

Attachment #1
AIR PERMIT
FOLDER LEVEL

AIR PA #: LE0020A X-PERMIT

File Type: PERMITS

Volume: 001

Inclusive Dates: 1/1/1999 - 12/31/2004

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

December 3, 1999

Mr. Walter D. Scott, III
Engineer and Environmental Manager
Alamo Concrete Products, Ltd.
P.O. Box 34210
San Antonio, Texas 78265-4210

Re: Permit Requirements
Concrete Batch Plant
Hallettsville, Lavaca County
Account ID No. LE-0020-A

Dear Mr. Scott:

This is in response to your letter dated August 23, 1999. We understand you proposed to install a central baghouse to capture the emissions of your grandfathered facility.

After evaluation of the information which you have furnished, we have determined that your proposed installation will not create a new source of air contaminants or increase emissions of air contaminants from existing sources. On this basis, no permit will be required. We thank you for informing us of this event. However, there is no necessary action required. We will keep your information in records for future reference. You are reminded that regardless of whether a construction permit is required, this facility must be in compliance with all air quality rules and regulations of the Texas Natural Resource Conservation Commission at all times.

Your cooperation in this matter is appreciated. If you need further information or have any questions, please call Ms. Lourdes C. Rosenberg at (512) 239-6148 or write to her at Texas Natural Resource Conservation Commission, Office of Permitting, Remediation, and Registration, Air Permitting Division (MC-162), P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

A handwritten signature in black ink, reading "Mark S. Gibbs".

Mark S. Gibbs, P.E.
Manager, Mechanical and Combustion Section
Air Permits Division

MG/LR/ss

cc: Mr. Jim Bowman, Air Program Manager, Corpus Christi

Record No. 67934

**NO PERMIT REQUIRED
TECHNICAL REVIEW**

Permit No: **M**
Project Type: **MLTR**
Record No: **67934**
Account No: **LE-0020-A**

Company: **Alamo Concrete Products, Ltd.**
Facility Name: **Concrete Batch Plant**
City: **Hallettsville**
County: **Lavaca**

PROJECT OVERVIEW

On August 23, 1999, Alamo Concrete Products, Ltd., submitted a SB1126 request for Permit No. M, Record No. 67934. There were various issues that had to be discussed as to if SB1126 was the right plan of action. Alamo Concrete Products, Ltd then on November 17, 1999 came in and had a meeting to discuss the pending issues. In this case, it was decided that SB1126 was not the type of appropriate method action for this grandfathered permit.

Alamo Concrete Products, Ltd. wants to install a central baghouse to their grandfathered facility to better control the emissions that are produced. Since there will not be any increase in the potential to emit, no change in character of emissions, nor increase in production, no permit required was the appropriate method required for this type of construction. The information that was sent was evaluated and will be kept in the file for information purposes only.

	12/3/99		12-3-99
Permit Engineer	Date	Team Leader/Section Manager/Backup	Date

C:\NSR\FORMS\FMTECHRVW.FM Revised 08-06-97

**NO PERMIT REQUIRED
TECHNICAL REVIEW**

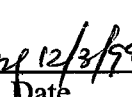
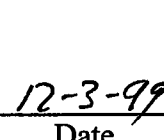
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 Permit Engineer	 Date	 Team Leader/Section Manager/Backup	 Date
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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

NOTIFICATION OF CHANGES TO QUALIFIED FACILITIES FORM PI-E

Please mail to: TNRCC, Office of Air Quality, New Source Review Division (MC-162), PO Box 13087, Austin, TX 78711-3087,

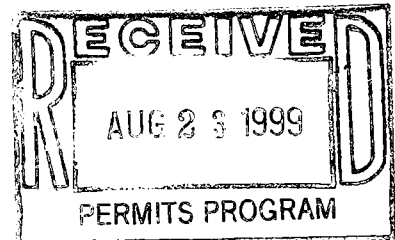
TNRCC Regional Office and, if applicable, any Local Air Pollution Control Program.

☐ Pre-Change qualification ☐ Pre-Change Notification ☐ Post-Change Notification ☐ Annual Report

I. Company Name Alamo Concrete Products, Ltd.
(Corporation, Company, Government Agency, Firm, etc.)
Mailing Address P O Box 34210 San Antonio, Texas 78265-4210
Individual Authorized to Act for Company: Name Walter D. Scott III Title Engineering/Environmental Manager
Address (Same) Telephone (210) 208-1561 Fax (210) 208-1553

II. LOCATION OF FACILITY:

Name of Plant or Site Alamo Concrete Products, Ltd. - Hallettsville #38
TNRCC Air Quality Account Number LE-0020-A
Street Address 210 Depot Street, Hallettsville, TX 77964
Nearest City Hallettsville County Lavaca Latitude N 29° 26' 20" Longitude W 96° 56' 20"



III. TYPE OF FACILITY:

A. Name of Facility and Company's Facility Number Alamo Concrete Products, Ltd. - Hallettsville #38
B. Facility Permit Status: ☒ Grandfathered ☐ Permit ☐ Special Exemption ☐ Standard Exemption ☐ Standard Permit
C. Permit/Exemption number, if applicable N/A

IV. DESCRIPTION OF CHANGE

Provide a written description of the physical or operational change, equipment being installed, the affected air contaminants, and the proposed date on which the change will occur. Attach additional pages if necessary.

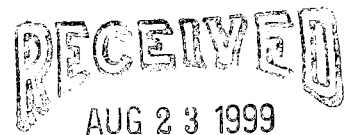
Installation of central dust collection system to control emissions from silos, load out point and weigh batcher

Temporary Change? ☐ Yes ☒ No Duration, if Temporary _____

PSD/Nonattainment Applicable ☐ Yes ☒ No

Type of Change: ☒ Same Facility Increase ☐ In-plant Trade ☐ Interchange

For In-plant Trades and Interchanges please complete page 2 (back) of this form



V. EMISSIONS

Furnish a description of the emission increases resulting from the change.

When requesting a pre-change qualification please provide all relevant calculations.

Please use a separate PI-E form for each facility where a change is occurring.

PERMITS PROGRAM

Name of Facility	Emission Point Number	Allowable Emissions		Actuals Before		Actuals After	
		lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
Central Baghouse	10	0	0	0	0	0.050	0.090
Truck Loadout	6	0.5	0.16	0.40	0.060	0.040	0.006
Drop points	4,5,6,7	001872	0.13075	0.0872	0.013075	0.0872	0.013075
Stockpile	1,2	0	0.1982	0	0.0982	0	0.0982
Silo top and cement batcher	8,9	0.2046	0.2958	0.1046	0.1958	0	0
Totals		0	0	0	0.367	0	0.207

If actual emissions after the change are greater than the allowables (lbs/hr or tons/yr), please complete page 2 (back) of this form

VI. A copy of this notification has been sent to the Regional Office of the TNRCC: ☒ Yes ☐ No

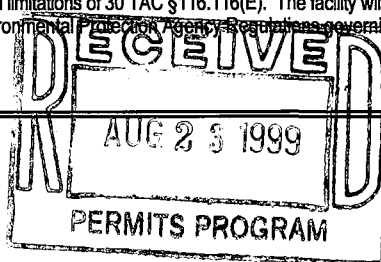
A copy of this notification has been sent to the Local Programs: ☐ Yes ☒ No N/A

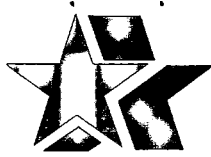
[illegible]

C. Provide the facility permit status (see III. B and C above) for each facility contributing to the trade.

[illegible]

SIGNATURE





SAN ANTONIO DIVISION
AUSTIN DIVISION
EAST GULF COAST DIVISION
WEST GULF COAST DIVISION
SOUTH TEXAS DIVISION
EAGLE PASS DIVISION

ALAMO CONCRETE PRODUCTS, Ltd.
CORPORATE OFFICE

P.O. Box 34210
San Antonio, TX 78265-4210
(210) 208-1880 FAX (210) 208-1501

August 23, 1999

Mr. Mark Gibbs
New Source Review
Office of Air Quality
TNRCC
P O Box 13087
Austin, TX 78711-3087

RE: Concrete Batch Plant
Hallettsville #38, Lavaca County
Account ID No.: LE-0020-A

Dear Mr. Gibbs:

We respectfully request a revision be made to the aforementioned account. We are process off acquiring a central baghouse dust collection system for future installation with collection points at the load out points and the cement weigh batcher, and the replacement of the silo top dust collectors (see attached).

There is no increase in production related to this additional control equipment. The reduced emissions from the installation of this system will improve air quality around this facility.

If you have any questions please contact me.

