KOOGLER & ASSOCIATES
ENVIRONMENTAL SERVICES
4014 NW THIRTEENTH STREET
GAINESVILLE, FLORIDA 32609
352/377-5822 ▪ FAX/377-7158

KA 344-01-02

February 27, 2004

Ms. Cindy Phillips, P.E.
Florida Department of
Environmental Protection
MS 5505
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Subject: Additional Information on Title V Permit Renewal
C.F. Industries, Inc. - BARTOW
DEP File No. 1050052-008-AV

Dear Ms. Phillips:

This is a follow up to your letter dated January 22, 2004, requesting additional information on the above referenced Title V renewal project.

The responses provided herein are in the format discussed with you and Bobby Bull in order to provide only the pertinent information.

1. **Please provide reasonable assurance that the facility is not a Major Source of Hazardous Air Pollutants (HAPs).**

RESPONSE

The emissions units listed in the application do not generate HF emissions. These units are not expected to be sources of other HAP emissions.

2. **Please provide reasonable assurance that the facility is not subject to any National Emission Standard for Hazardous Air Pollutants (NESHAP), in particular 40 CFR63 Subparts AA and BB.**

RESPONSE

The emissions units identified as affected sources under 40CFR63 Subparts AA and BB are no longer in operation at the subject facility. Consequently, the NESHAP does not apply.

3. **Please provide a Compliance Assurance Monitoring (CAM) Plan for all applicable emission units for the facility.**

RESPONSE

The emission units listed in this application are not subject to CAM requirements. The CAM applicability information is presented in Attachment 1.

4. **Please provide a facility plot plan for the facility. The previous application did not have the applicable attachment.**

RESPONSE

The requested facility plot plan is presented in Attachment 2.

5. **Please provide the process flow diagram(s) for the facility.**

RESPONSE

The requested process flow diagrams are presented in Attachment 3.

6. **Please provide the precautions to prevent emissions of unconfined particulate matter for the facility.**

RESPONSE

The list of precautions to prevent emissions of unconfined particulate matter is presented in Attachment 4.

7. **Please provide a list of insignificant activities for the facility. The previous application did not have the applicable attachment.**

RESPONSE

The list of insignificant activities is presented in Attachment 5.

8. **Please provide a compliance report and plan for the facility. The previous application did not have the applicable attachment.**

RESPONSE

The compliance reports summary is presented in Attachment 6.

9. Please provide any applicable supplementary items for each emission unit in the facility.

RESPONSE

The supplementary pertinent information is presented in the attachments herein.

10. Please provide a list of any fugitive emissions from the facility.

RESPONSE

The list of fugitive emissions summary is presented in Attachment 7.

11. Please provide the area map showing the facility location.

RESPONSE

The facility location map is presented in Attachment 8.

12. On the electronically submitted permit application, which was submitted on November 25, 2003 to provide additional information, you have yourself listed as the Responsible Official. Our database still shows Paul Roberts as the Responsible Official. An unsigned, undated, Responsible Official Notification Form to make you the Responsible Official effective 8/1/03, was received by our Southwest District Office on January 12, 2004. In your letter dated January 13, 2004 to Mr. Jason Waters of our Southwest District Office, you stated that you had obtained a PIN number, completed the R.O. Certification Statement, and submitted the application electronically. This is not the same thing as filling out a Responsible Official Notification Form. Please resubmit a signed and dated Responsible Official Notification Form.

RESPONSE

A faxed copy of the RO notification form is presented in Attachment 9. The original signature page is being mailed under separate cover.

Ms. Cindy Phillips
Florida Department of
Environmental Protection

February 27, 2004

13. As a reminder, rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature.

RESPONSE

The PE certification form is presented in Attachment 10.

We request that the emission units that no longer have a valid operation permit be mentioned in the permit write-up, acknowledging that although the units physically exist on-site they would require construction-operation permits prior to reactivation.

If you have any additional questions, please call Craig Kovach at (863) 533-8048, ext. 246, or Pradeep Raval at (352) 377-5822.

Very truly yours,

KOOGLER & ASSOCIATES

John B. Koogler, Ph.D., P.E.

JBK:par
Encl.

C: John Doran, CF Bartow
Craig Kovach, CF Bartow
Lynne Vadelund, CF Bartow
John Bunch, CF Bartow
Cheryl Peck, CF Bartow

