



Occidental Chemical Corporation

May 25, 1989

RECEIVED

MAY 30 1989

DER-BAQM

Mr. Bill Thomas
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, FL 32301-8241

Dear Mr. Thomas:

Enclosed is an application for the construction of a soda ash handling facility. This unit will be part of the pollyphos process that is currently permitted as A024-145590. The use of soda ash will replace caustic in the pollyphos process.

The change to soda ash will be beneficial to employees in the area, since it does not have the hazards associated with its handling that caustic does. It will also allow Occidental to realize a substantial raw materials cost reduction.

If you should have any questions concerning this application, please do not hesitate to contact me at 904/397-8442.

Best regards,

Charles B. Pults
Environmental Engineer

CBP/rdw

Enclosures

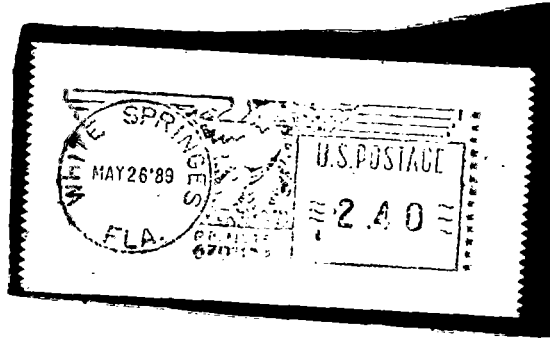
cc: Mr. Ronald C. Green
Mr. W. Marvin Miller
Mr. William P. Stewart

RECEIVED
DER-MAIL ROOM
1989 MAY 30 AM 11: 11

AQ
1031

OxyChem®

Agricultural Products - Florida Operations
County Road 137, P.O. Box 300, White Springs, Florida 32096
(904) 397-8101



OCCIDENTAL CHEMICAL COMPANY
FLORIDA OPERATIONS

Post Office Box 300, White Springs, Florida 32096 – Phone 904 397-8101

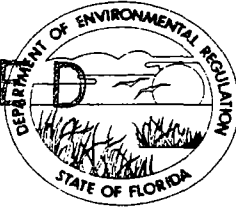
Mr. Bill Thomas
Florida Dept. of Environmental
Regulation
2600 Blair Stone Road
Tallahassee, FL 32301-8241

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

#200 pd
5-30-89
Recept. # 117621

NORTHEAST DISTRICT
3426 BILLS ROAD
JACKSONVILLE, FLORIDA 32207

RECEIVED



AC 24-165548

MAY 30 1989

BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY
G. DOUG DUTTON
DISTRICT MANAGER

DER-BAOM
APPLICATION TO ~~OPERATE~~/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Soda Ash Storage & Handling [] New¹ [X] Existing
APPLICATION TYPE: [X] Construction [] Operation [X] Modification
COMPANY NAME: Occidental Chemical Corporation COUNTY: Hamilton

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) Soda Ash Handling

SOURCE LOCATION: Street CR 137 City White Springs

UTM: East 7,328,320 North 3,368,820
Latitude ° ' "N Longitude ° ' "W

APPLICANT NAME AND TITLE: Hudson C. Smith, Vice President and General Manager

APPLICANT ADDRESS: P. O. Box 300, White Springs, Florida 32096

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Occidental Chemical

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: Hudson C. Smith
Hudson C. Smith, Vice President and General Manager
Name and Title (Please Type)

Date: May 23, 1989 Telephone No. 904/397-8101

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

¹ 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 R. E. McNeill

R. E. McNeill
Name (Please Type)

Occidental Chemical Corporation
Company Name (Please Type)

P. O. Box 300, White Springs, Florida 32096
Mailing Address (Please Type)

Florida Registration No. 12813 Date: May 23, 1989 Telephone No. 904/397-8270

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.

This project will add a 330 ton soda ash storage silo and a 20 ton "ready" silo and associated pneumatic handling equipment. The handling equipment consists of a vacuum railcar unloading system and a pneumatic transfer system.

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

Start of Construction 6/89 Completion of Construction 12/89

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.)

Railcar unloading \$12,000

"Ready" bin \$7,000

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

This is a modification of Permit A024-145590, last modified and finalized July 21, 1988.

E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52; if power plant, hrs/yr _____; if seasonal, describe: These units will operate on an as-needed basis. It is estimated that the railcar unloading system will operate approximately 900 hours per year; the transfer system to the ready bin approximately 1,350 hours per year.

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? No
a. If yes, has "offset" been applied? _____
b. If yes, has "Lowest Achievable Emission Rate" been applied? _____
c. If yes, list non-attainment pollutants. _____

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

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

H. Do "Reasonably Available Control Technology" (RACT) requirements apply to this source? No

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.

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		
Soda Ash	Part.	0.02	3045	1

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

1. Total Process Input Rate (lbs/hr): N/A
2. Product Weight (lbs/hr): _____

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 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/hr	T/yr	
Part. (silo)	0.178		17-2.610(1)(b)	19.24 lb/hr	591.11	266	2
Part. (bin)	3.94		17-2.610(1)(b)	14.97 lb/hr	394.07	266	2

¹See Section V, Item 2.

²Reference 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).

³Calculated from operating rate and applicable standard.

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

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)
AVR Receiver *,**	Part.	99.98		Manf. Spec.
AVS Filter *	Part.	99.98		" "
Filter *,**	Part.	97-98		" "
*All units from				
MAC Pneumatic - See Attached Data Sheets				
**Operate in series				

E. Fuels

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

*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.