Sincerely,

Walter D. Scott III, REM, CEA
Engineering/Environmental Manager

WDS/rjg

cc: Charles D. Wells
Neil Ackerman
Region 14 TNRCC – Corpus Christi

RECEIVED
AUG 23 1999

PERMITS PROGRAM

RECEIVED
AUG 23 1999
PERMITS PROGRAM

Fax: (512)239-4500

*** ACTIVITY REPORT ***

TRANSMISSION OK

TX/RX NO. 8017
CONNECTION TEL 9 361 980 3101
CONNECTION ID REG 14
START TIME 08/24 14:19
USAGE TIME 01'36
PAGES 5
RESULT OK

**TNRCC**Protecting Texas
by Reducing and
Preventing Pollution**FAX TRANSMITTAL**DATE: 8.24 1999 NUMBER OF PAGES (including this cover sheet):

3

5

TO: Name TNRCC REGION 14
Organization AIR PROGRAM
FAX Number _____

FROM: TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Name SANDY MOHLER
Division/Region NEW SOURCE REVIEW, CORE
Telephone Number 512 239-1926
FAX Number 512 239-4500

NOTES:

PERMIT**NAME**alamo Concreteslidings # 38Recad 67934

TABLE 20 CONCRETE BATCH PLANTS

1. What type of plant? (Check One) ☒ X Permanent ☐ Portable
2. What type of batching will be accomplished? (Check One)
☒ Wet (Rotary Mix Trucks) ☐ Dry ☐ Central Mix
3. **Maximum Production Rates:** 100 yd³/hour 30,000 yd³/year
Maximum Operations: 12 hours/day 6 days/wk 52 weeks/yr 3,744 hour/year
Does the facility operate at night? ☒ Yes ☐ No
4. **Cement/Flyash/Additive Silo Information:**
- a) How many silos will this plant have? 2
- b) What is the volume of each silo? 1,500 ft³ 2,089 ft³ ft³
- c) Explain method of loading silo(s): Pneumatic unloading from tanker truck
- d) Is each silo equipped with overload warning devices? ☒ Yes ☐ No
Please describe: Visual warning light
- e) What type of abatement device will be used on silo vent(s)? Central Baghouse Collector
- f) If baghouses are used on the vent(s), for **each** device submit the following data and **attach**
- I. Flow rate cfm Total filtering area ft²
Air to cloth ratio Outlet grain loading gr/dscf
Method of cleaning bags
Automatic (not manual) sequenced cleaning? ☐ Yes ☐ No
- II. Flow rate cfm Total filtering area ft²
Air to cloth ratio Outlet grain loading gr/dscf
Method of cleaning bags
Automatic (not manual) sequenced cleaning? ☐ Yes ☐ No
- III. Flow rate cfm Total filtering area ft²
Air to cloth ratio Outlet grain loading gr/dscf
Method of cleaning bags
Automatic (not manual) sequenced cleaning? ☐ Yes ☐ No
5. How will the batch drop to truck or central mixer be controlled to prevent dust emissions?
☒ X Suction shroud with exhaust air to central baghouse? (complete following and **attach Table 11**)
Flow rate 6,500 cfm Total filtering area 1,400 ft²
Air to cloth ratio 4.51 Outlet grain loading 0.01 gr/dscf
Method of cleaning bags reverse air
Automatic (not manual) sequenced cleaning? ☒ Yes ☐ No
☐ Flexible Discharge Spout with Water Fog Ring (**attach design drawing**)
☐ Other type of abatement device (explain in detail and **attach design drawing**):
6. The cement weigh hopper will be vented to the: (Pick One)
☐ Cement/Flyash Silo Baghouse ☒ Central Baghouse ☐ Discharge Spout
☐ Other:
7. List all additives or ad-mixtures and maximum usage rates at your facility:
Concrete Retarding Agents
Concrete Water Reducing Agents
Concrete Accelerator Agents
Concrete Air Entraining Agents

Provide additional information on any items requested above in this space:

8. Will the sand and aggregate be washed prior to delivery at your facility? ☒ Yes ☐ No
9. The number of acres or square feet which may be covered by aggregate stockpiles: 0.183
10. Explain the method of moving aggregate from storage piles to the mixing area (in detail):
Rubber tired F.E.L. moves the aggregate from the stockpile to the charging hopper. The material is conveyed to the overhead aggregate bins. From the overhead bins the material is gravity fed to the weigh batcher and mixing truck.
-
11. Will water sprays be used at the following locations?
- a) Stockpiles ☒ Yes ☐ No
- b) Aggregate bin outlets ☐ Yes ☒ No
- c) Conveyor transfer points ☐ Yes ☒ No
- d) Screens ☐ Yes ☒ No
12. Plant roads will be: ☒ Paved & Cleaned ☐ Paved & Vacuumed ☐ Oil Coated
☐ Gravel ☐ Chemical Sprayed ☐ Water Sprinkled
13. Aggregate transport trucks have: ☐ Beds Covered by Tarps ☐ A sprinkler system
14. Please provide the following information for all vehicles which travel on plant property

Vehicle Type	Speed	Weight (tons)		No. of wheels	Distance Traveled per round trip (miles or feet)	
		Empty	Full		Paved	Unpaved
Raw Aggregate						
Loaders						
Cement Tankers						
Flyash Tankers						
Additives						
Mix Trucks						

revised 01/04/94

ALAMO CONC. PROD.,Ltd. - HALLETTSVILLE #38



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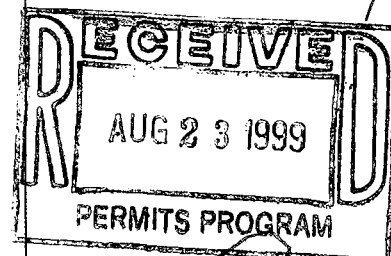
Tue Aug 10 12:54 1999

Scale 1:18,750 (at center)

2000 Feet

500 Meters

- Local Road
- Major Connector
- US Highway
- County Seat
- Cemetery
- Population Center



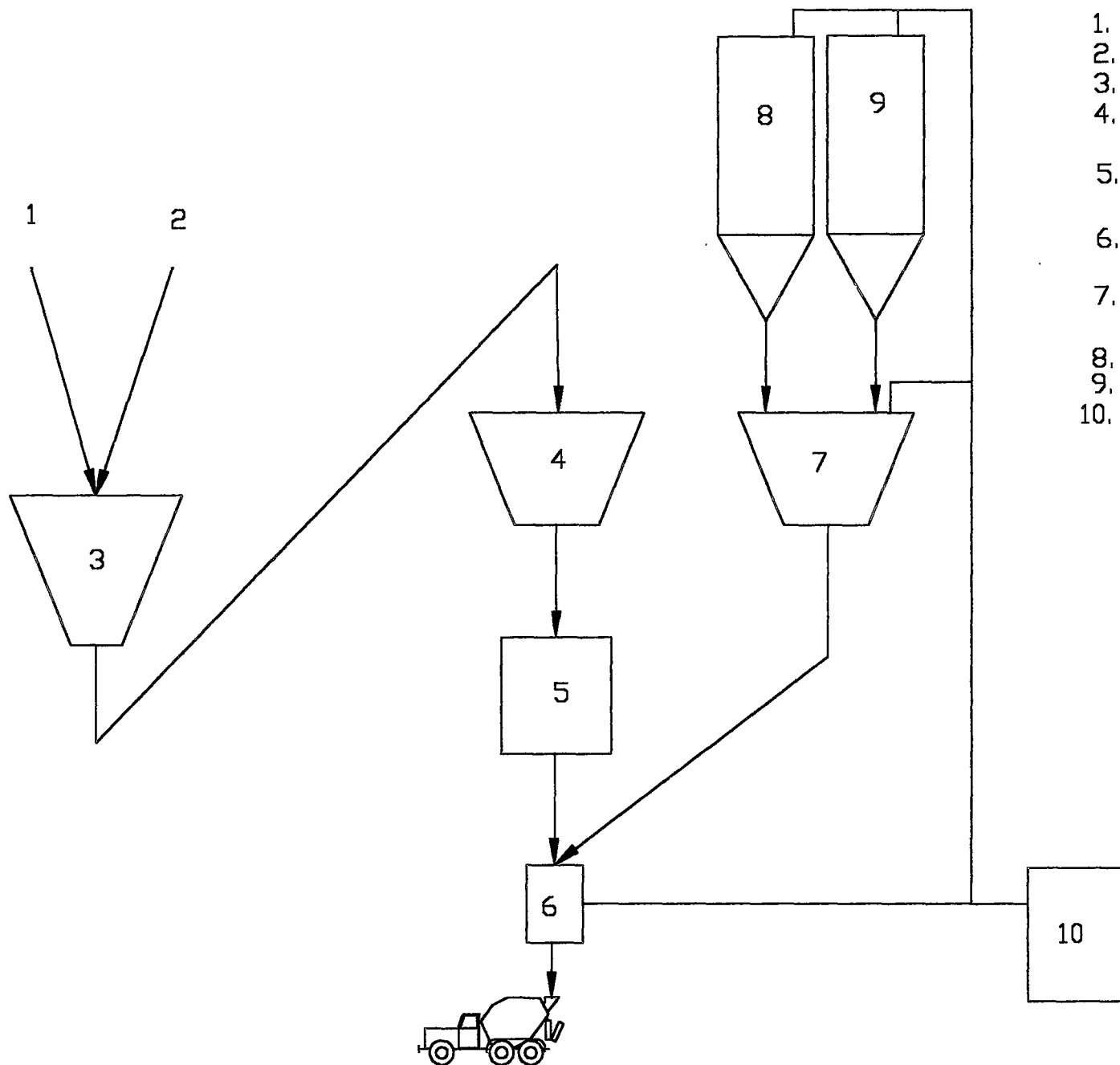
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ALAMO CONCRETE PRODUCTS, Ltd.
Hallettsville Plant

PROCESS DESCRIPTION

Raw materials, i.e., sand, gravel, crushed limestone, cement, and fly ash are transported to the plant site via tandem trailer and cement tanker trucks, which enter the plant through the driveway fronting Depot Street. The sand and aggregate are unloaded and stockpiled on site (Emissions Pts. # 1-2). The bulk cement and fly ash are unloaded into the elevated silos through pressurized lines from the transport truck to the top of the silo (Emission Pts. # 8&9). The silos are vented to the central dust collector (Emission Pt. #10) in order to filter any air displaced through the top of the silo during the off-loading of the transport tanker. All haul trucks exit the plant through the driveway fronting Depot Street.

