STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

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

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

May 14, 1982

Mr. Ed Mayer
Environmental Engineer
Agrico Chemical Company
South Pierce Chemical Works
Post Office Box 1969
Bartow, Florida 33830

Dear Mr. Mayer:

This is to acknowledge receipt of your application to construct a prilled sulfur unloading facility at South Pierce. Your receipt for the processing fee of $20.00 is attached. The permit processing number is AC 53-55780. Please refer to this number on future correspondence.

If we may be of further assistance, please fell free to call at (904)488-1344.

Sincerely,

Patty Adams

Patty Adams
Bureau of Air Quality
Management

pa

Attachment

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Nº 33606

RECEIPT FOR APPLICATION FEES AND MISCELLANEOUS REVENUE

Received from _____ Date _____

Address _____ Dollars $ _____

Applicant Name & Address _____

Source of Revenue _____

Revenue Code _____ Application Number _____

By _____

50-817
213

213805

Agrico

Agrico Chemical Company
One Williams Center
Tulsa, Oklahoma 74103

No. 213805

General Disbursement Account

CITIBANK (NEW YORK STATE), N.A.
NORTH AMERICAN BANKING GROUP

Date 3-09-82

Pay $*******20.00 Dollars

Pay To The Order of
STATE OF FLORIDA DEPT OF ENVIRONMENTAL REGULATION
7601 N HIGHWAY 301
TAMPA, FL 33610

Authorized Signatures

⑈213805⑈ ⑆021308176⑆ 30990228⑈

Agrico
ONE OF THE WILLIAMS COMPANIES

May 7, 1982

Mr. Dan Williams
Florida Department of Environmental Regulation
7601 Highway 301, North
Tampa, Florida 33610

Dear Dan,

Enclosed please find 4 copies of an application permit to construct a prilled sulfur unloading facility at South Pierce. Also, included is a copy of a letter sent to Steve Smallwood discussing P.S.D.review.

If you have any questions or require additional information, please feel free to contact me.

Sincerely,

Ed Mayer,
Environmental Engineer

DER
MAY 14 1982
BAQM

D.E.R.
MAY 10 1982
SOUTHWEST DISTRICT
TAMPA

Agrico Chemical Company • South Pierce Chemical Works • P. O. Box 1969, Hwy. 630 • Bartow, Florida 33830
(813) 428-1423

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

	INITIAL	DATE
1. TO: (NAME, OFFICE, LOCATION) Clair Fancy		
2. Bureau of Air Quality Management		
3.		
4. RE: Agrico Chemical Co.		

REMARKS:

attached are permit applications from Agrico to construct a pilled sulfur unloading and melting operation at their South Pierce complex. Since the facility is a major source, CAPS would have permitting responsibility. I kept one copy of the application.

INFORMATION	DISPOSITION
REVIEW & RETURN	REVIEW & RESPOND
REVIEW & FILE	PREPARE RESPONSE
INITIAL & FORWARD	FOR MY SIGNATURE
	FOR YOUR SIGNATURE
	LET'S DISCUSS
	SET UP MEETING
	INVESTIGATE & REPT
	INITIAL & FORWARD
	DISTRIBUTE
	CONCURRENCE
	FOR PROCESSING
	INITIAL & RETURN

FROM: Dan A. Williams

DATE 5-11-82

PHONE

AC 53-55780

DER

MAY 14 1982

BAQM

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

D.E.R.

MAY 10 1982

SOUTHWEST DISTRICT
TAMPA

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Prilled Sulfur [X] New[1] [ ] Existing[1]

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

COMPANY NAME: Agrico Chemical Company COUNTY: Polk

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peeking Unit No. 2, Gas Fired) H2S Scrubber

SOURCE LOCATION: Street State Road 630 City Polk County

UTM: East 407.6 Km E North 3071.3 Km N

Latitude 27 ° 45 ' 45 "N Longitude 81 ° 56 ' 28 "W

APPLICANT NAME AND TITLE: Agrico Chemical Company

APPLICANT ADDRESS: P. O. Box 1969, S.P.C.W, Bartow, Florida 33830

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Agrico Chemical Company

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: L. C. Lahman

L. C. Lahman, Plant Manager
Name and Title (Please Type)

Date: 5/6/82 Telephone No. 813-428-1423

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 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: William S. Hornbeck

William S. Hornbeck
Name (Please Type)

(Affix Seal)

Agrico Chemical Co.
Company Name (Please Type)

P. O. Box 1969, Bartow, Fla. 33830
Mailing Address (Please Type)

Florida Registration No. 20095 Date: 5/6/82 Telephone No. 813-428-1423

[1]See Section 17-2.02(15) and (22), Florida Administrative Code, (F.A.C.)