Annual Average _____ Maximum _____

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

N/A

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

Stack Height: See Attachment 3 ft. Stack Diameter: _____ ft.
 Gas Flow Rate: _____ ACFM _____ DSCFM Gas Exit Temperature: _____ °F.
 Water Vapor Content: _____ % Velocity: _____ FPS

SECTION IV: INCINERATOR INFORMATION

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 Diameter: _____ 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) _____

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:

¹Explain method of determining efficiency.

²Energy 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:

F. 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:

¹Explain method of determining efficiency.

²Energy 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:

¹Applicant 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

A. Company Monitored Data

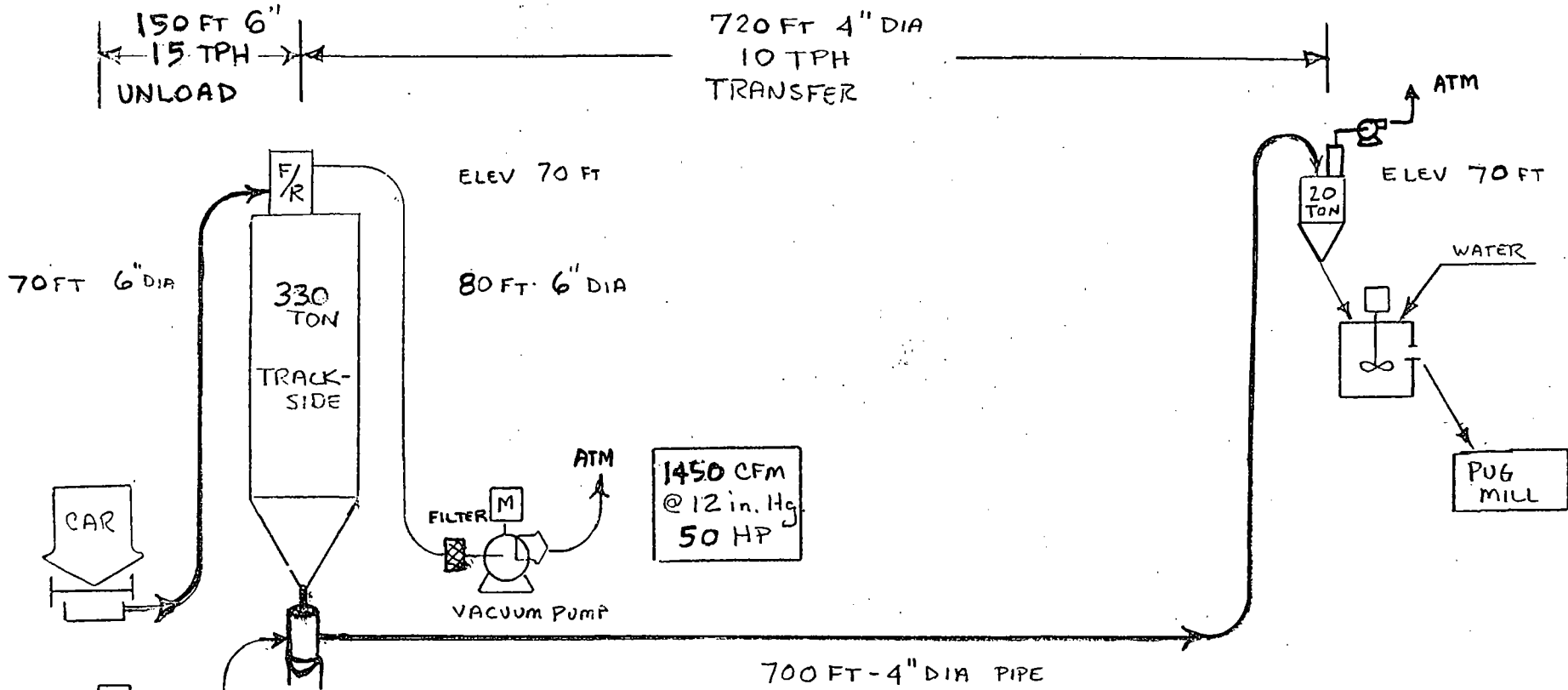
1. _____ no. sites _____ TSP _____ () SO₂* _____ Wind spd/dir

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).



BLOWER
120 CFM
@ 80 psi
30HP

NEW RECEIVING SILO

SODA ASH SYSTEM

ATTACHMENT NO. 1

R.C. GREEN 5-25-89

It is estimated that 13,300 tons of soda ash will be handled annually. By manufacturers' specifications, the silo baghouse is 99.98% effective; the bin filter is also 99.98% effective. The in-line filter prior to the vacuum pump is 97-98% effective (use 97% for calculations). The silo baghouse will operate approximately 900 hours per year; the ready-bin baghouse approximately 1,350 hours per year.

EMISSION (Maximum pounds/hour)

Silo- Operating with a baghouse (99.98%) and an in-line filter (97%) approximately 900 hours per year

$$\frac{13,300 \text{ ton}}{\text{year}} \times (1-0.9998) \times (1-0.97) = 0.08 \text{ tons/year}$$

$$\frac{0.08 \text{ ton}}{\text{year}} \times \frac{\text{year}}{900 \text{ hours}} \times \frac{2,000 \text{ lb}}{\text{ton}} = 0.178 \text{ lb/hr}$$

Bin- Operating with a filter (99.98%) approximately 1,350 hours per year

$$\frac{13,300 \text{ ton}}{\text{year}} \times (1-0.9998) = 2.66 \text{ tons/year}$$

$$\frac{2.66 \text{ ton}}{\text{year}} \times \frac{\text{year}}{1,350 \text{ hours}} \times \frac{2,000 \text{ lb}}{\text{ton}} = 3.94 \text{ lb/hr}$$

ALLOWABLE EMISSIONS (Per 17-2.610(1)(b))