The process by which ready mix concrete is batched for sale begins with the charging of the load hopper (Emission Pt. #3) with sand and aggregate from the various stockpiles by a front-end loader. The material is then conveyed to the overhead aggregate bins (Emission Pt. #4). From the overhead aggregate bins, the material is gravity loaded into the aggregate weigh batcher (Emission Pt. #5). From the aggregate weigh batcher the material is conveyed to the truck charging chute (Emission Pt. #6). Simultaneously while the sand and aggregate are being weighed out, the cement/fly ash is gravity loaded into the cement weigh batcher (Emission Pt. #7). A proportioned amount of water is deposited into the mixer truck through the charge chute (Emission Pt. # 6). The materials are loaded into transit mix trucks through the truck charge chute (Emission Pt. # 6). After the transit mix trucks have been loaded with concrete mixture they depart the plant site via the driveway on Depot Street. After off-loading at job site destinations, they return through the same driveway.



1. GRAVEL
2. SAND
3. CHARGING HOPPER
4. OVERHEAD
AGGREGATE BINS
5. AGGREGATE WEIGH
BATCHER
6. TRUCK CHARGING
CHUTE
7. CEMENT WEIGH
BATCHER
8. CEMENT SILO
9. FLY ASH SILO
10. CENTRAL DUST
COLLECTOR



GLENDAL ST.

**COMPACTED
BASE**

**VEGETATED
AREA**

RUSSELL ST.

LOCATION LEGEND

- 1.- CEMENT
- 2.- FLY ASH
- 3.- OFFICE
- 4.- DIESEL TANK
- 5.- BUILDINGS
- 6.- RETURN CONCRETE
- 7.- CONCRETE PAVING
- 8.- SAND
- 9.- GRAVEL
- 10.- MB. POZZOLITH 122-HE
- 11.- MB. POZZOLITH 300-R
- 12.- MB. POZZOLITH 322-N
- 13.- MB. AE90 AIR
- 14.- CENTRAL DUST COLLECTOR
- (A).- STORMWATER OUTFALL
- (B).- STORMWATER OUTFALL

RAIN OUTFALL FROM PLANT TO CITY STORM WATER TO LAVACA RIVER.



2100 DEPOT ST.
HALLETTSVILLE, TX.

Project	Item
Date 11/12/98	1 of 1
Study NTS	

MAERT TABLE

Facility: Hallettsville

Name of Facility	Permitted Emissions			Existing Emissions w/vented baghouse			Proposed Emissions CDS only	
	lbs/hr	tons/yr		lbs/hr	tons/yr		lbs/hr	tons/yr
Central bag house	0	0		0	0		0.05	0.09
Truck loadout	0	0		0.4	0.06		0.04	0.006
Drop pts.	0	0		0.0872	0.013075		0.0872	0.013075
Stockpile	0	0		0	0.0982		0	0.0982
Silo top dust coll. +cement batcher	0	0		0.1046	0.1958		0	0
Totals	0	0		0.5918	0.367075		0.1772	0.207275

Production hours	Permitted
	n/a



Emission Calculations



Company: Alamo Concrete Products - Hallettsville, Existing Bin Top Baghouses

Completed by: Walter D. Scott III

Table 1: Plant Capacity

HP	max. hr. production (yd ³ /hr)	<u>100</u>
AP	max. annual prod. (yd ³ /yr)	<u>30000</u>
AH	max. annual operating hrs (hr/yr)	<u>3744</u>

Note: Information in Table 1 will be used throughout the calculations

Table 2: Vent style baghouse emissions from silo & weigh hopper
(Outlet grain loading method)

	Silo #1	Silo #2	Weigh Hopper	Totals
ACFM Actual air flow through baghouse (cfm)	550	550	120	
GL Outlet grain loading of filter (gr/dscf)	0.01	0.01	0.01	
AH max. annual operating hrs (hr/yr)	3744	3744	3744	

E1	lb PM10/hr	0.0471	0.0471	0.0103	0.1046
E2	lb PM10/yr	0.0883	0.0883	0.0193	0.1958

$$E1 = ACFM * GL * (1/7000gr) * (60min/1hr)$$

$$E2 = E1 * AH * (1ton/2000lb)$$

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, Existing Bin Top Baghouses

Completed by: Walter D. Scott III

Table 3: Vent Style baghouse emissions from silos & weigh hopper
(Control device efficiency method)

		Silo*	Weigh Hopper**	Totals
HP	max. hr. prod. (yd ³ /hr)	550	120	
AP	max. annual prod. (yd ³ /yr)	30000	30000	
CF	control factor, table A	0.01	0.01	
EF	emission factor (lb/yd ³)	0.07	0.04	

E3	lb PM10/hr	0.385	0.048	0.433
E4	ton PM10/yr	0.0105	0.006	0.0165

* Calc. Should be used once regardless of number of silos since the emission factor has been calculated based on production of typ. concrete recipe.

** Calc. Determines emissions from weigh hopper usage. If weigh hopper has its own baghouse, this emission should be listed as a separate emission source on the Max. Allowable Rates Table (MAERT). If the weigh hopper is vented to silo, add the calculated emissions to that silo's emissions on the MAERT.

$$E3 = EF * HP * CF$$

$$E4 = EF * AP * CF * (1\text{ton}/2000\text{lb})$$

Table 4: Truck loading emissions

HP	max. hr. prod. (yd ³ /hr)	100
AP	max. annual prod. (yd ³ /yr)	30000
CF	control factor, table A	0.1
EF	emmission factor (lb/yd ³)	0.04

E5	lb PM10/hr	0.4
E6	ton PM10/yr	0.06

$$E5 = EF * HP * CF$$

$$E6 = EF * AP * CF * (1\text{ton}/2000\text{lb})$$

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, Existing Bin Top Baghouses

Completed by Walter D. Scott III

Table 5: Central baghouse calculations

ACFM	Actual air flow through baghouse (cfm/min)	<u>0</u>
GL	Outlet grain loading of filter (gr/dscf)	<u>0.01</u>
AH	Max. annual operating hrs. (hr/yr)	<u>3744</u>
E7	lb PM10/hr	<u>0.00</u>
E8	ton PM10/yr	<u>0.00</u>

$$E7 = ACFM * GL * (1lb/7000gr) * (60min/1hr)$$

$$E8 = E7 * AH * (1ton/2000lb)$$

NOTE: E7 & E8 do not apply because existing system uses vent type dust collectors only.

Please describe all batch and continuous drop points below and include specific control methods used at each point.

Table 6: Batch & continuous drop points

Description	Control Method
1 F.E.L. to charging hopper	<u>0.50 Wet Mat'l</u>
2 Charging hopper to ovhd.	
agg. bin via conveyor	<u>0.50 Wet Mat'l</u>
3 Ovhd. agg. Bin to aggregate	
weigh batcher	<u>0.150 Partial Enclosure</u>
4 Agg. Weigh batcher to truck	
load out via conveyor	<u>0.50 Wet Mat'l</u>
5	
6	

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, Existing Bin Top Baghouses

Completed by: Walter D. Scott III

Table 7: Drop point emissions

		Drop #1	Drop #2	Drop #3	Drop #4	Drop #5	Drop #6	Totals
Type of material (sand, agg, etc.)		S&A	S&A	S&A	S&A			
HT	hr. material throughput (ton/hr)	157	157	157	157	0	0	
AT	annual mat'l throughput (ton/yr)	47100	47100	47100	47100	0	0	
EF1	emission factor (lb TSP/ton) see table B	0.035	0.0012	0.0012	0.0012	0	0	
EF2	emission factor (lb PM10/ton) see table B	0.001	0.000048	0.000048	0.000048	0	0	
CF	control factor, see table A	0.5	0.5	0.15	0.5	0	0	
E9	lb TSP/hr	2.7475	0.0942	0.0283	0.0942	0	0	2.9642
E10	lb PM10/hr	0.0785	0.0038	0.0011	0.0038	0	0	0.0872
E11	ton TSP/yr	0.4121	0.0141	0.0042	0.0141	0	0	0.4446
E12	ton PM10/yr	0.011775	0.000565	0.000170	0.000565	0	0	0.013075

$$E9 = HT \cdot EF1 \cdot CF$$

$$E10 = HT \cdot EF2 \cdot CF$$

$$E11 = AT \cdot EF1 \cdot CF \cdot (1 \text{ ton} / 2000 \text{ lb})$$

$$E12 = AT \cdot EF2 \cdot CF \cdot (1 \text{ ton} / 2000 \text{ lb})$$

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, Existing Bin Top Baghouses

Completed by: Walter D. Scott III

Table 8: Stockpile Emissions

A	Stockpile area (acre)	<u>0.183</u>
D	# of active days/yr (day/yr)	<u>312</u>
CF	Control factor, Table A	<u>0.5</u>
E13	Inactive stockpile emissions (ton TSP/yr)	<u>0.008</u>
E14	Inactive stockpile emissions (ton PM10/yr)	<u>0.0042</u>
E15	Active stockpile emissions (ton TSP/yr)	<u>0.188</u>
E16	Active stockpile emissions (ton PM10/yr)	<u>0.094</u>

$$E13 = (3.5\text{lb TSP/acre day}) \cdot (365 - D/\text{year}) \cdot A \cdot (1\text{ton}/2000\text{lb}) \cdot CF$$

$$E14 = 0.5 \cdot E13$$

$$E15 = (13.2\text{lb TSP/acre active-day}) \cdot D \cdot A \cdot CF \cdot (1\text{ton}/2000\text{lb})$$

$$E16 = 0.5 \cdot E15$$

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, Existing Bin Top Baghouses

Completed by: Walter D. Scott III

SUMMARY OF EMISSIONS

E1	lb PM10/hr	0.1046	E7	lb PM10/hr	0.0000	E13	ton TSP/yr	0.0085
E2	ton PM10/yr	0.1958	E8	ton PM10/yr	0.0000	E14	ton PM10/yr	0.0042
E3	lb PM10/hr	0.4330	E9	ton TSP/hr	2.9642	E15	ton TSP/yr	0.1884
E4	ton PM10/yr	0.0165	E10	ton PM10/hr	0.0872	E16	ton PM10/yr	0.0942
E5	lb PM10/hr	0.4000	E11	ton TSP/yr	0.4446	E17	ton TSP/yr	n/a
E6	ton PM10/yr	0.0600	E12	ton PM10/yr	0.0131	E18	ton PM10/yr	n/a

NOTE: Factors E7 & E8 do not apply since the current system uses vent type baghouses only.