ATTACHMENT 1

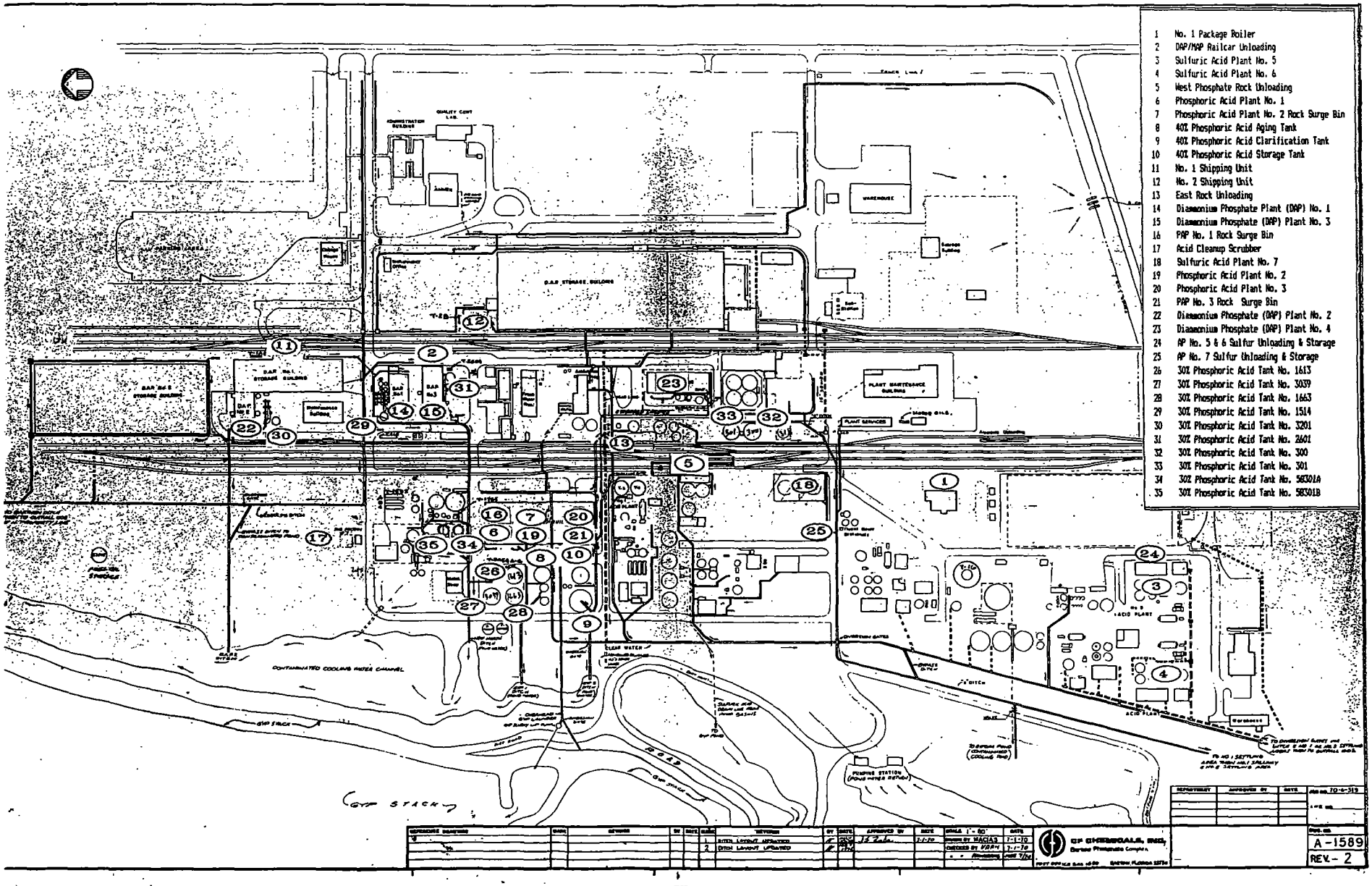
CAM APPLICABILITY ANALYSIS

CAM APPLICABILITY DETERMINATION

UNIT	DESCRIPTION	CAM APPLIES?	RATIONALE
002	No. 1 Shipping	NO	No control device
025	No. 2 Shipping	NO	No control device
006	No. 6 Sulfuric Acid Plant	NO	The double absorption process and mist eliminator use is primarily for product recovery.
021	No. 1 Boiler	NO	No control device
031	Fertilizer unloading/transfer	NO	No control device
032	Sulfur unloading pit	NO	No control device
033	North sulfur tank	NO	No control device
034	South sulfur tank	NO	No control device
035	Phosphogypsum stack	NO	No control device
000	Unregulated units	NO	No control device
000	Insignificant units	NO	No control device
000	Fugitive emission units	NO	No control device

