ YES ☐	
IF WATER DROPLET PLUME: ATTACHED ☐ DETACHED ☐	
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED START	Point of Ext
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED STOP	
DESCRIBE BACKGROUND START	Sky
DESCRIBE BACKGROUND STOP	Sky
BACKGROUND COLOR START	Blue
BACKGROUND COLOR STOP	White
SKY CONDITIONS START	P+Cl.
SKY CONDITIONS STOP	P+Cl.
WIND SPEED START	3-5
WIND SPEED STOP	3-5
WIND DIRECTION START	SE
WIND DIRECTION STOP	SE
AMBIENT TEMP START	85
AMBIENT TEMP STOP	85
WET BULB TEMP	
RH percent	

Source Layout Sketch — Draw North Arrow



OBSERVATION DATE	START TIME	STOP TIME
6/9/87	935	1005

SEC / MIN	0	15	30	45	SEC / MIN	0	15	30	45
1	0	0	0	0	31				
2	0	0	0	0	32				
3	0	0	0	0	33				
4	0	0	0	0	34				
5	0	0	0	0	35				
6	0	0	0	0	36				
7	0	0	0	0	37				
8	0	0	0	0	38				
9	0	0	0	0	39				
10	0	0	0	0	40				
11	0	0	0	0	41				
12	0	0	0	0	42				
13	0	0	0	0	43				
14	0	0	0	0	44				
15	0	0	0	0	45				
16	0	0	0	0	46				
17	0	0	0	0	47				
18	0	0	0	0	48				
19	0	0	0	0	49				
20	0	0	0	0	50				
21	0	0	0	0	51				
22	0	0	0	0	52				
23	0	0	0	0	53				
24	0	0	0	0	54				
25	0	0	0	0	55				
26	0	0	0	0	56				
27	0	0	0	0	57				
28	0	0	0	0	58				
29	0	0	0	0	59				
30	0	0	0	0	60				

AVERAGE OPACITY FOR HIGHEST PERIOD	0
NUMBER OF READINGS ABOVE	0 % WERE 0
RANGE OF OPACITY READINGS MINIMUM	0
RANGE OF OPACITY READINGS MAXIMUM	0
OBSERVER'S NAME (PRINT)	Robert L. Harrison Jr
OBSERVER'S SIGNATURE	Robert L. Harrison Jr
DATE	6/9/87
COMMENTS	

HILLSBOROUGH COUNTY ENVIRONMENTAL
PROTECTION COMMISSION
305 NORTH MORGAN STREET
STOVALL PROFESSIONAL BUILDING
SIXTH FLOOR
TAMPA, FLORIDA 33602

accordance with Section 10 of the Hillsborough County Environ-
ital Protection Commission, please provide the following
formation:

TE 6-17-87 SAMPLING TIME: FROM 935 TO 1005

ATEMENT OF PROCESS WEIGHT:

OMPANY NAME Consolidated Minerals, Inc.

AILING ADDRESS P.O. Box 790 Plant City Fl. 33289

OURCE IDENTIFICATION A029-130178

OURCE LOCATION Plant City Facility

ATA ON OPERATING CYCLE TIME:

TART OF OPERATION, TIME 930

ND OF OPERATION, TIME 1030

ELAPSED TIME 1 Hour

IDLE TIME DURING CYCLE None

DESIGN PROCESS RATING:
PROCESS WEIGHT RATE (INPUT) _____ PRODUCT (OUTPUT) _____

DATA ON ACTUAL PROCESS RATE DURING OPERATION CYCLE:

(Include specifications on fossil fuels)

MATERIAL CDP Product RATE* 1250 TPH

MATERIAL _____ RATE* _____

MATERIAL _____ RATE* _____

TOTAL PROCESS WEIGHT RATE* 1250 TPH

PRODUCT _____ RATE** _____

For phosphate process expressed as actual tons/hour and as tons of P_2O_5/hour.

For fossil fuel steam generators expressed as btu/hour heat input.

For sulfuric acid plants expressed as 100% H_2SO_4/hour.

I certify that the above statement is true to the best of my knowledge and belief:

Signature Walter W. Bowers

Title Production manager

ATTACHMENT C

POTENTIAL DISCHARGE

The maximum baghouse inlet loading based on actual test data is 3.67 grains/ft^3.