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, CDS

Completed by: Walter D. Scott III

Table 1: Plant Capacity

HP	max. hr. production (yd ³ /hr)	<u>100</u>
AP	max. annual prod. (yd ³ /yr)	<u>30000</u>
AH	max. annual operating hrs (hr/yr)	<u>3744</u>

Note: Information in Table 1 will be used throughout the calculations

Table 2: Vent style baghouse emissions from silo & weigh hopper
(Outlet grain loading method)

		Silo #1	Silo #2	Weigh Hopper	Totals
ACFM	Actual air flow through baghouse (cfm)	0	0	0	
GL	Outlet grain loading of filter (gr/dscf)	0.01	0.01	0.01	
AH	max. annual operating hrs (hr/yr)	3744	3744	3744	
E1	lb PM10/hr	0.0000	0.0000	0.0000	0.0000
E2	lb PM10/yr	0.0000	0.0000	0.0000	0.0000

$$E1 = ACFM * GL * (1/7000gr) * (60min/1hr)$$

$$E2 = E1 * AH * (1ton/2000lb)$$

NOTE: Factors E1 & E2 do not apply since the current system uses central dust collector.

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, CDS

Completed by: Walter D. Scott III

Table 3: Vent Style baghouse emissions from silos & weigh hopper
(Control device efficiency method)

	Silo*	Weigh Hopper**	Totals
HP max. hr. prod. (yd ³ /hr)	550	120	
AP max. annual prod. (yd ³ /yr)	30000	30000	
CF control factor, table A	0	0	
EF emission factor (lb/yd ³)	0.07	0.04	

E3 lb PM10/hr	0	0	0
E4 ton PM10/yr	0	0	0

* Calc. Should be used once regardless of number of silos since the emission factor has been calculated based on production of typ. concrete recipe.

** Calc. Determines emissions from weigh hopper usage. If weigh hopper has its own baghouse, this emission should be listed as a separate emission source on the Max. Allowable Rates Table (MAERT). If the weigh hopper is vented to silo, add the calculated emissions to that silo's emissions on the MAERT.

$$E3 = EF \cdot HP \cdot CF$$

$$E4 = EF \cdot AP \cdot CF \cdot (1 \text{ ton} / 2000 \text{ lb})$$

NOTE: E3 & E4 does not apply since a central dust collection system is to be installed.

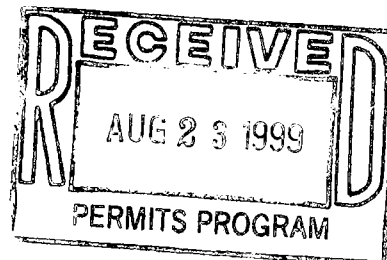
Table 4: Truck loading emissions

HP max. hr. prod. (yd ³ /hr)	100
AP max. annual prod. (yd ³ /yr)	30000
CF control factor, table A	0.01
EF emission factor (lb/yd ³)	0.04

E5 lb PM10/hr	0.04
E6 ton PM10/yr	0.006

$$E5 = EF \cdot HP \cdot CF$$

$$E6 = EF \cdot AP \cdot CF \cdot (1 \text{ ton} / 2000 \text{ lb})$$



Emission Calculations

Company: Alamo Concrete Products - Hallettsville, CDS

Completed by Walter D. Scott III

Table 5: Central baghouse calculations

ACFM	Actual air flow through baghouse (cfm/min)	<u>550</u>
GL	Outlet grain loading of filter (gr/dscf)	<u>0.01</u>
AH	Max. annual operating hrs. (hr/yr)	<u>3744</u>
E7	lb PM10/hr	<u>0.05</u>
E8	ton PM10/yr	<u>0.09</u>

$$E7 = ACFM * GL * (1lb/7000gr) * (60min/1hr)$$

$$E8 = E7 * AH * (1ton/2000lb)$$

Please describe all batch and continuous drop points below and include specific control methods used at each point.

Table 6: Batch & continuous drop points

Description	Control Method
1 F.E.L. to charging hopper	<u>0.50 Wet Mat'l</u>
2 Charging hopper to ovhd.	
agg. bin via conveyor	<u>0.50 Wet Mat'l</u>
3 Ovhd. agg. Bin to aggregate	
weigh batcher	<u>0.150 Partial Enclosure</u>
4 Agg. Weigh batcher to truck	
load out via conveyor	<u>0.50 Wet Mat'l</u>
5	
6	

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, CDS

Completed by: Walter D. Scott III

Table 7: Drop point emissions

		Drop #1	Drop #2	Drop #3	Drop #4	Drop #5	Drop #6	Totals
Type of material (sand, agg, etc.)		S&A	S&A	S&A	S&A			
HT	hr. materail throughput (ton/hr)	157	157	157	157	0	0	
AT	annual mat'l throughput (ton/yr)	47100	47100	47100	47100	0	0	
EF1	emission factor (lb TSP/ton)							
	see table B	0.035	0.0012	0.0012	0.0012	0	0	
EF2	emission factor (lb PM10/ton)							
	see table B	0.001	0.000048	0.000048	0.000048	0	0	
CF	control factor, see table A	0.5	0.5	0.15	0.5	0	0	
E9	lb TSP/hr	2.7475	0.0942	0.0283	0.0942	0	0	2.9642
E10	lb PM10/hr	0.0785	0.0038	0.0011	0.0038	0	0	0.0872
E11	ton TSP/yr	0.4121	0.0141	0.0042	0.0141	0	0	0.4446
E12	ton PM10/yr	0.011775	0.000565	0.000170	0.000565	0	0	0.013075

$$E9 = HT * EF1 * CF$$

$$E10 = HT * EF2 * CF$$

$$E11 = AT * EF1 * CF * (1 \text{ ton} / 2000 \text{ lb})$$

$$E12 = AT * EF2 * CF * (1 \text{ ton} / 2000 \text{ lb})$$

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, CDS

Completed by: Walter D. Scott III

Table 8: Stockpile Emissions

A	Stockpile area (acre)	0.183
D	# of active days/yr (day/yr)	312
CF	Control factor, Table A	0.5
E13	Inactive stockpile emissions (ton TSP/yr)	0.008
E14	Inactive stockpile emissions (ton PM10/yr)	0.0042
E15	Active stockpile emissions (ton TSP/yr)	0.188
E16	Active stockpile emissions (ton PM10/yr)	0.094

$$E13 = (3.5\text{lb TSP/acre day}) \cdot (365 - D/\text{year}) \cdot A \cdot (1\text{ton}/2000\text{lb}) \cdot CF$$

$$E14 = 0.5 \cdot E13$$

$$E15 = (13.2\text{lb TSP/acre active-day}) \cdot D \cdot A \cdot CF \cdot (1\text{ton}/2000\text{lb})$$

$$E16 = 0.5 \cdot E15$$

Emission Calculations

Company: Alamo Concrete Products - Hallettsville, CDS

Completed by: Walter D. Scott III

SUMMARY OF EMISSIONS

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NOTE: Factors E1to E4 do not apply since the current system uses a central dust collector.

RECEIVED
AUG 23 1999

PERMITS PROGRAM

TABLE 11
FABRIC FILTERS

Point Number(from Flow Diagram)		Manufacturer & Model No. (if available) Dust Control Systems & Equipment Model No RA-1400		
Name of Abatement Device Central Baghouse Collection System		Type of Particulate Controlled Cement/Fly Ash Dust		
GAS STREAM CHARACTERISTICS				
Flow Rate (acfm)		Gas Stream Temperature (F)		Particulate Grain Loading (grain/scf)
Design Maximum 8000	Average Expected 6500	70 F		Inlet 15 Outlet 0.01
Pressure Drop (in. H ₂ O) 6"		Water Vapor Content of Effluent Stream (lb water/lb dry air) Ideally zero		Fan Requirements (hp) (ft ³ /min) 15 6500
PARTICULATE DISTRIBUTION (By Weight)				
Micron Range	Inlet		Outlet	
0.0-0.5				
	%		%	
0.5-1.0				
	%		%	
1.0-5.0				
	%		%	
5-10				
	%		%	
10-20				
	%		%	
over 20				
	%		%	
FILTER CHARACTERISTICS				
Filtering Velocity (acfm/ft ² of Cloth) 4.51	Bag Diameter (in.) 8"	Bag Length (ft) 9.5'	Number of Bags 72	Number of Compartments in Baghouse 2
Bag rows will be: Staggered Straight X		Walkways will be provided between banks of bags: Yes No X		
Filtering Material: 100% polyester				
Describe Bag Cleaning Method and Cycle: Release air via adjustable automatic timer				
Capital Installed Cost \$		Annual Operating Cost \$		
/				
ADDITIONAL INFORMATION				

On separate sheets attach the following:

- A. Details regarding principle of operation

- An assembly drawing (Front and Top View) of the abatement device dimensioned and to scale clearly showing the design, size and shape.