Silo- Operating at a transfer rate of 15 TPH

$$E = 3.59 (P)^{.62}$$

$$E = 3.59 (15)^{.62} = 19.24 \text{ lb/hr}$$

Bin- Operating at a transfer rate of 10TPH

$$E = 3.59 (P)^{.62}$$

$$E = 3.59 (10)^{.62} = 14.97 \text{ lb/hr}$$

POTENTIAL EMISSIONS (without controls)

Assuming 2% passes a 200 mesh screen, the following would be the maximum uncontrolled emissions:

Silo-

$$\frac{13,300 \text{ ton}}{\text{year}} \times 0.02 = 266 \text{ tons/year}$$

$$\frac{266 \text{ ton}}{\text{year}} \times \frac{\text{year}}{900 \text{ hours}} \times \frac{2,000 \text{ lb}}{\text{ton}} = 591.11 \text{ lb/hr}$$

Bin-

$$\frac{13,300 \text{ ton}}{\text{year}} \times 0.02 = 266 \text{ tons/year}$$

$$\frac{266 \text{ ton}}{\text{year}} \times \frac{\text{year}}{1,350 \text{ hours}} \times \frac{2,000 \text{ lb}}{\text{ton}} = 394.07 \text{ lb/hr}$$

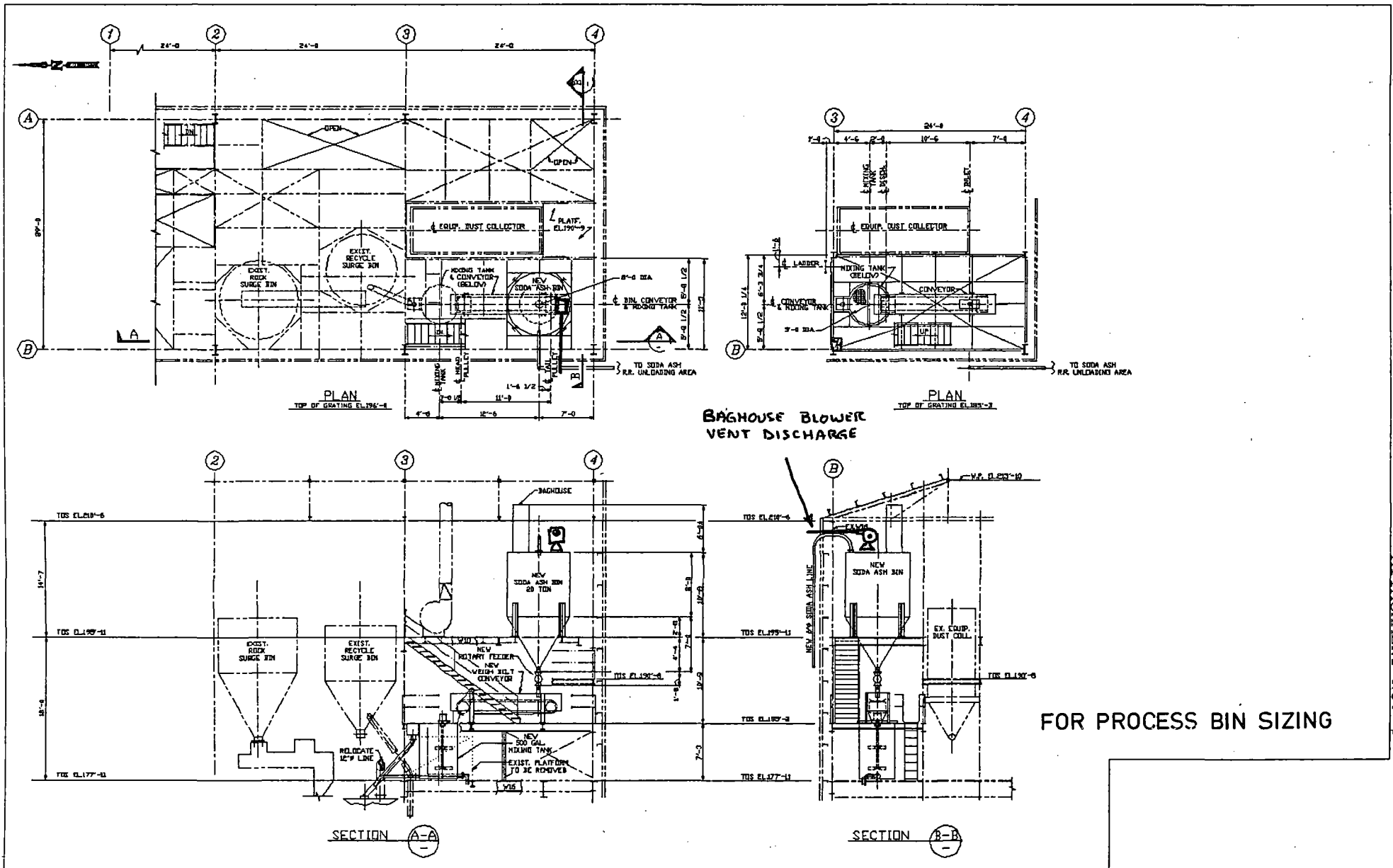
330 Ton Silo

MAC Model 460 vacuum blower system operating at 1,450 cfm. Discharge (6") is through an attached silencer unit to the atmosphere at an elevation of approximately 15 feet. Discharge from the bin is filtered through a MAC Model 72 AVR 32 pneumatic receiver and an in-line pre-filter before the intake of the vacuum pump.