3.67 grains/ft^3 X 12,500 CFM

= 45,875 grains/minute

45,875 grains/minute ÷ 7,000 grains/pound

= 6.55 pounds/minute

6.55 pounds/minute X 60 minutes/hour

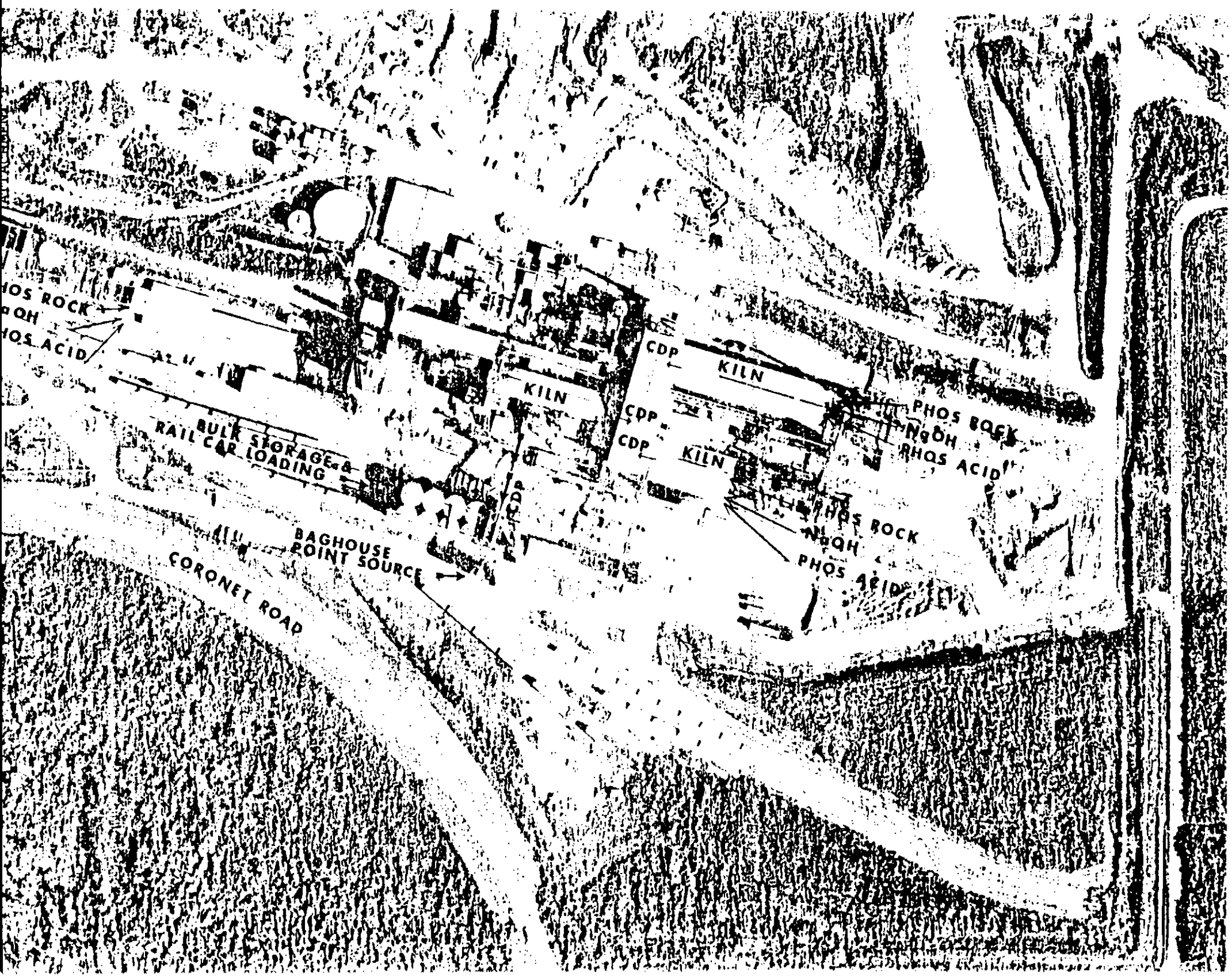
= 393 pounds/hour

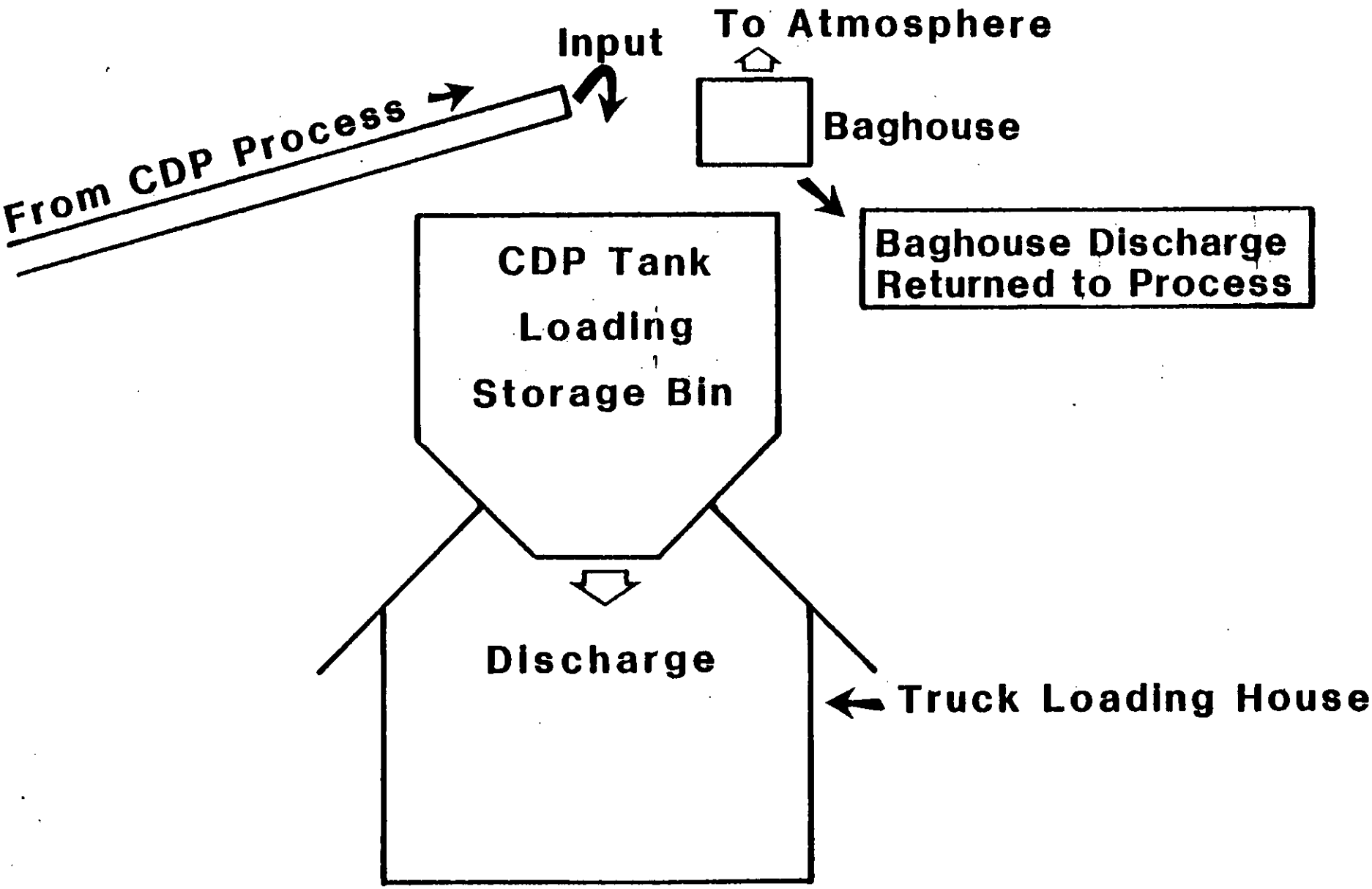
393 pounds/hour X 1,400 hours/year

= 550,480 pounds/year

550,480 pounds/year ÷ 2,000 pounds/ton

= 275 tons/year


OS ROCK
OH
OS ACID
KILN
CDP
KILN
CDP
CDP
KILN
PHOS ROCK
NaOH
PHOS ACID
BULK STORAGE &
RAIL CAR LOADING
PHOS ROCK
NaOH
PHOS ACID
BAGHOUSE
POINT SOURCE
CORONET ROAD


To Atmosphere
Input
From CDP Process
Baghouse
Baghouse Discharge
Returned to Process
CDP Tank
Loading
Storage Bin
Discharge
Truck Loading House

SECTION II A

The installation of a third CDP holding bin between the two existing CDP loading bins. This permit will fall under permit number A029-130178, which was declared a state of the art facility by DER in 1982 when it was installed. The aforementioned permit has performed extremely well at this location and with the addition of the third holding bin it would allow this unit to also be utilized for the loading of CDP fines into trucks.

ATTACHMENT F

The controls for this construction permit are already being used under operating permit #A029-130178, which has a total cloth area of 1411 $ft.^3$.