If the device has bypasses, safety valves, etc., include in drawing and specify when such bypasses are to be used and under what conditions.

DUST CONTROL SYSTEMS & EQUIPMENT
A Division of Curtis Whitus, Inc.

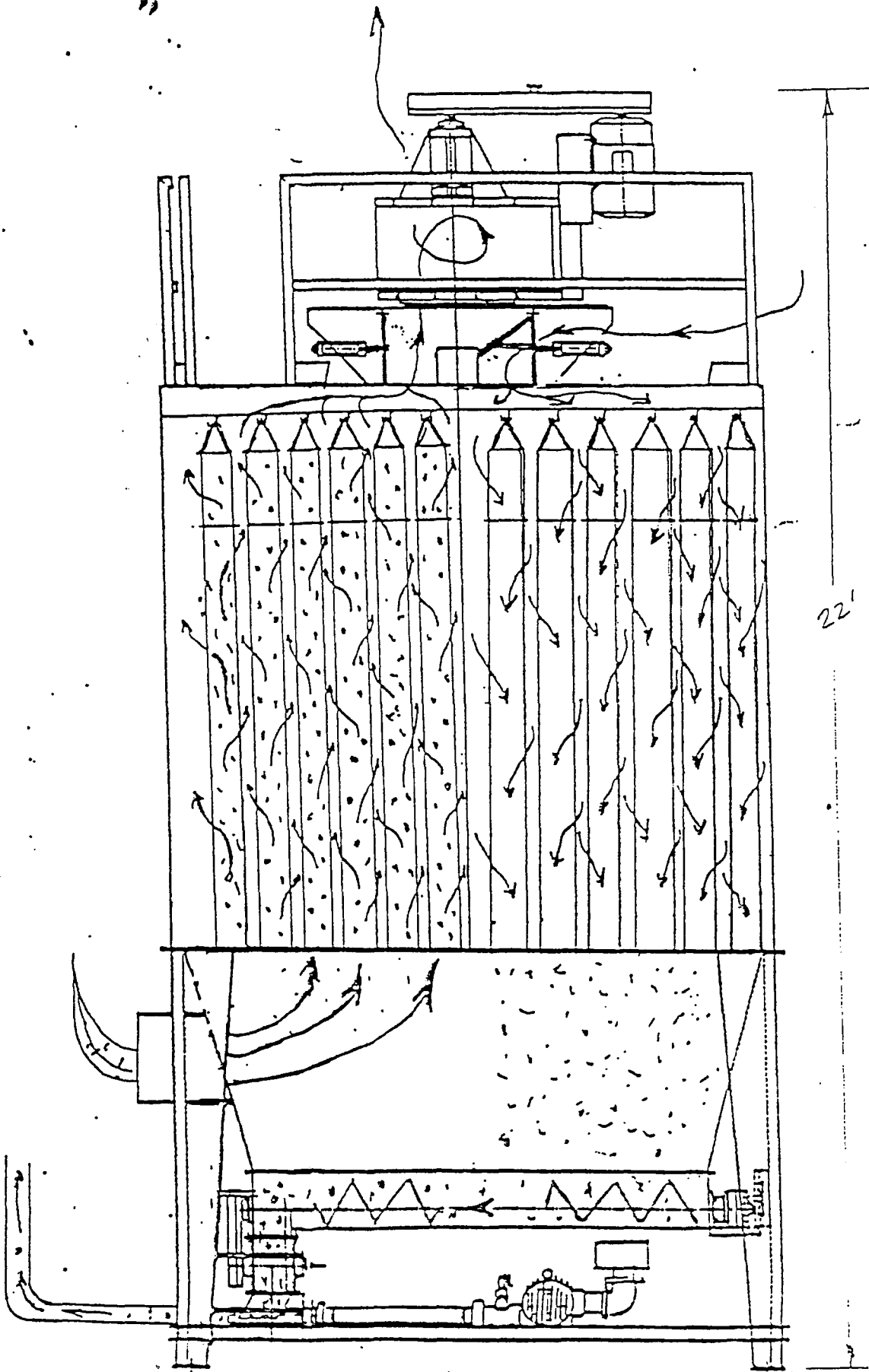
12450 Rendon Road
Burleson, TX 76028

Phone (817) 572-7878

SPECIFICATIONS FOR DCS-RA-1400
DUST COLLECTION SYSTEM

Model number - DCS-RA-1400
Number of bags - 72
Bag diameter - 8"
Bag length - 114"
Total filtration area - 1,400 sq. ft.
Min. design - efficiency of dust collector - 99.8%
Air to cloth ratio - 4.51 A.C.F.M./Ft.²
Filtration velocity - 4.51 Ft./Min.
Blower H.P. - 15H.P.
Static pressure drop (inches of water) - 6"
Air capacity - 7,000 C.F.M.
Outlet area - 2.34 Ft.²
Outlet velocity - 46.3 Ft./Sec.
Outlet moisture content - ideally zero
Cleaning mechanism - reverse air
Frequency of cleaning - variable
* Inlet dust concentration (GR/Min.) - 97,500 GR/Min.
* Outlet emissions (GR/Min.) - 195 GR/Min.
* Outlet dust loading - .010 GR/C.F.M.

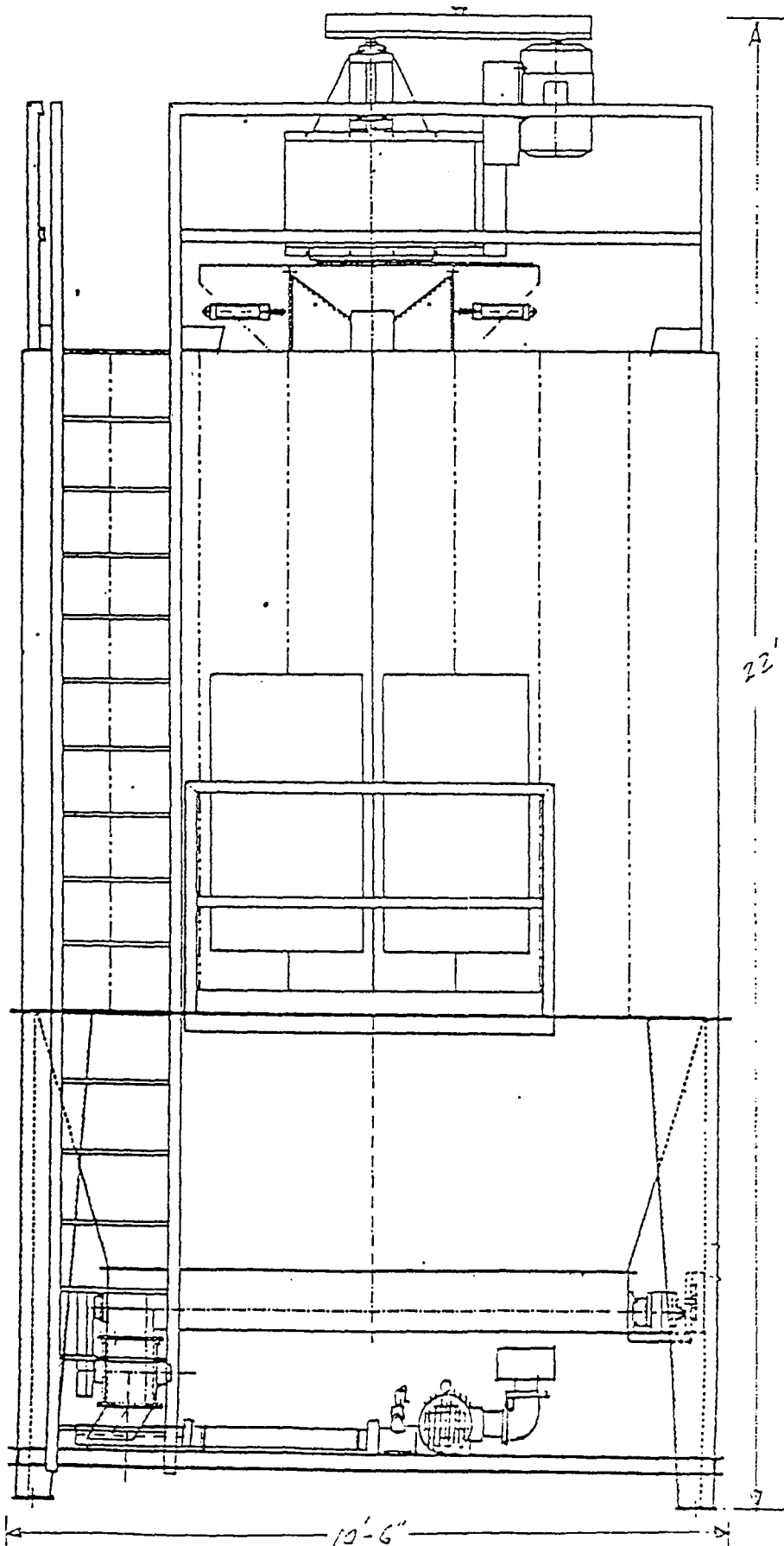
* These calculations based on inlet dust loading of 15 GR/Ft.³