20 Ton Bin

See Attachment 4

Discharge from this unit is through a MAC 72 AVS 64 filter. Discharge (120 cfm) from the filter is through a 10" x 20" duct to the outside of the existing Feed Prep Area building. Elevation approximately 70 feet.



**BAGHOUSE BLOWER
VENT DISCHARGE**

FOR PROCESS BIN SIZING

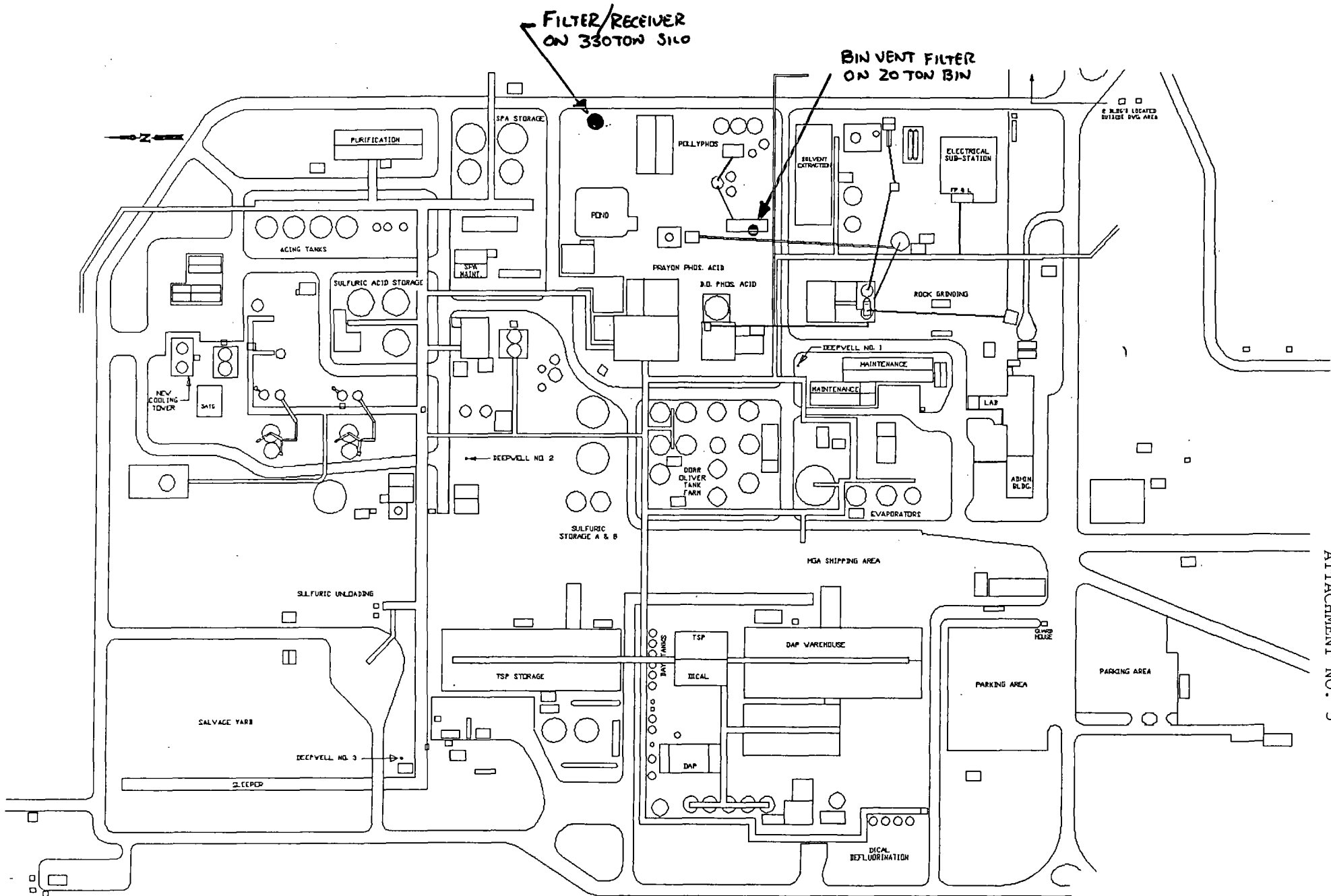
ATTACHMENT NO. 4

3/16/85-D
DCD/DM 1-27-89

SUNAWEE RIVER CHEMICAL
PELLYBID PLANT
FELS PREPARATION AREA
PLAN & ELEVATIONS

SRCC
SHEET 24-4-14

226-229



ATTACHMENT NO. 5

1"=100'
 8-8-88

BLAINE RIVER DIVISION
 GENERAL ARRANGEMENT PILE PLAN
 AREA "C"

SPC
 SPC81-475

DU-475

Our blower packages are designed to supply the proper CFM and pressure to handle your application. We offer proven quality positive displacement blowers manufactured by Roots, Sutorbilt, Schwitzer, MD, and others. Positive displacement blowers are selected to match the requirements for specific applications. A complete line of blower packages are available to accommodate the full range of your system requirements.

All MAC blower packages contain a PD blower, rugged vertical base, take-up table, V-belt drive and guard.

420 Positive Pressure Package

The 420 Positive Pressure Blower Package consists of models in six standard sizes. Each is complete, ready to satisfy your present and future conveying needs. Standard line sizes range from 1½" diameter to 6" diameter. Larger sizes are available. 420 Positive Pressure Blower Packages are used in positive pressure pneumatic conveying systems and other applications that require positive air pressure.

The MAC 420 Positive Pressure Package includes the following as standard features:

Intake filters are used on the inlet side of the blowers on pressure systems to insure clean air to the blower, due to the small clearances on the lobes and rotor ends. The pressure system also contains a removable and cleanable filter cartridge which offers protection to the blower and eliminates product contamination.