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.

Receiving and melting of prilled sulfur (See Appendix A for Further description)

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

Start of Construction August, 1982 Completion of Construction August, 1984

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.)

Covers and shed for unloading - $20,000

H_2S Scrubber - $20,000

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

None

E. Is this application associated with or part of a Development of Regional Impact (DRI) pursuant to Chapter 380, Florida Statutes, and Chapter 22F-2, Florida Administrative Code? ____ Yes __X__ No

F. Normal equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ; if power plant, hrs/yr ____ ;

if seasonal, describe: ____

G. 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? If yes, see Section VI. No
3. Does the State "Prevention of Significant Deterioriation" (PSD) requirements 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

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: Utilization basis = 1800 LTPD ÷ 24

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		
Prilled Sulfur	Dust	(.05 or less)	168,000	6-A
	H_2S	(.025 or less)		6-A

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

1. Total Process Input Rate (lbs/hr): 168,000

2. Product Weight (lbs/hr): 167,998.86

C. Airborne Contaminants Emitted: Maximum Lb/Hr. Basis = 1800 LTon/Day ÷ 24
Actual T/Yr. Basis = 600,000 L Ton/Yr.

Name of Contaminant	Emission[1]		Allowed Emission[2] Rate per Ch. 17-2, F.A.C.	Allowable[3] Emission lbs/hr	Potential Emission[4]		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr	T/yr	
Particulate	1.14	4.57	34.11 Lb/Hr.*	34.11	1.14	4.57	6-A,B
H_2S	42	4.20	N/A	N/A	42	4.20	6-C,D

* Process Weight Table

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

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles[5] Size Collected (in microns)	Basis for Efficiency (Sec. V, It[5]
Wet Scrubber	H2S	95%	N/A	See Supple-
				ments 2 & 3

[1]See Section V, Item 2.

[2]Reference applicable emission standards and units (e.g., Section 17-2.05(6) Table II, E. (1), F.A.C. – 0.1 pounds per million BTU heat input)

[3]Calculated from operating rate and applicable standard

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

[5]If Applicable

E. Fuels

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

*Units Natural Gas, MMCF/hr; Fuel Oils, barrels/hr; Coal, 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.

Spent scrubber liquor will go to recycle pond.

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

Stack Height: 50 ft. Stack Diameter: 2.5 ft.

Gas Flow Rate: 125 ACFM Gas Exit Temperature: 150 °F.

Water Vapor Content: Saturated % Velocity: 41.67 FPS

SECTION IV: INCINERATOR INFORMATION

Type of Waste	Type O (Plastics)	Type I (Rubbish)	Type II (Refuse)	Type III (Garbage)	Type IV (Pathological)	Type V (Liq & Gas By-prod.)	Type VI (Solid By-prod.)
Lbs/hr Incinerated							

Description of Waste _____

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

Approximate Number of Hours of Operation per day _____ days/week _____

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) _____

Brief description of operating characteristics of control devices: _____

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight — show derivation.
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.,) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, etc.).
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3, and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8½" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8½" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8½" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. An application fee of $20, unless exempted by Section 17-4.05(3), F.A.C. The check should be made payable to the Department of Environmental Regulation.

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

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?
[ ] Yes [ ] No

Contaminant	Rate or Concentration

B. Has EPA declared the best available control technology for this class of sources (If yes, attach copy) [ ] Yes [ ] No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

1. Control Device/System:
2. Operating Principles:
3. Efficiency:*
4. Capital Costs:
5. Useful Life:
6. Operating Costs:
7. Energy:
8. Maintenance Cost:
9. Emissions:

Contaminant	Rate or Concentration

*Explain method of determining D 3 above.

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*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy*: 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*: d. Capital Cost:

e. Useful Life: f. Operating Cost:

g. Energy**: h. Maintenance Costs:

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:

*Explain method of determining efficiency.