RA-1400

22'

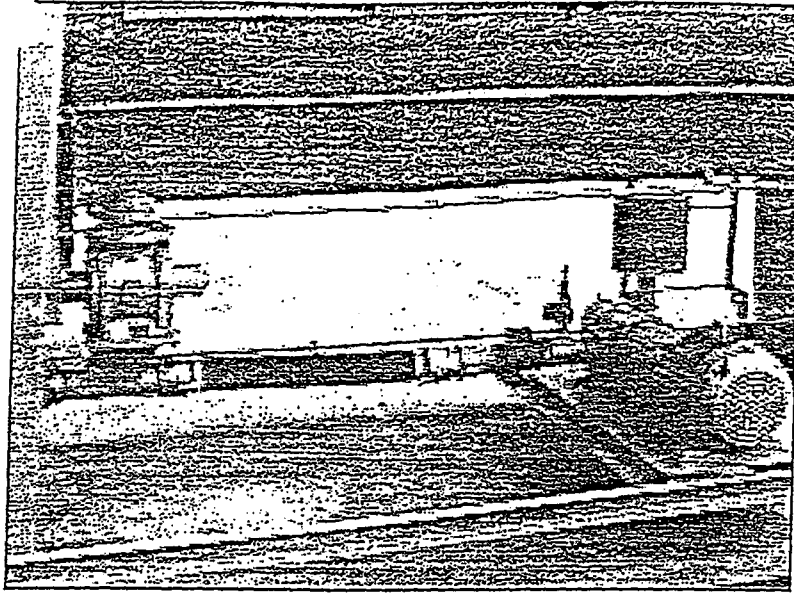
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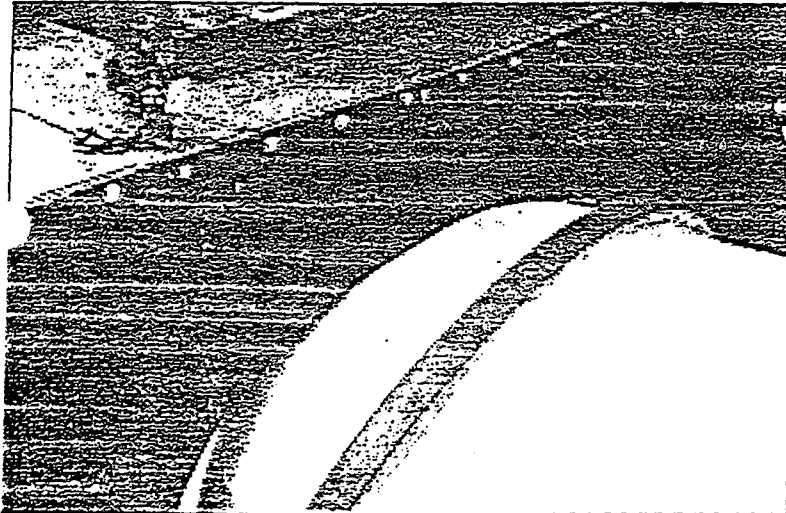
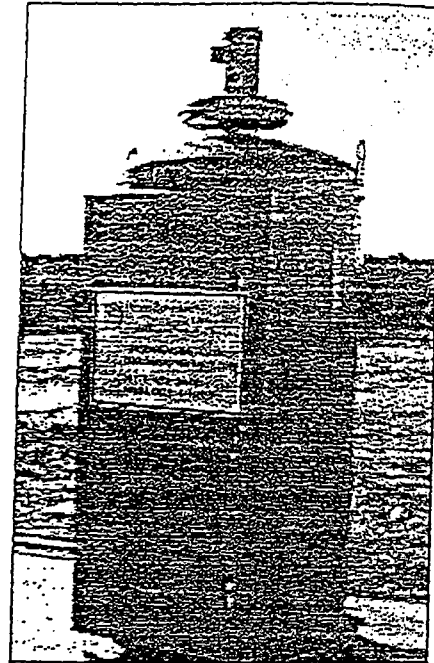
RA-1400

WIDTH - 6'

AUTOMATIC CEMENT RECYCLE SYSTEM



SILO COLLECTOR



STATIONARY BACK-IN SHROUD

DUST CONTROL SOLUTIONS:

- Silo Collectors
- Portable Collectors-Custom Designed
- Automatic Cement Recycle Systems
- Single-source supplier for your filter bags and other replacement items
- Dust collectors for the aggregate and asphalt industries
- Quarterly inspection and maintenance programs
- Consulting services

SPECIFICATIONS AUTOMATIC - REVERSE AIR DUST COLLECTORS

SERIES	DCS-1200	DCS-1400	DCS-2000	DCS-2800
Bag Area (Dacron)	1000 sq. ft.	1400 sq. ft.	2000 sq. ft.	2800 sq. ft.
No. of 8" Snap-on Bags	48 Bags	72 Bags	108 Bags	144 Bags
Bag Length	9'6"	9'6"	9'6"	9'6"
Overall Height	22'	22'	22'	22'
Overall Width	6'	6'	6'	6'
Overall Length	8'0"	10'6"	15'6"	20'6"
proximate Weight (lbs.)	3500	5250	6800	7900
Type Blower	SQB 13 1/2"	SQB 20"	SQB 20"	SQB 22 1/4"
Blower Motor H.P.	10	15	20	25
Blower C.F.M.	4000	6500	9000	12000
No. of Compartments	2	2	3	4
Collected Dust Removal	Screw Conveyor	Screw Conveyor	Screw Conveyor	Screw Conveyor
Application	Small Single Alley	Single Alley Plant	Double Alley Plant	Double Alley Plant

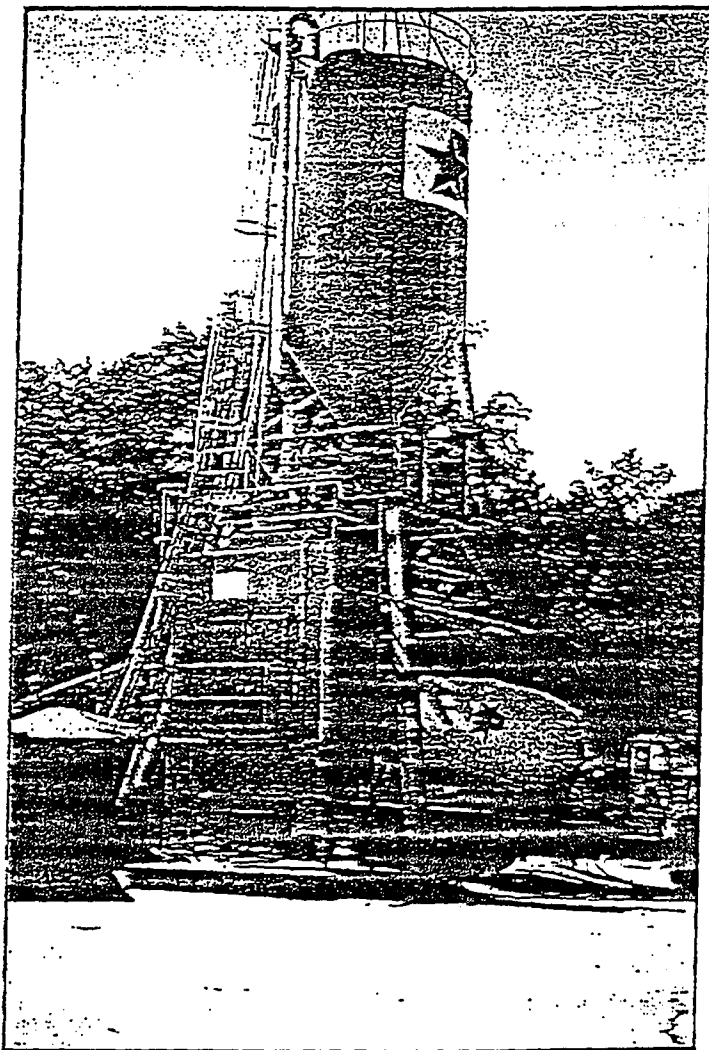


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A DIVISION OF CURTIS WHITUS, INC.