Pre-set pressure relief valves are properly sized to insure complete blower protection. The pressure relief valve is spring loaded and set by the type of spring used.

Options Available:

All packages can be equipped with optimum inlet and outlet silencers. Pressure drop is kept to a minimum. The silencer is constructed of welded steel with mineral wool acoustical packing—acceptable for most food applications.

Expansion joints and isolation pads are available for reducing resonance and vibration; also compensates for heat expansion.

A swing check plate can be used to prevent any material from entering the blower. This could occur if the pressure in the line suddenly blocks and momentarily reverses air flow.

A pressure gauge and snubber can be used to monitor the system operation.

A pressure switch can be utilized to electrically monitor your systems conditions. Each switch is factory set to your specifications.

The pressure switch and gauge are mounted on a separate stand to prevent damage from vibration.

460 Vacuum Blower Package

The 460 Vacuum Blower Package consists of models in seven standard sizes. Units range from 1½" diameter to 8" diameter lines. Larger sizes available.

The 460 Vacuum Blower Package is designed for use in vacuum applications. Every vital component and control for maintaining continuous, efficient operation is available.

The MAC 460 Vacuum Blower Package includes the following as standard features:

Expansion joints are used for reducing resonance and vibration; also compensates for heat expansion.

Pre-set vacuum relief valves are properly sized to insure complete blower protection. The vacuum relief valve is spring loaded and set by the type of spring used.

An inline filter is used to provide protection to the blower in the event of product carryover from the receiver. A magnehelic gauge is included on the inline filter to monitor the operation of the inline filter. The inline filter has a quick opening top and bottom and requires no tools to obtain access to the filter media. Also beneficial to ease of maintenance is the fact that there are no lines to disconnect when servicing the filter.

All packages are equipped with an optimum discharge silencer. Pressure drop is kept to a minimum. The discharge silencer is constructed with an acoustical and absorption chamber.

A vacuum switch is used for the same purpose as the pressure switch, to electrically prevent overloading the system.

A pressure gauge and snubber are used to monitor the system operation.

The vacuum switch and gauge are mounted on a separate stand to prevent damage from vibration.

Options Available:

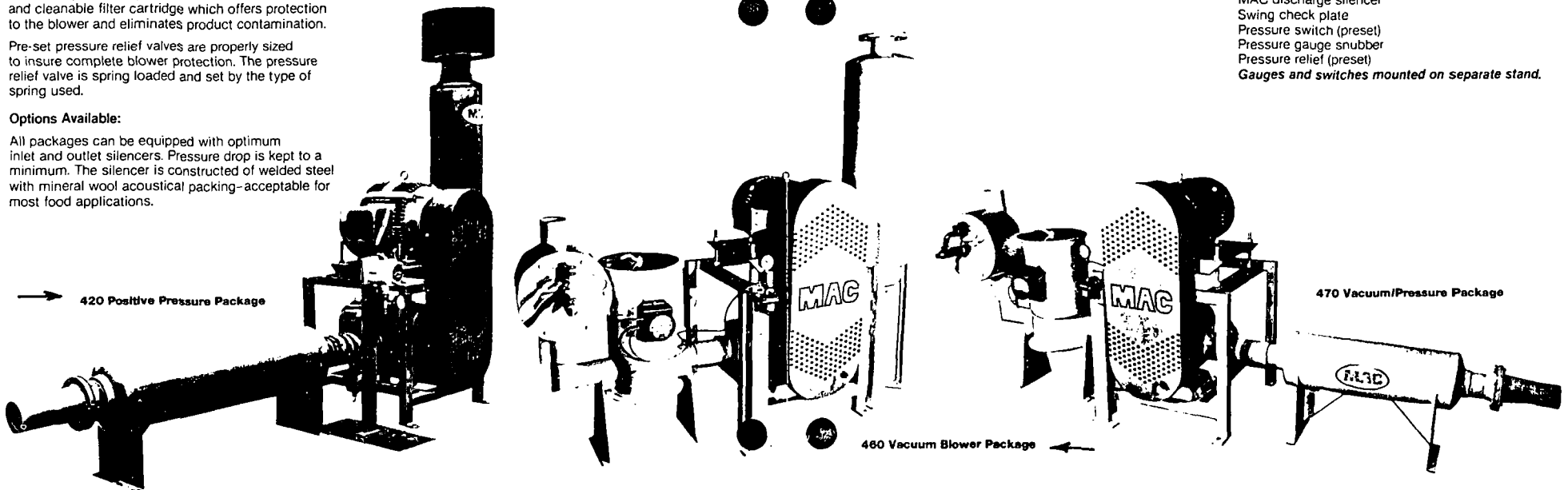
The vacuum breaker is an air-operated electrically activated valve to bleed atmospheric air into your system. The breaker can be automated or tripped manually for incidental checking. It is used on vacuum systems and vacuum/pressure combination systems to avoid bringing more materials into the system when a malfunction occurs, or to allow purging of the system. It is also a means of protecting the blower when high vacuum conditions may occur. In effect, it short circuits the suction system by changing the inlet from the pick-up to the vacuum breaker.

470 Combination Vacuum/Pressure Package

Our standard 470 Combination Vacuum/Pressure Package includes:

- Positive displacement blower
- Vertical blower frame assembly
- Motor base with take-up table
- V-belt drive
- Belt guard
- Inline air filter with replacement filter elements
- Vacuum breaker
- Vacuum relief (preset)
- Vacuum switch (preset)
- Vacuum gauge and snubber
- MAC discharge silencer
- Swing check plate
- Pressure switch (preset)
- Pressure gauge snubber
- Pressure relief (preset)

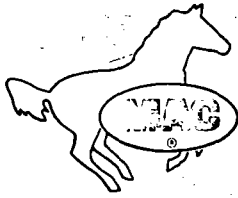
Gauges and switches mounted on separate stand.