ATTACHMENT 2

FACILITY PLOT PLAN

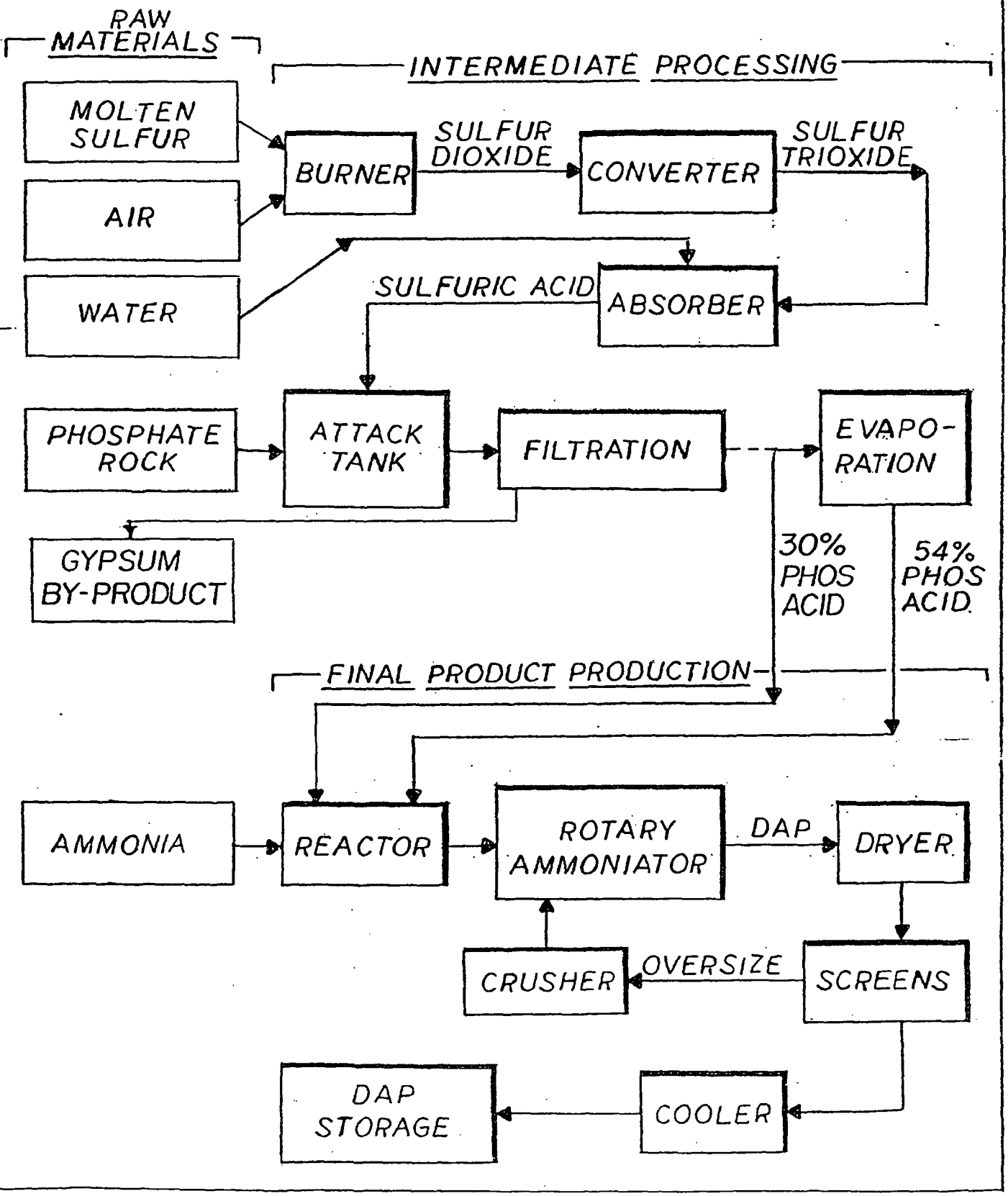


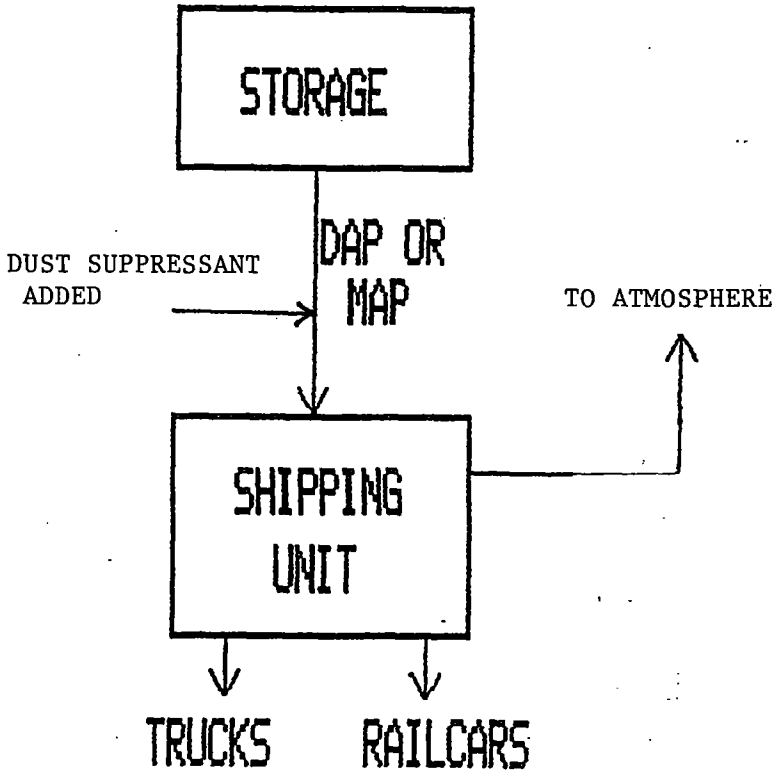
CF INDUSTRIES, INC.
BARTOW PHOSPHATE COMPLEX
FACILITY PLOT PLAN

ATTACHMENT 3

PROCESS FLOW DIAGRAMS

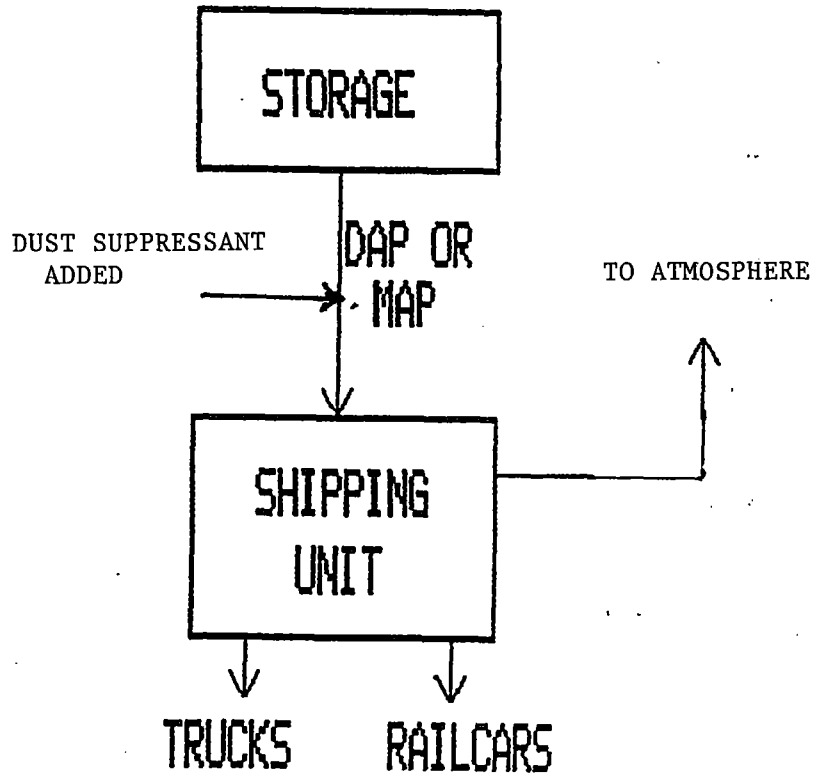
SIMPLIFIED PROCESS FLOW DIAGRAM
BARTOW PHOSPHATE COMPLEX





RE'	DATE	BY	DESCRIPTION

DRAWN BY:	TITLE: SOURCE FLOW DIAGRAM FOR NO. 1 SHIPPING UNIT	CF Industries, Inc. Barlow Phosphate Complex
DATE:		
SCALE:		PROJECT/AFE NO.
REVISION:		