P.O. Box 794 • MANSFIELD, TEXAS 76063
PHONE (817) 572-7878 • FAX (817) 478-3786
TOLL FREE 1-888-DCS-4-HELP

Specializing In Dust Control



DCS-1400 STATIONARY DUST COLLECTOR
SHOWN: DRY BATCH PLANT - FOUR(4) SERVICE POINTS
(2-Shroud, 1-Cement batcher, & 1-Silo)

STANDARD FEATURES:

- Automatic control panel - bag cleaning
- Magnahelic gauge for bag and system maintenance control
- OSHA-approved ladders, platforms, kick plates and handrails
- 65° Wedge hopper with 6" screw conveyor
- 10.5 oz. seamless polyester snap bottom band bags
- Entry doors - 5 feet tall

OPTIONS:

- Cement recycle system
- Automatic recycle system (see other side)
- Custom shrouds (see other side)
- Portable collectors available
- Anti-overfill system
- Hopper level controller

* Reverse Air Bag Cleaning - Fully Automatic

DUST CONTROL SYSTEMS & EQUIPMENT
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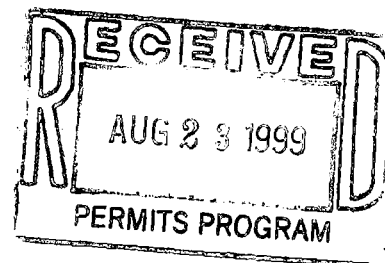
12450 Rendon Road
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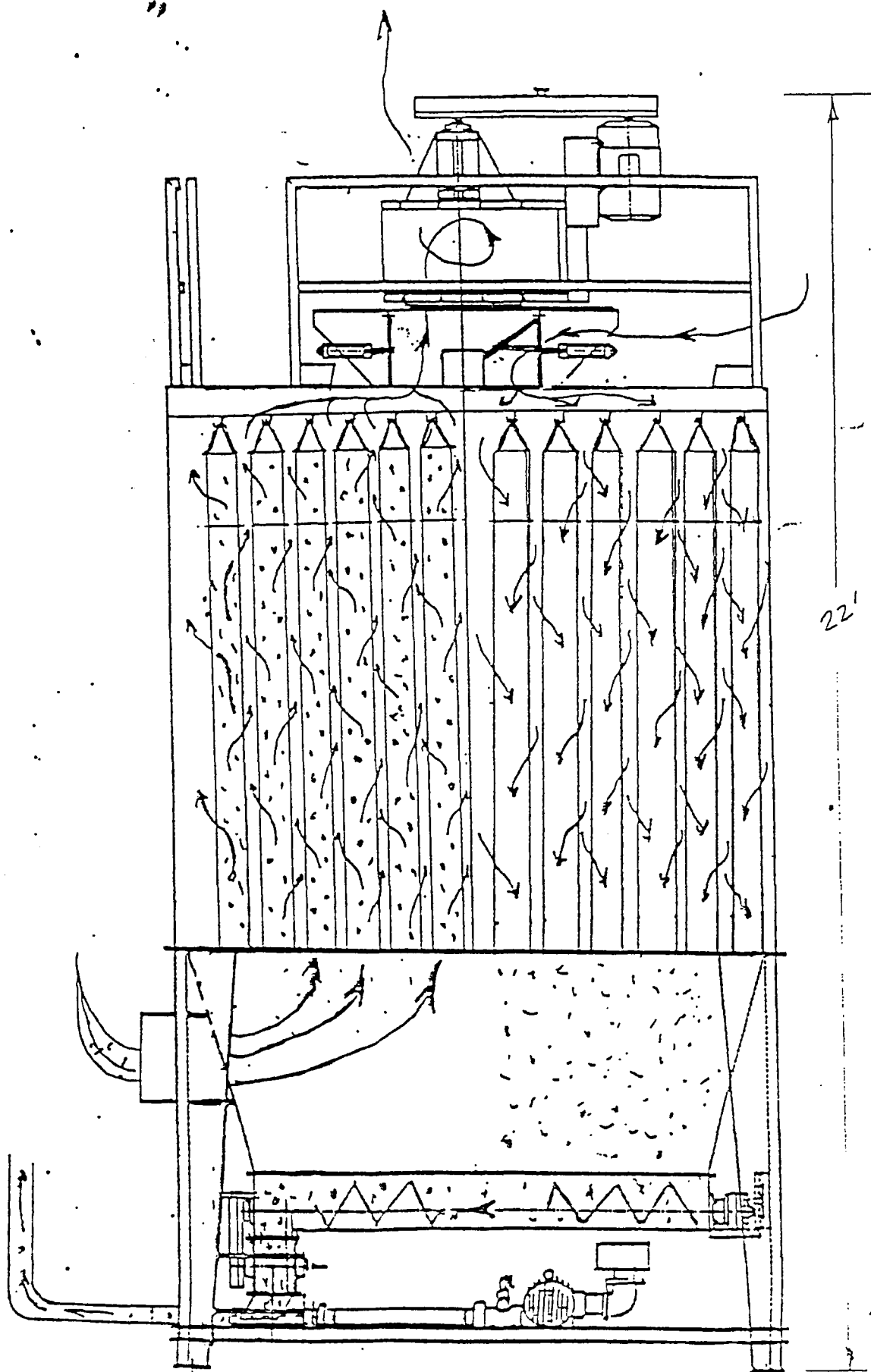
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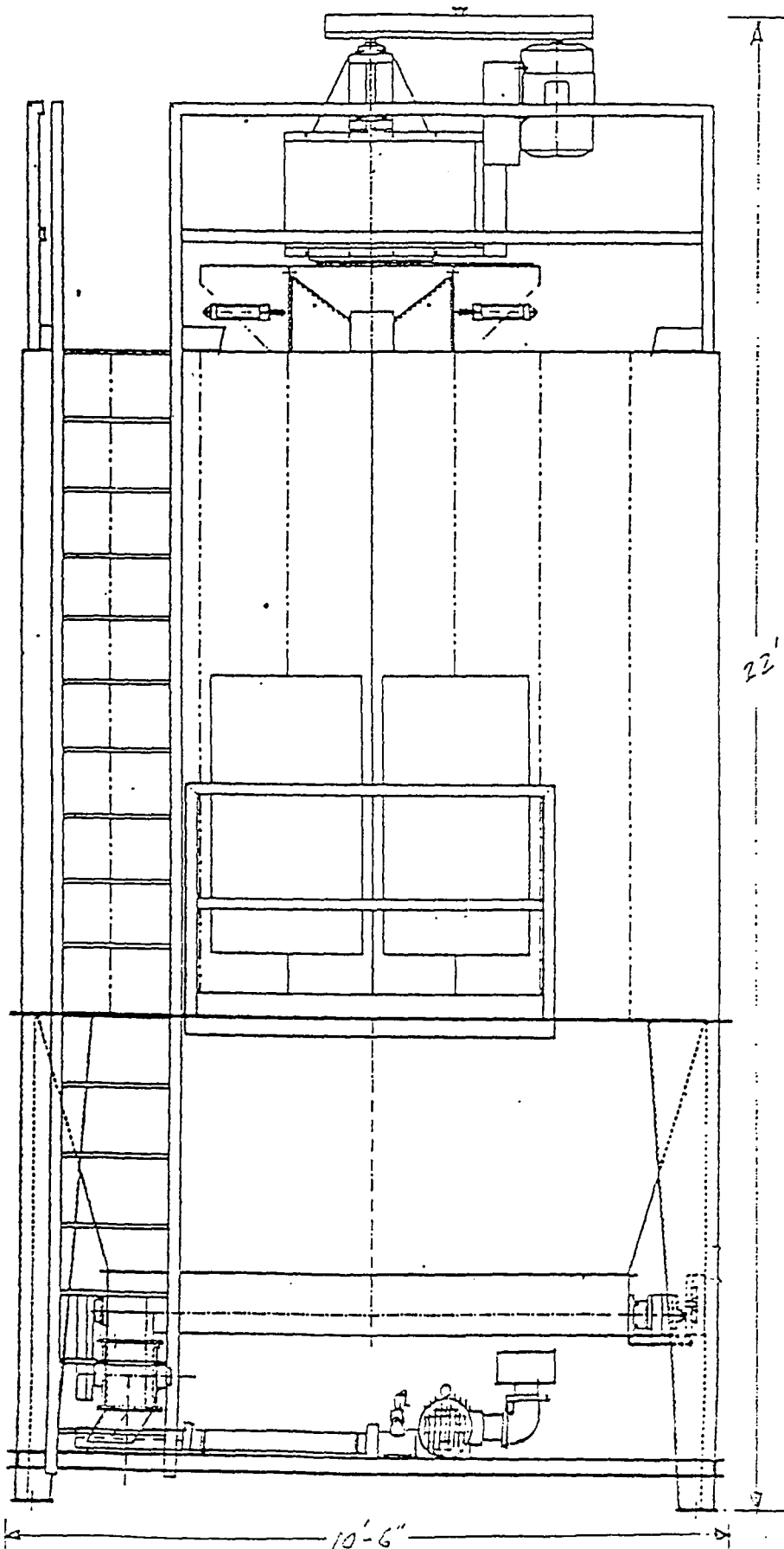




RA-1400

22'

WIDTH-6'