420 Positive Pressure Package

460 Vacuum Blower Package

470 Vacuum/Pressure Package



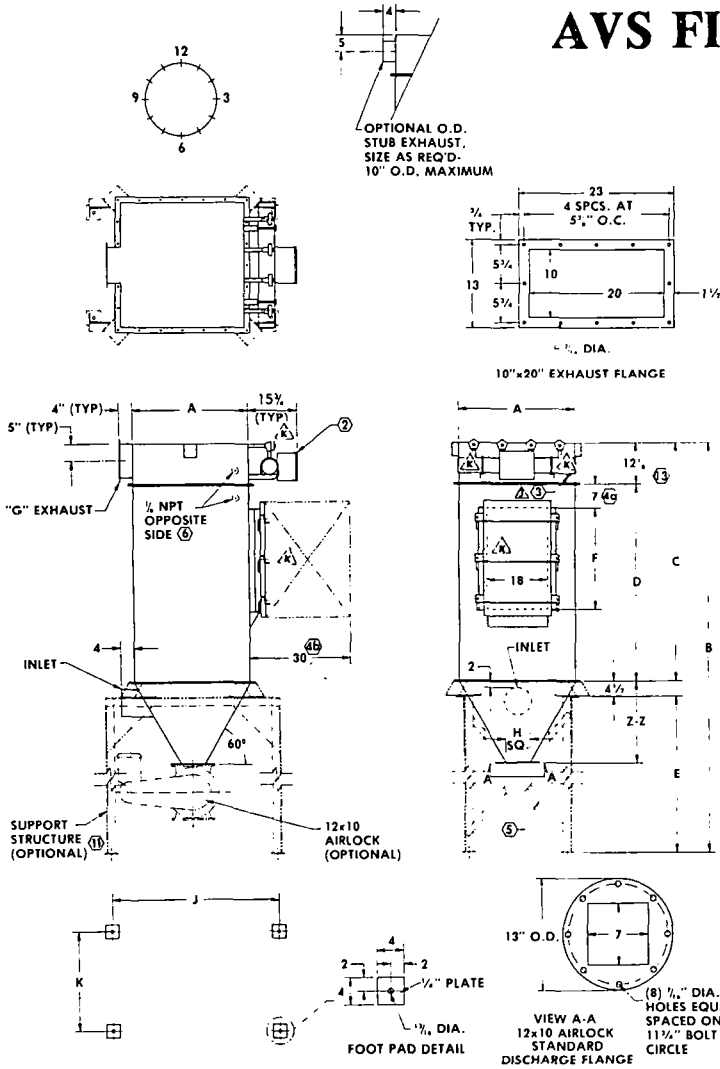
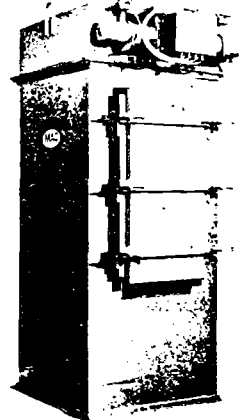
MAC

P.O. Box 205 • Sabetha, Kansas 66534 • Toll Free 1-800-223-2191
or in Kansas Call Collect 913-284-2191

FAX 913-284-3565

SECTION **2**
DATA SHEET
AIR VENT FILTERS
Effective 4-27-88
Supersedes 11-1-87

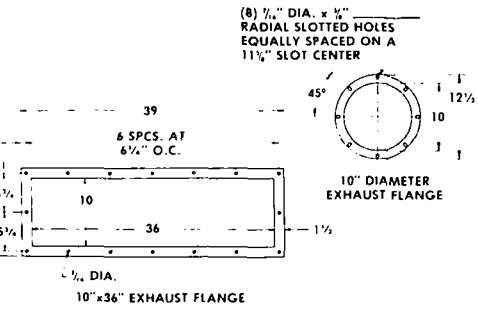
AVS FILTER



NOTES:

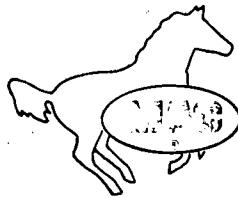
- All dimensions are in inches.
- Timer control panel, 110 volts required.
- 3/4" NPT, 90-100 PSI, clean, dry air required. See SCFM for volume.
- a) Filters with 18" bags have bolted service doors, this dimension will be 3 1/2".
b) Minimum for hinged service door to open completely.
- AVS36 and AVS64 have X-bracing on all four sides.
- 3/8" NPT must have pipe plug if differential pressure gauge is not used.
- This is a maximum dimension for fans with V-belt drive, direct drive fans will be shorter.
- Airlocks, other than those shown, may require special support frame.
- AVS9 with airlock equipped with Drive No. 1 or No. 2 and explosion-proof Class IIG motor requires 6" tall transition or stub adaptor to provide motor clearance.
- Dimensions for 10x8 and 12x10 airlocks are based on airlock installed with square side up.
- Optional structural steel legs include mount pads. When structural steel legs are not specified, then mount pads become optional as a separate item.
- Larger dimensions used only when 12x10 or 12x12 airlocks with drive are required.
- Dimension includes tubsheet thickness.