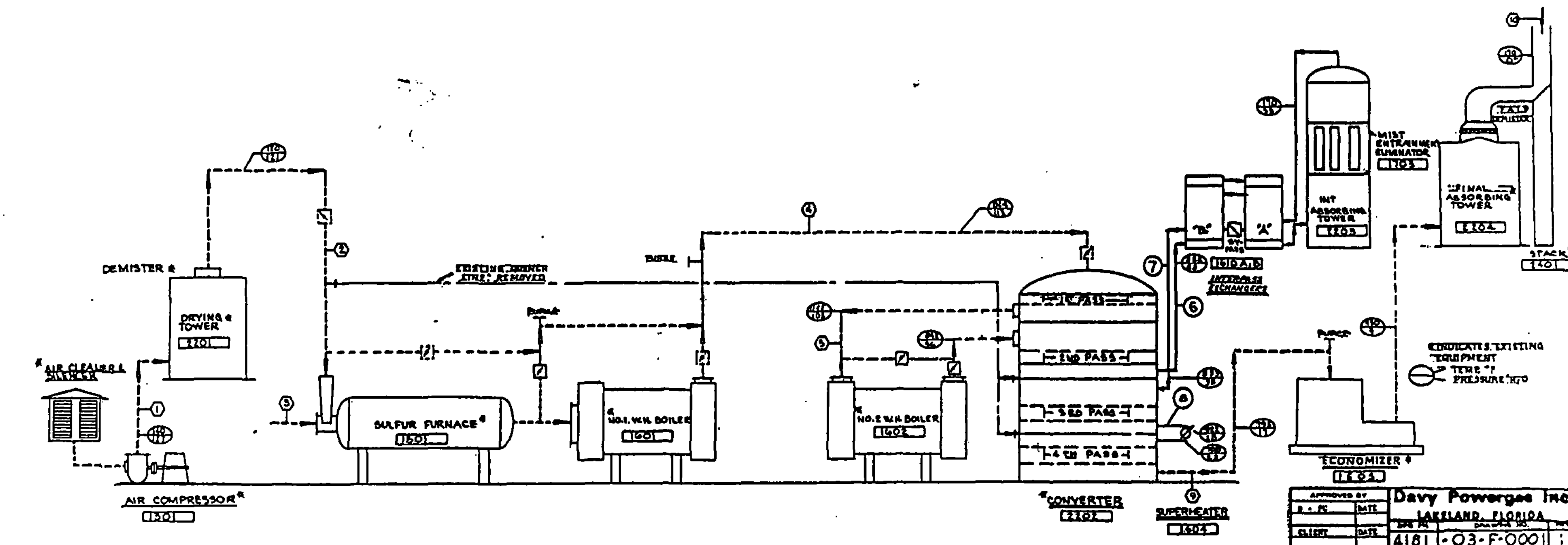
RE	DESCRIPTION	DATE	BY

DRAWN BY:	TITLE: SOURCE FLOW DIAGRAM FOR NO. 2 SHIPPING UNIT	CF Industries, Inc. Bartow Phosphate Complex
DATE:		
SCALE:		PROJECT/AFE NO.
REVISION:		

PROCESS GAS FLOW - MOLS PER HOUR BASIS 950 TONS/DAY (10% SO_2)

STREAM	1	2	3	4	5	6	7	8	9	10
DESCRIPTION	AIR TO DRYER	AIR FROM DRYER	LIQ SULFUR FURN	GAS TO 1st CONV PASS	GAS TO #1 BOILER	GAS FROM 1st PASS	GAS TO 3rd CONV PASS	GAS FROM 3rd CONV PASS	GAS TO ECONOMIZER	GAS TO ATMOS
N_2	6430	6430		6430	6430	6430	6430	6430	6430	6430
O_2	1702	1702		898	653	547	347	494	492	492
SO_2				814	230	117	11.7	10	6	6
SO_3					484	697		107	7.0	
H_2O	237									
TOTAL MOLES/HR	8376	8139	814	8139	7893	7791	709.4	1041	7039	6928
FLOW RATE LBS/HR.	239,000	234,720	26,096	260,800	260,800	260,800	205,050	205,050	206,080	196,170
PRESSURE IN. H_2O	127	121	—	113	103	89	33	18	17	04
TEMPERATURE °F	140	120	264	824	1148	982	833	922	795	170
VOLUME S.C.F.M. (GPM)	50,260	48,840	—	48,840	47,390	46,750	42,570	42,250	42,230	37,790
VOLUME ACFM (GPM)	46,720	44,385	(29)	99,770	123,880	112,440	103,480	111,050	103,410	58,890
AVG MW	28.53	28.84	32.06	32.04	33.02	33.47	28.90	29.12	29.13	28.32

NOTES:
ALL PRESSURES/CAPACITY ARE BASED ON A CLEAN PLANT.



Davy Powergas Inc.
LAKELAND, FLORIDA
4181 -03-F-0001

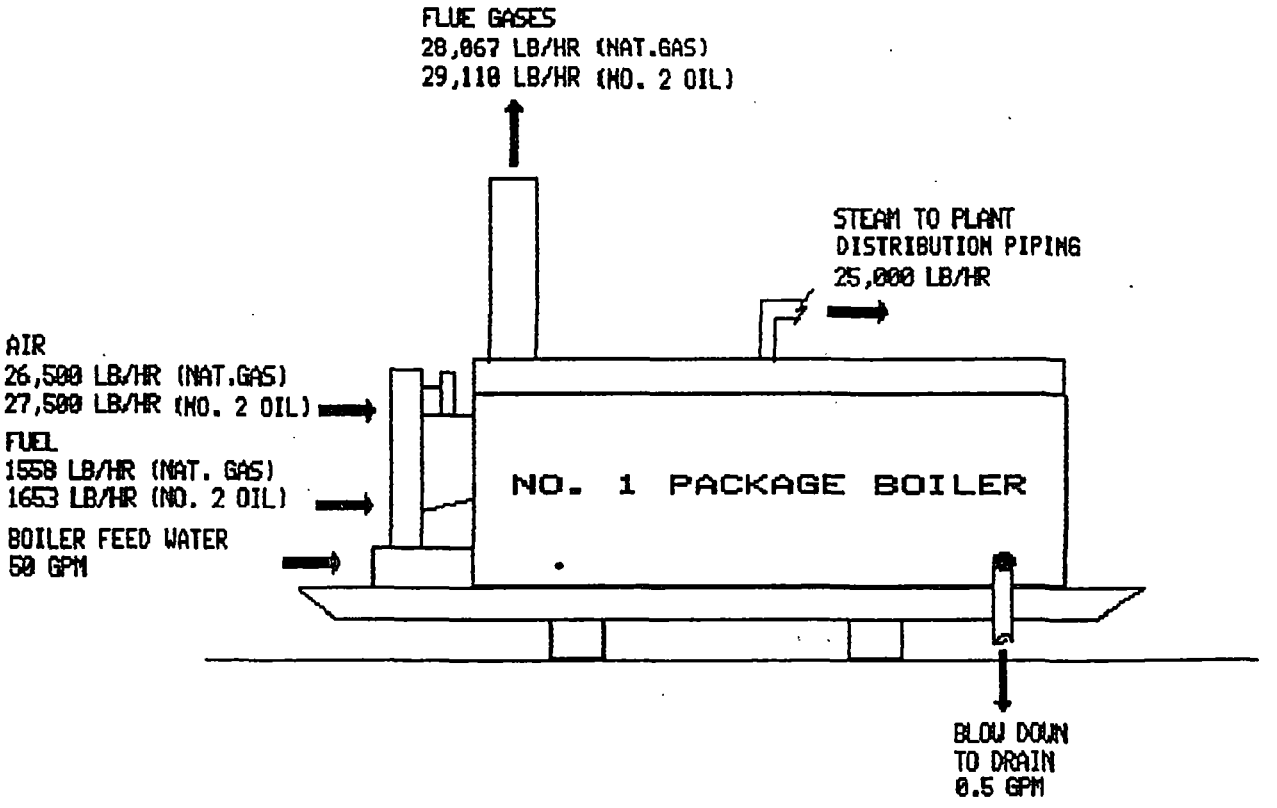
DRAWING HISTORY
ISSUED FOR CONSTRUCTION
ISSUED FOR CLIENT APPROVAL
J.T. FREY 11-23-73