RA-1400

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1.0-5.0				
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	%		%	
10-20				
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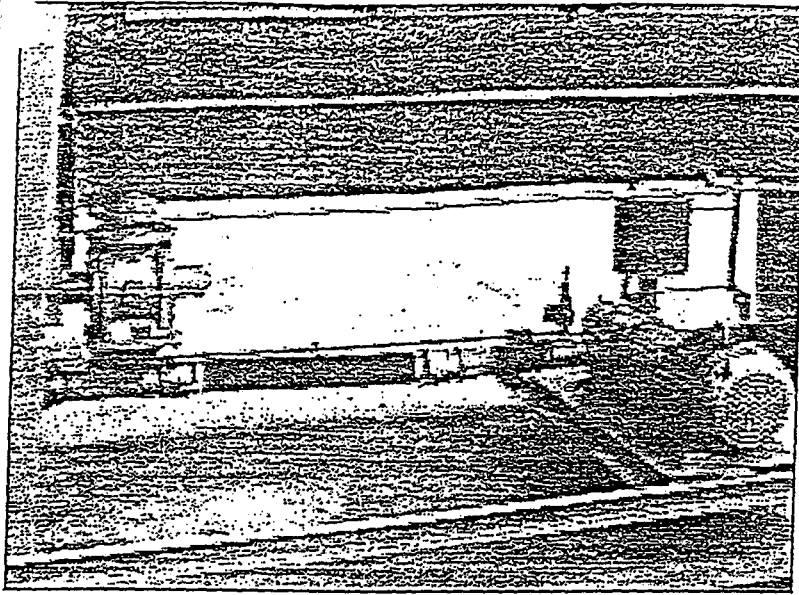
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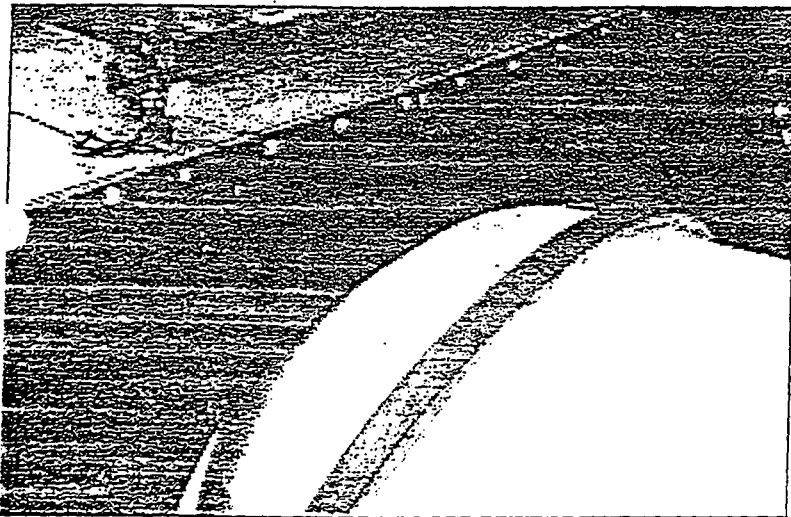
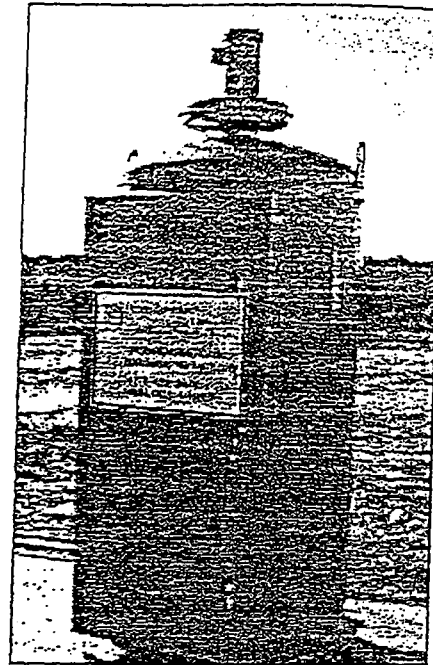
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Blower Motor H.P.	10	15	20	25
Blower C.F.M.	4000	6500	9000	12000
No. of Compartments	2	2	3	4
Collected Dust Removal	Screw Conveyor	Screw Conveyor	Screw Conveyor	Screw Conveyor
	Small Single Alley	Single Alley Plant	Double Alley Plant	Double Alley Plant

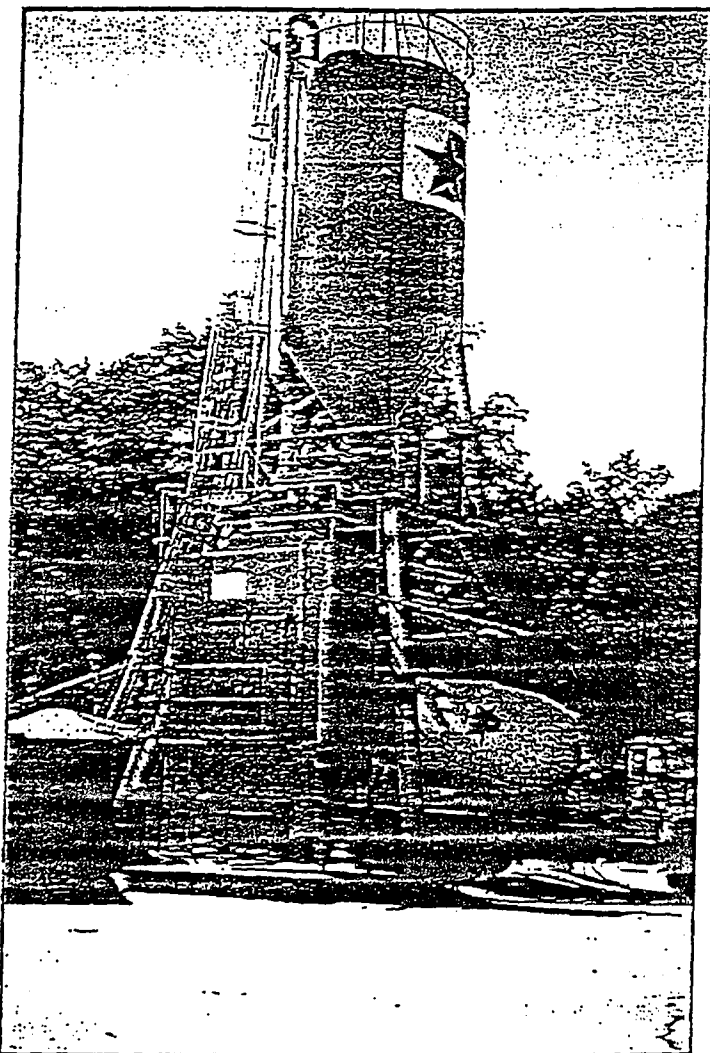


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(2-Shroud, 1-Cement batcher, & 1-Silo)

* Reverse Air Bag Cleaning - Fully Automatic

Request for Comments - Senate Bill 1126
TNRCC - New Source Review Permits Division
Phone: (512)239-1000
Fax: (512)239-4500

LCR 3

Mailing Address: TNRCC, New Source Review Permits Division, P.O. Box 13087, Austin, TX 78711-3087

REGIONAL OFFICES/LOCAL PROGRAM: NSR Permits Division has received a request for a Senate Bill 1126 permit action for the facility below. Please make comment, if necessary, regarding the referenced permit, as affected by the attached request. Please return comments no later than the comments deadline which is 10 working days from the submitted date of request. If comments are not received by deadline, then "no comments" is assumed.

TO: ☐ Region: 14 ☐ City: Hallensville ☐ County: Lavaca

Submitted by: SANDY MOHLER

E-Mail Initials: SMOHLER

Phone: 512 239 1926

Date Request Submitted: August 24, 1999

Comments Deadline: 9/7/99

Date Application Received by New Source Review: 8/23/99

NSR RECORD NO.: 67934

PERMIT NO.: M

TNRCC ACCOUNT NO.: LE 0020 A

Company Name: Alamo Concrete Products, Ltd.

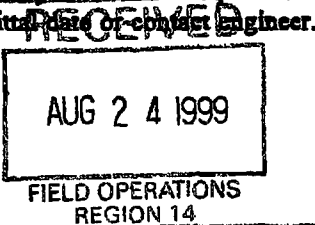
Plant Name: HALLETTSVILLE #38

County: Lavaca

Unit Name: Hallensville #38

Technical Contact: WALTER D. SCOTT III

Phone: 210 208 1561



8-30-99 → EJK
w/ info attached
to TREC only.

NOTES:

Local Program Applicable?: Yes: ☐ No: ☒ LP1 ☐ LP2 ☐

Copy of Application Received by your Office: ☐ YES ☐ NO Date Received: ☐

Investigator's/Compliance Officer's Name (Please Print): ED J. KASPRZYK

Phone: (361) 980 3108

Date of Last Site Visit: 2/26/99

GENERAL COMMENTS: NO OBJECTIONS TO THE INSTALLATION OF
CONTROL BAGFILTER DEVICES (NEW) AT GROUND LEVEL
FOR ACCESSIBILITY AND MAINTENANCE IMPROVEMENTS. THE NEW
DUST CONTROL DEVICES IS FOR THE SILOS AND TRUCK LOADING POINTS.
THERE WILL BE AN OVERALL REDUCTION IN TSP EMISSIONS

PERMIT ALTERATION APPROVAL:

☒ No objection to alteration

If you have any objections to approval, please note them here:

R-14 HAS NO OBJECTIONS TO THE ISSUANCE OF
THIS SEN. BILL 1126 CHANGES TO THE DUST CONTROL
BAGFILTER ON THE SILOS AND TRUCK LOADING AT THE
CEMENT BATCH PLANT.

9/8/99 Ed J. Kasprzyk



Protecting Texas
by Reducing and
Preventing Pollution

FAX TRANSMITTAL

DATE: 9/8/99 NUMBER OF PAGES (including this cover sheet): 5

TO: Name SANDY MOHLER
Organization NSR AIR PERMITS
FAX Number (512) 239 4500

FROM: TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
Name ED KASPRZYK
Division/Region Region 14
Telephone Number 361/825-3100
FAX Number 361-825-3101

NOTES: OK / ON THE SB 1126 BAG FILTER
IMPROVEMENTS ON LE 6624A -
CEMENT BATCH PLANT #38 / ALAMO CEMENT
PRODUCTS, LTD. . . EdJR