MODEL	HOPPER HEIGHT (Z-Z)									
	STD.	DISCHARGE "H"								
	12x10 10	7x7 7	10x8 8	9x9 9	10 10	12x12 12	14 14	15 15	16 16	
AVS9	14 1/8	16 3/4	15 5/8	15 5/8	15	14 1/8	12 3/8	10 3/4	9 3/4	9
AVS16	21 1/2	24 1/8	23 3/4	23 3/4	22 3/8	21 1/2	19 3/4	18	17 1/4	16 1/2
AVS25	28 3/8	31 1/2	30 3/8	30 3/8	29 3/8	28 3/8	27 1/8	25 3/8	24 1/2	23 3/4
AVS36	36 1/4	38 3/4	38	38	37 1/8	36 1/4	34 1/2	32 3/4	31 1/8	31
AVS64	51	53 1/2	52 3/4	52 3/4	51 3/4	51	49 1/4	47 1/2	46 3/8	45 3/4



CLEARANCE BELOW AIRLOCK (6)					
DISCHARGE	7	8	8	10	12
MODEL	7x7	10x8	9x9	12x10	12x12
AVS9	16 1/8	13 3/8	14 3/8	12	13 3/8
AVS16	17 1/4	14 3/8	15	12 3/8	14 1/4
AVS25	17 3/8	15	15 3/8	13 3/4	14 3/8
AVS36	18 3/8	15 3/8	16 1/4	13 3/8	15 1/2
AVS64	19 3/8	16 3/8	17 1/2	15 3/8	16 3/4

MODEL	CLOTH AREA	NO. BAGS	A	B	C	D	E	F	G	J	K	MAX A/L	SCFM	INLET
18AVS9	22	9	26	76 5/8	34 1/8	22	38	15	10" DIA.	40	21 3/4	12x12	3.6	SIZED PER JOB
36AVS9	44			94 3/8	52 1/8	40		22						
54AVS9	67			112 3/8	70 1/8	58		30						
72AVS9	89			130 3/8	88 1/8	76		38						
18AVS16	39	16	34 1/2	84 3/8	34 3/8	22	46	15	10" DIA.	39 1/2	29 3/4	12x12	5.0	SIZED PER JOB
36AVS16	78			102 3/8	52 1/8	40		22						
54AVS16	119			120 3/8	70 1/8	58		30						
72AVS16	159			138 3/8	88 1/8	76		38						
96AVS16	209			162 3/8	112 3/8	100		48		49 1/2				
18AVS25	62	25	43	92 3/8	34 1/8	22	54	15	10" x 20"	48	36 1/2	12x12	5.8	SIZED PER JOB
36AVS25	124			110 3/8	52 1/8	40		22						
54AVS25	186			128 3/8	70 3/8	58		30						
72AVS25	245			146 3/8	88 3/8	76		38						
96AVS25	332			170 3/8	112 3/8	100		48						
36AVS36	179	36	51 1/2	118 3/8	52 3/8	40	62	22	10" x 20"	51 1/2	51 1/2	12x12	7.3	SIZED PER JOB
54AVS36	269			136 3/8	70 3/8	58		30						
72AVS36	358			154 3/8	88 3/8	76		38						
96AVS36	478			178 3/8	112 3/8	100		48						
36AVS64	318	64	68 1/2	134 3/8	52 3/8	40	78	22	10" x 36"	68 3/4	68 1/2	15x15	10.9	SIZED PER JOB
54AVS64	478			152 3/8	70 3/8	58		30						
72AVS64	636			170 3/8	88 3/8	76		38						
96AVS64	850			194 3/8	112 3/8	100		48						



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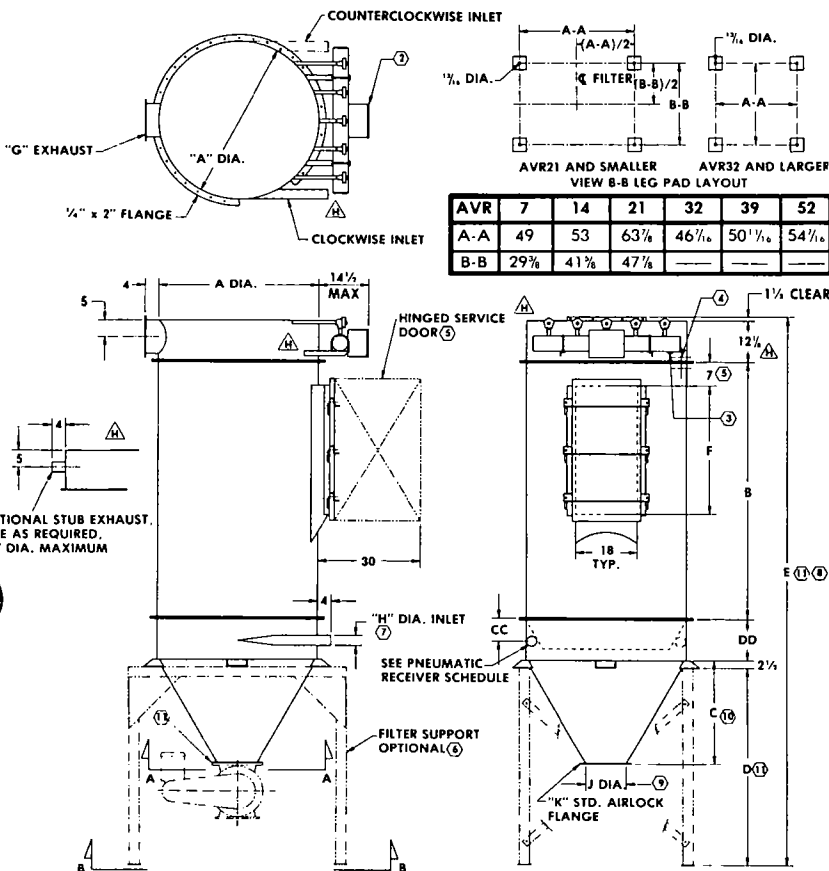
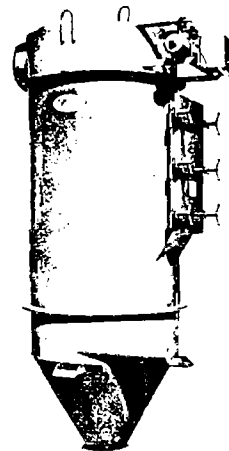
SECTION 2