REV. 1 — TAG. TO SHOW EXISTING LINES

CF CHEMICALS, INC.
Bartow Phosphate Complex

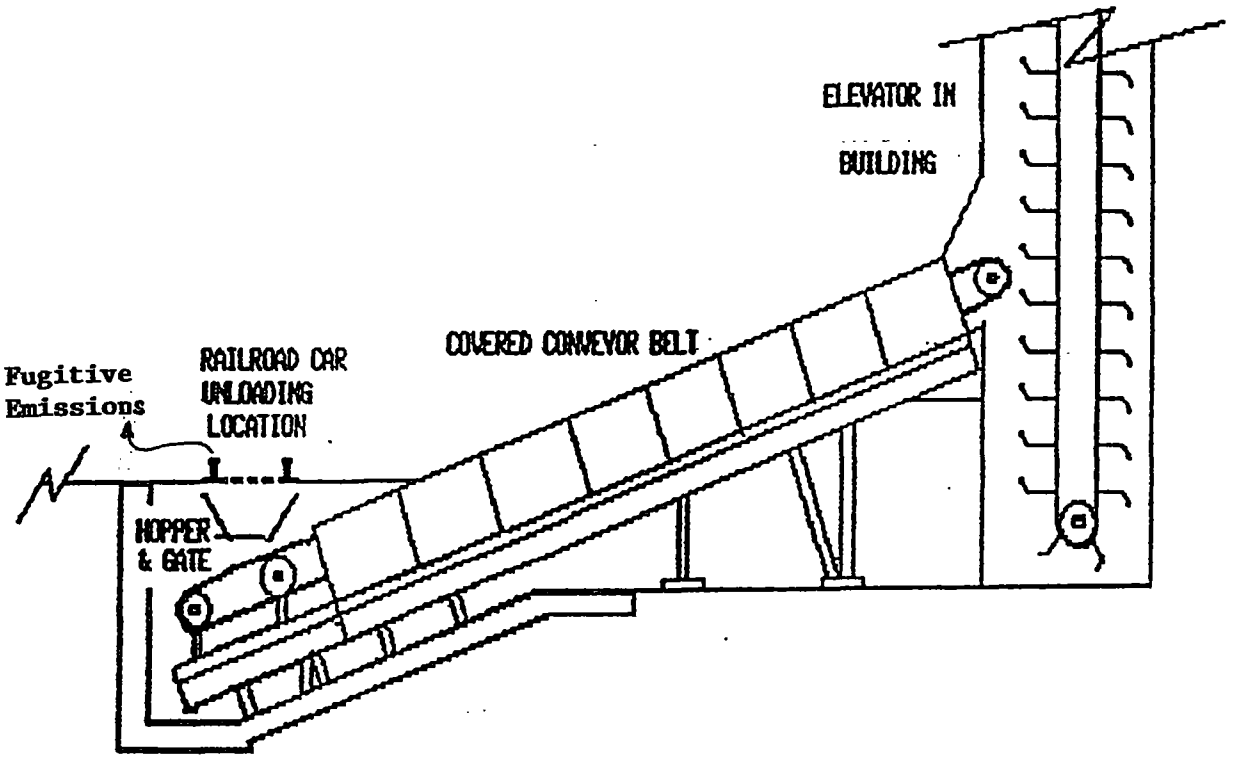
SO_2 ABATEMENT PLANT NO. 5 & 6
DOUBLE ABSORPTION SULFURIC ACID
UNIT - 950 T/D BASIS
GAS FLOW DIAGRAM