**Energy to be reported in units of electrical power – KWH design rate.

3.

a. Control Device:

b. Operating Principles:

c. Efficiency*: d. Capital Cost:

e. Life: f. Operating Cost:

g. Energy: h. Maintenance Cost:

*Explain method of determining efficiency above.

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*:

d. Capital Cost:

e. Life:

f. Operating Cost:

g. Energy:

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*:

3. Capital Cost:

4. Life:

5. Operating Cost:

6. Energy:

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

(5) Environmental Manager:

(6) Telephone No.:

*Explain method of determining efficiency above.

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

b.

(1) Company:

(2) Mailing Address:

(3) City:

(4) State:

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

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions*:

Contaminant	Rate or Concentration

(8) Process Rate*:

10. Reason for selection and description of systems:

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

SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

A. Company Monitored Data

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

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

Other data recorded _____

Attach all data or statistical summaries to this application.

2. Instrumentation, Field and Laboratory

a) Was instrumentation EPA referenced or its equivalent? _____ Yes _____ No

b) Was instrumentation calibrated in accordance with Department procedures? _____ Yes _____ No _____ Unknown

B. Meteorological Data Used for Air Quality Modeling

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

2. Surface data obtained from (location) _____

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

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

C. Computer Models Used

1. _____ Modified? If yes, attach description.

2. _____ Modified? If yes, attach description.

3. _____ Modified? If yes, attach description.

4. _____ Modified? If yes, attach description.

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

D. Applicants Maximum Allowable Emission Data

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

E. Emission Data Used in Modeling

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

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

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

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

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

APPENDIX A - PROJECT DESCRIPTION

The purpose of the project is to construct a handling facility at the existing Agrico South Pierce Plant to receive and transfer wetted prilled sulfur to a new sulfur melting system. The sulfur will be received via trucks or railcar, at a rate of 1800 long tons per day. The facility will process a maximum of 600,000 long tons per year.

The trucks and/or railcars will be unloaded in an open shed. The unloaded sulfur will be conveyed to a 100 LT surge hopper. From the hopper, the sulfur will be fed to the melting system by a vibrating feeder. The melting system consists of three 900 LT/Day melters. One of the melters will provide spare capacity, however, the throughput of the system will not exceed 1800 LT/Day. The potential H_2S fumes generated from the melting of the sulfur will be controlled by a wet scrubber. The scrubber will utilize a caustic solution as the scrubbing liquor.

SUPPLEMENT #1

DERIVATION OF PROCESS INPUT WEIGHT FROM OUTPUT WEIGHT

PRODUCT INPUT WEIGHT (1800 LTPD Design Rate)

$$1800 \frac{LT}{Day} \times \frac{1 \text{ Day}}{24 \text{ Hrs}} \times \frac{2240 \text{ Lb.}}{1 \text{ Lt.}} = 168{,}000 \text{ Lb./Hr.}$$

DUST EMISSIONS

$$1800 \frac{\text{L Tons}}{\text{Day}} \times .0068 \frac{\text{Lb}}{\text{Ton}} \times 2 \text{ dumps} \times 1.12 \frac{\text{Ton}}{\text{L Ton}} \times \frac{1 \text{ Day}}{24 \text{ Hrs.}} = 1.14 \text{ Lb./Hr.}$$

DERIVATION

$$168{,}000 \frac{\text{Lb}}{\text{Hr.}} - 1.14 \frac{\text{Lb}}{\text{Hr.}} = 167{,}998.86$$

SUPPLEMENT #2 and #3

EMISSION ESTIMATES

I. PARTICULATES

On February 28, 1979, Dr. Dale A. Lundgren, of the University of Florida, issued a report entitled "Determination of Emission Factors for Fugitive Emission Sources". The paper summarized research conducted to determine the emission rate of dust in the movement of prilled sulfur. The results of the research indicated that for prilled sulfur with 2% moisture, an emission rate of .0068 lb. of particulate per ton of material could be expected in a transfer-convey operation. At South Pierce, the sulfur will be unloaded from trucks and/or railcars and transferred into a silo.