DATA SHEET
AVR RECEIVER
Effective 12-1-87
Supersedes 3-30-87

AVR PNEUMATIC RECEIVER

NOTES:

- All dimensions are in inches.
- Timer control panel, 110 volts required.
- 3/4" NPT. 90-100 PSI, clean, dry air required. See SCFM for volume.
- 1/2" NPT must have pipe plug if differential pressure gauge is not used.
- Filters with 18" bags have bolted service doors. This dimension will be 2".
- AVR32 and larger have bolted legs rather than support frame.
- "H" is maximum. Larger inlets can be used, but can velocity should be checked.
- Stack-up "E" is based on max. inlet size "H". When "H" dia. inlet line size is 2 1/2", 3 1/2", etc. use next larger size for sidewall and inner cone dimensions (I.E., 2 1/2"-use 3").
- May vary per unit.
- Hopper is a constant 60°. "C" dimension will vary with the size of the discharge. See Hopper Schedule.
- Add 4" to the overall stack-up and legs on AVR7 if mating airlock is equipped with R/A reducer and XPL/PF motor. 4" extension must be bolted between hopper and airlock. This applies only if unit is supplied with legs.
- This is the maximum that will fit under the legs with no chance of interference.
- Clearance listed is for std. legs and 60° hoppers only.
- Unit construction for 17" HG. or 40" WG. (AVR52 - 40" WG. only).
- Ladder and service platform available on 72AVR52 and up.
- Level indicator and vibrator mounting available.
- Unless otherwise specified, orientation shown is standard.
- Differential pressure gauge, if supplied, shipped VIA U.P.S. to be mounted by customer.



AVR	7	14	21	32	39	52
A-A	49	53	63 3/8	46 1/8	50 1/8	54 1/8
B-B	29 3/8	41 3/8	47 3/8			

Min. Airlock Clearance			
8x6	14 3/8	7x7	17 1/4
10x8	14 3/8	9x9	15
12x10	12 3/8	12x12	14 1/4
16x12	10	15x15	14
20x15	8 3/8	18x18	11 3/8

PNEUMATIC RECEIVER SCHEDULE									
"H" DIA.	1 1/2	2	3	4	5	6	8	10	
CC	4	5	7	9	10	12	16	19	
DD	5	7	9	12	13	16	21	24	

HOPPER SCHEDULE							
AIRLOCK FLANGE	"J" DIA. Discharge	AVR FILTER					
		7	14	21	32	39	52
"C" DIMENSION							
8x6	6	19 1/4	29 3/8	—	—	—	—
7x7	7	18 3/8	28 3/8	34 3/8	—	—	—
10x8, 9x9	8	17 1/2	27 1/8	34	45 1/4	—	—
12x10	10	15 3/4	26 1/2	32 1/4	43 1/2	48 3/8	53 3/8
16x12, 12x12	12	—	—	30 1/2	41 3/4	47	52 1/8
15x15	14	—	—	28 3/4	40	45 1/4	50 3/8
20x15	15	—	—	27 3/8	39 1/8	44 3/8	49 1/2
18x18	18	—	—	25 1/4	36 1/2	41 3/4	47

MODEL	CLOTH AREA	NO. OF BAGS	A	B	(10) C	D	(11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	F	G	(7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	H	J	K	MAXIMUM AIRLOCK	SCFM
18AVR 7	17	7	28	22	18 3/8	42 1/2	(11)	89 1/16	17 1/2	10" DIA.	3	7	7x7	12x12	3.3
36AVR 7	34			40				107 1/16	22						
54AVR 7	52			58				125 1/16	30						
72AVR 7	69			76				143 1/16	38						
18AVR14	34	14	40	22	27 3/8	52 3/4	(11)	103 1/16	17 1/2	10" DIA.	5	8	9x9	12x12	4.7
36AVR14	69			40				121 1/16	22						
54AVR14	104			58				139 1/16	30						
72AVR14	139			76				157 1/16	38						
96AVR14	185		100					181 1/16	48						
36AVR21	104	21	47	40	30 1/2	58 3/4	(11)	130 1/16	22	10x20	6	12	12x12	18x18	5.4
54AVR21	156			58				148 1/16	30						
72AVR21	209			76				166 1/16	38						
96AVR21	278			100				190 1/16	48						
54AVR32	239	32	60	58	41 3/4	70	(11)	160 1/16	30	10x20	6	12	12x12	12x12	6.5
72AVR32	318			76				178 1/16	38						
96AVR32	425			100				202 1/16	48						
54AVR39	291			58				170 1/16	30						
72AVR39	388	39	66	76	47	75 1/4	(11)	188 1/16	38	10x30	8	12	12x12	12x12	7.5
96AVR39	518			100				212 1/16	48						
72AVR52	518			76				193 1/2	38						
96AVR52	690			100				217 1/2	48						
		52	72	76	50 3/8	80 3/8	(11)	193 1/2	38	10x30	8	14	15x15	15x15	9.1
				100				217 1/2	48						



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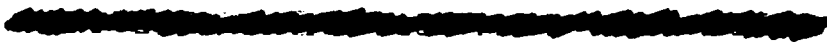
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