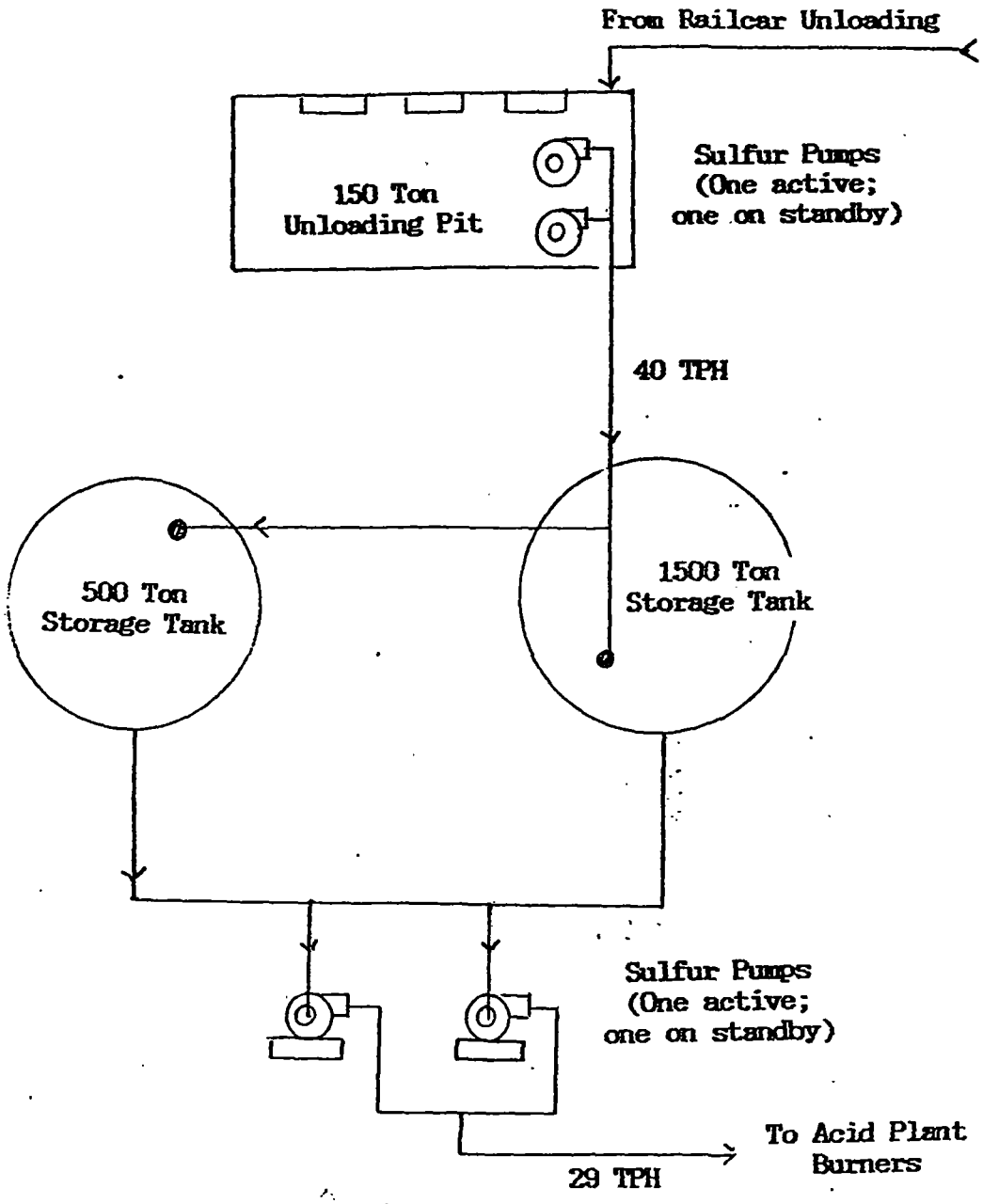
DO THIS JOB SAFELY



SOURCE FLOW DIAGRAM
FOR NO. 1 PACKAGE BOILER

DAP/MAP/GTSP RAILCARS UNLOADING OPERATION





DESCRIPTION	BY	DATE	REV

DRAWN BY:	TITLE: SULFURIC ACID PLANTS NOS. 5 AND 6 SULFUR UNLOADING AND STORAGE	CF Industries, Inc. Bartow Phosphate Complex
DATE:		
SCALE:		PROJECT/AFE NO.
REVISION:		

ATTACHMENT 4

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Reasonable precautions to minimize emissions of unconfined particulate matter may include, as necessary:

- Existing paved roadways; application of water to unpaved roads.

- Landscaping or planting of vegetation.

- Use of enclosures and windbreaks, where practical.

- Oiling of fertilizer products to reduce dust generation.

ATTACHMENT 5

LIST OF INSIGNIFICANT ACTIVITIES

LIST OF INSIGNIFICANT AND/OR UNREGULATED EMISSIONS UNITS FOR TITLE V PERMIT

GENERAL FACILITY WIDE

E	abrasive cleaning - indoors
E	agricultural related activities
E	air compressors
E	air conditioners
E	air vents in compressed air systems
E	ammonia bullets, pipeline, pop off valves, flanges, truck/rail unloading, flares and chillers
CD	asbestos, waste and haz-waste removal
CD	automatic oil/lube systems for mechanical equipment
E	automotive, tractor, locomotives and their repair shops
E	blueprint copiers
E	building ventilation systems
E	caustic tanks/vents
E	closed containers of maintenance chemicals
CD	cold cleaning degreasers (containing heavier than air solvents)
E	construction/repair of office, storage and residential units
E	containers, reservoirs, wax and grease
GD	containers and tanks for oils
CD	cooling ponds and process water storage ponds, gypsum stacks
GD	cooling towers (no heavy metals used as antiscalants or algaecides)
E	degassifiers/dearators
CD	diesel pump motors
E	drain vents
E	drinking water treatment area and wastewater treatment plant
E	ducts, chutes, equipment maintenance
E	dumpsters, other miscellaneous waste collection and handling
GD	electric substation/electric yard
E	electric-powered vehicles
E	electrical charging systems
E	electrically heated equipment for heat treating, drying, annealing, etc.
E	equipment cleaning, including steam cleaning
E	equipment for bonding brake shoes
E	equipment of hydraulic or hydrostatic testing
E	fire training exercises
E	food preparation, handling, consumption
E	fresh water tanks/vents
E	fuel tanks and dispensors
CD	gypsum stack process water re-circulation system (ditches, ponds, spillways)
E	hand held equipment
GD	handling of baghouse materials
E	hydroblasting
E	instrument air systems/vents
CD	laboratories (quality control, analytical, metallurgical)
E	landscaping and farm equipment
GD	lime silo with baghouse
E	lime tanks/vents
E	liming station
E	liquid sampling systems
E	maintenance of facilities
E	maintenance of grounds
E	maintenance shops
E	mechanical drives/gearboxes
CD	metal shops

GD	minor fugitive leaks from process equipment
E	mobile equipment fueling operations (diesel/gasoline)
E	mobile sources, including internal combustion engines, pumps, compressors, generators, welding , etc.
E	neutralization tanks/vents
E	non process mineral spirits use
E	open containers in use
E	painting /coating of equipment, tanks and structures (less than 6 gallons per day)
CD	portable kerosene space heaters
E	pressure/steam relief valves
GD	process water treatment and evaporation
GD	pump seals
E	purchased non-listed chemical tanks/vents (no HAP or VOC content)
GD	railcar/truck/tanker unloading
E	railroad flares
GD	raw material, reclaim/recycle material and product transfer and storage tanks
GD	reclaimed mined areas
E	reclaimed water tank vents
CD	refrigeration systems
GD	rock pile, rock hoppers, rock grinding mills
CD	safety devices
CD	safety kleen solvent cleaners
E	sandlbasters, welding equipment, compressors, wood shop, metal shop
E	service of air pollution control devices
CD	space heaters
E	steam vents/leaks
E	storage facilities for packaged materials
E	storage tanks and dispensers
GD	sulfuric acid tanks/vents
E	sweeping and general cleanup
E	temporary use of compressors, generators, water pumps with internal combustion engines
GD	transfer of materials on covered belt systems
GD	transformer vault/building
E	vacuum cleaning systems
GD	valves and flanges (no HAP or VOC content)
E	washing and cleaning equipment
E	waste preparation for disposal (in closed drums or other containers, spill cleanup)
GD	wastewater plants, water treatment area
CD	water pumps
E	water treatment aeration
E	water treatment chemical tanks/totes/drums
GD	wet limestone transfer, handling, storage
E	woodworking shops
E	fugitive emissions of PM/PM10, SO2, NOx, CO, VOCs, NH3 and HAPs

GRANULATION

GD	choke feeder, covered conveyors, screening tower
GD	chutes, conveyor and hopper
E	coating oil tanks
GD	cooling tower, slurry pump, scrubber sump
GD	covered conveyor, surge bin, product screens, chute to truck/railcar
GD	material conveyors, elevators and screens
E	oil coating application systems
E	pond water sumps
GD	product recovery units
GD	raw material, reclaim material and product storage tanks, bins and buildings
GD	scrubber seal tanks
E	seal oil tanks

MOLTEN SULFUR HANDLING

GD	molten sulfur storage tank fires
GD	tanker truck/rail unloading
GD	sulfur spill cleanup

PHOSPHATE ROCK HANDLING

GD	railcar unloading and unloading pit
GD	rock and feed hoppers, conveyors
GD	train/truck unloading, hoppers, conveyors, wet rock stacking on pile
GD	wet rock grinding
GD	wet rock pile, stacking and transfer

SULFURIC ACID PRODUCTION

E	auxiliary power diesel generators
E	auxiliary power generator diesel tank
GD	cooling towers
E	economizers
GD	hot water reuse tank
GD	process and product storage tanks
GD	sulfuric acid tanker truck/rail loading/unloading
E	water reuse, uncontaminated water storage, condensate tanks for evaporators

NOTES:

1. E reflects items to be exempted under EPA "trivial list" criteria
2. CD reflects items to be exempted under DEP's categorical exemption criteria
3. GD reflects items to be exempted under DEP's generic exemption criteria or criteria in 62-4.040 FAC

ATTACHMENT 6

COMPLIANCE REPORT

COMPLIANCE REPORT & PLAN

The compliance reports have been submitted for the listed emission units as follows:

EMISSION UNIT		COMPLIANCE TEST REPORT SUBMITTED
002	No. 1 Shipping	April 28, 2003
025	No. 2 Shipping	not in operating
006	No. 6 Sulfuric Acid Plant	not in operation
021	No. 1 Boiler	not in operation
031	Fertilizer unloading/transfer	July 9, 2003
032	Sulfur unloading pit	not in operation
033	North sulfur tank	not in operation
034	South sulfur tank	not in operation

The emission units not in operation will conduct compliance testing after start-up. The compliance test reports will be submitted to FDEP within 45 days of test completion.

As there are no emission units out of compliance, a compliance plan is not necessary for this facility.

ATTACHMENT 7

SUMMARY OF FUGITIVE EMISSIONS

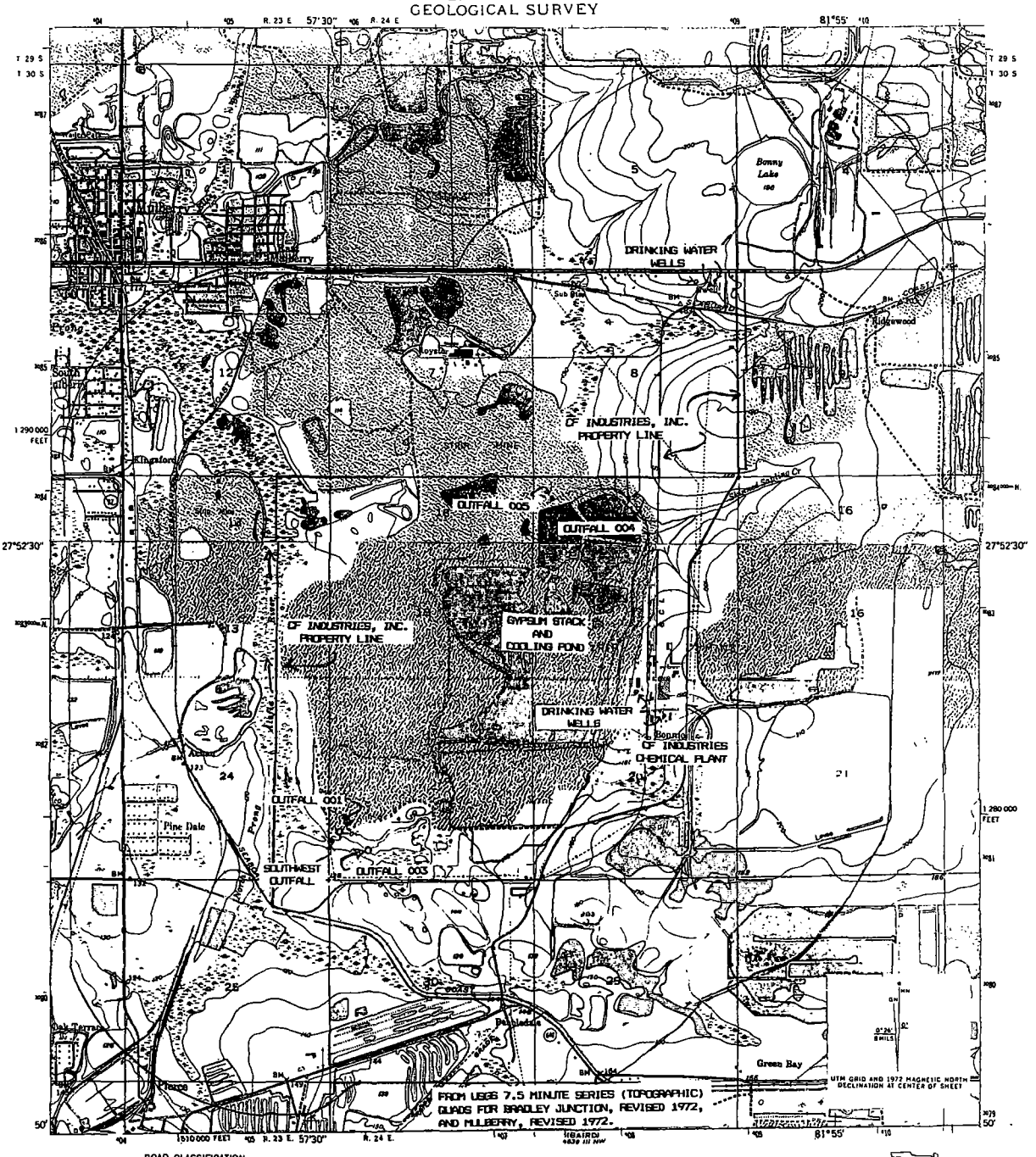
FUGITIVE EMISSIONS

The phosphate fertilizer manufacturing process and ancillary activities associated therewith result in fugitive emissions of PM/PM10, SO2, NOx, CO, VOCs, NH3 and HAPs from the receiving, storage, handling, transfer and use of process, product and maintenance related materials. These fugitive emissions may occur both inside the manufacturing buildings and outside within the plant site.

ATTACHMENT 8

FACILITY LOCATION MAP

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS		DRY WEATHER ROADS	
Heavy-duty	4 LANE OR MORE / 2 LANE	Improved dirt	
Medium-duty	4 LANE OR MORE / 2 LANE	Unimproved dirt	

Loose-surface, graded, or narrow hard-surface

U. S. Route State Route

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

FLORIDA LOCATION

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

ATTACHMENT 9

R.O. CERTIFICATION

Department of Environmental Protection

Division of Air Resource Management

RESPONSIBLE OFFICIAL NOTIFICATION FORM

Note: A responsible official is not necessarily a designated representative under the Acid Rain Program. To become a designated representative, submit a certificate of representation to the U.S. Environmental Protection Agency (EPA) in accordance with 40 CFR Part 72.24.

Identification of Facility

1. Facility Owner/Company Name: CF Industries, Inc.
2. Site Name: Bartow Phosphate Complex | 3. County: Polk
4. Title V Air Operation Permit/Project No. *(leave blank for initial Title V applications)*: 1050052-008-AV

Notification Type *(Check one or more)*

- ☐ **INITIAL:** Notification of responsible officials for an initial Title V application.
- ☒ **RENEWAL:** Notification of responsible officials for a renewal Title V application.
- ☒ **CHANGE:** Notification of change in responsible official(s).
  Effective date of change in responsible official(s) 2003 Application

Primary Responsible Official

1. Name and Position Title of Responsible Official: John Doran, Manager
2. Responsible Official Mailing Address:
   Organization/Firm: CF Industries, Inc.
   Street Address: P.O. Box 1480
   City: Bartow State: FL Zip Code: 33831
3. Responsible Official Telephone Numbers:
   Telephone: (863) 533-0528 Fax: (863) 533-7097
4. Responsible Official Qualification *(Check one or more of the following options, as applicable)*:

[X] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.

[ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively.

[ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.

[ ] The designated representative at an Acid Rain source.

5. Responsible Official Statement:

I, the undersigned, am a responsible official, as defined in Rule 62-210.200, F.A.C., of the Title V source addressed in this notification. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this notification are true, accurate and complete. Further, I certify that I have authority over the decisions of all other responsible officials, if any, for purposes of Title V permitting.

Signature Date: March 1/04

Additional Responsible Official

1. Name and Position Title of Responsible Official:
2. Responsible Official Mailing Address: Organization/Firm: Street Address: City: State: Zip Code:
3. Responsible Official Telephone Numbers: Telephone: Fax:
4. Responsible Official Qualification *(Check one or more of the following options, as applicable)*: [ ] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. [ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively. [ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. [ ] *The designated representative at an Acid Rain source.*

Additional Responsible Official

1. Name and Position Title of Responsible Official:
2. Responsible Official Mailing Address: Organization/Firm: Street Address: City: State: Zip Code:
3. Responsible Official Telephone Numbers: Telephone: Fax:
4. Responsible Official Qualification *(Check one or more of the following options, as applicable)*: [ ] For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. [ ] For a partnership or sole proprietorship, a general partner or the proprietor, respectively. [ ] For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. [ ] The designated representative at an Acid Rain source.

ATTACHMENT 10

P.E. CERTIFICATION

APPLICATION INFORMATION

Professional Engineer Certification

1. Professional Engineer Name: **John B. Koogler**
   Registration Number: **12925**
2. Professional Engineer Mailing Address...
   Organization/Firm: **Koogler & Associates**
   Street Address: **4014 NW 13th Street**
   City: **Gainesville** State: **Fl** Zip Code: **32609**
3. Professional Engineer Telephone Numbers...
   Telephone: **(352) 377-5822** ext. Fax: **(352) 377-7158**
4. Professional Engineer Email Address: **jkoogler@kooglerassociates.com**
5. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

(3) If the purpose of this application is to obtain a Title V air operation permit (check here ☒, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.

(4) If the purpose of this application is to obtain an air construction permit (check here ☐, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here ☐, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here ☐, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature (seal) Date: 2/27/04

* Attach any exception to certification statement.