For a facility handling 600,000 long tons of material a year, the following emissions are expected:

Assume: .0068 Lb/Ton Emission Factor
2 Transfer Locations

$$600{,}000 \frac{\text{L Ton}}{\text{Yr.}} \times .0068 \frac{\text{Lb}}{\text{Ton}} \times 2 \text{ dumps} \times 1.12 \frac{\text{Ton}}{\text{L Ton}} \times \frac{1 \text{ Ton}}{2000 \text{ Lb}} = 4.57 \text{ Ton/Yr.}$$

The attached photos are included to demonstrate the lack of dust. They were taken at a prilled sulfur installation in Canada. Notice that there are no visible emissions in the movement of the material.

II. HYDROGEN SULFIDES

Technical data obtained from Dr. Mike D. Raymont of the Sulfur Development Institute of Canada indicated that 25-50 PPM of H_2S could normally be released during melting of the prilled sulfur. Occasionally some sulfur could release as much as 250 PPM, however, this would be rare.

The H_2S scrubber will be designed to control the worst case situation of a release of 250 PPM H_2S.

The maximum throughput of the three melters are 1800 LTPD. The emission rate would be:

$$1800 \frac{\text{L Ton}}{\text{Day}} \times .00025 \frac{\text{L Ton } H_2S}{\text{L Ton}} \times \frac{1 \text{ Day}}{24 \text{ Hr.}} \times \frac{2240 \text{ Lb.}}{1 \text{ L Ton}} = 42 \frac{\text{Lb } H_2S}{\text{Hr.}}$$

SUPPLEMENT #2 and #3 (Continued)

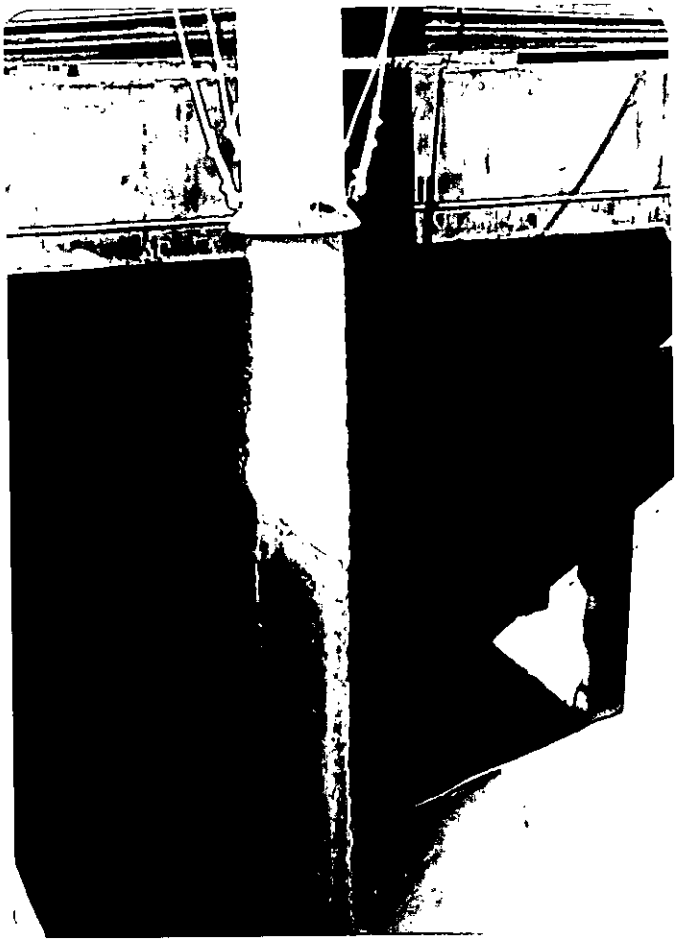
The design output of the scrubber (per Barnard & Burk) will be 1.9 Lb/Hr. The efficiency will be:

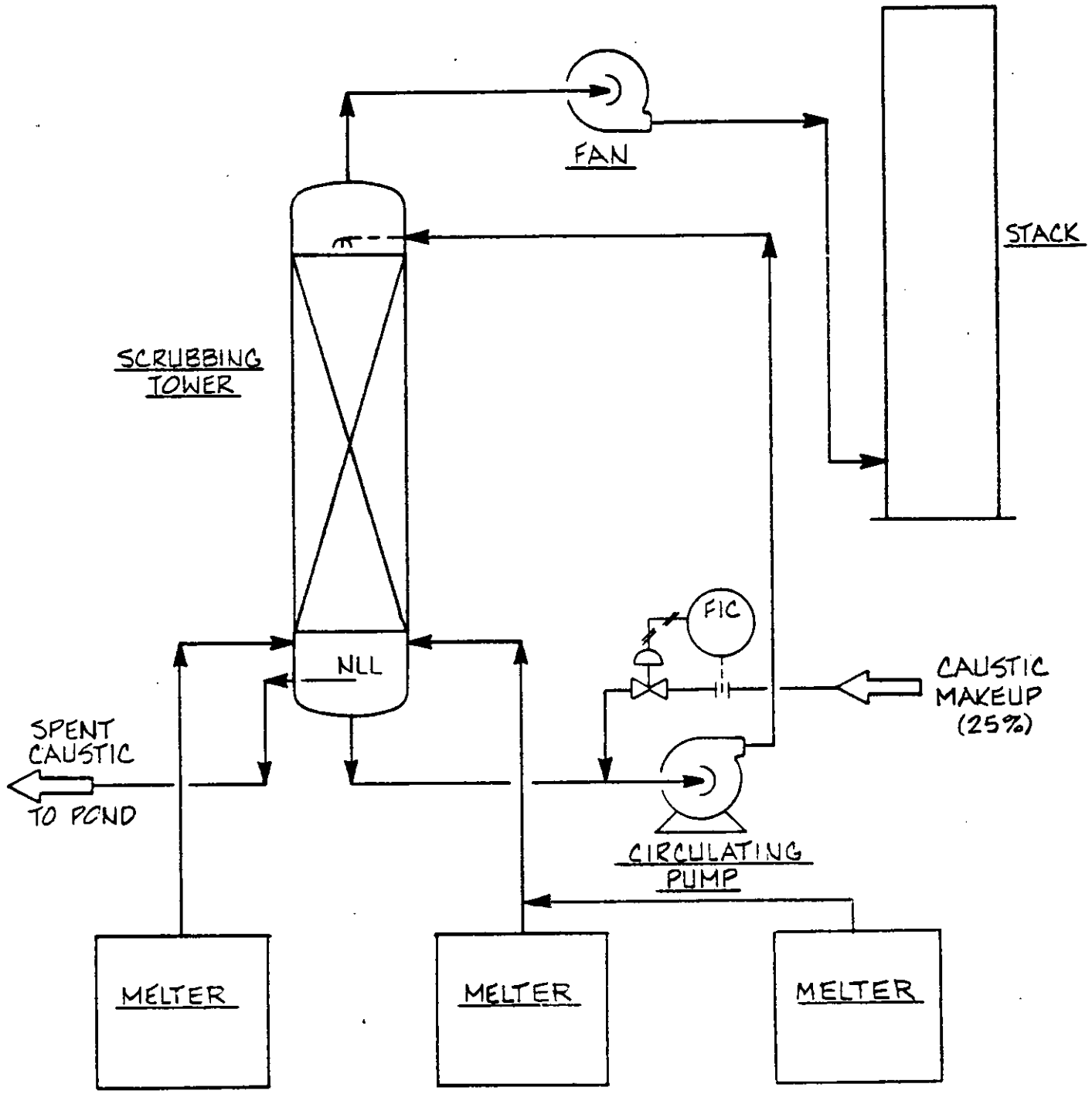
$$\frac{42-1.9}{42} \times 100 = 95\%$$

Yearly emissions rate:

$$600{,}000 \frac{\text{L Ton}}{\text{Yr.}} \times .00025 \frac{\text{L Ton H2S}}{\text{L Ton}} \times .05 \times 1.12 \frac{\text{Ton}}{\text{L Ton}} = 8.4 \text{ Ton/Yr. } H_2S$$

TYPICAL PRILLED SULFUR OPERATION





SUPPLEMENT #4

REV. NO.	DATE	REVISION DESCRIPTION	ORIG. / CKD.

BARNARD AND BURK ENGINEERS & CONSTRUCTORS, INC.

ORIG.	AW
CKD.	RLB
APPD.	
APPROVED BY CLIENT	

TITLE: PROCESS FLOW DIAGRAM
H_2S SCRUBBER PRILLED SULPHUR HANDLING

CLIENT: AGRICO - SOUTH PIERCE

DATE OF ORIGINAL ISSUE:

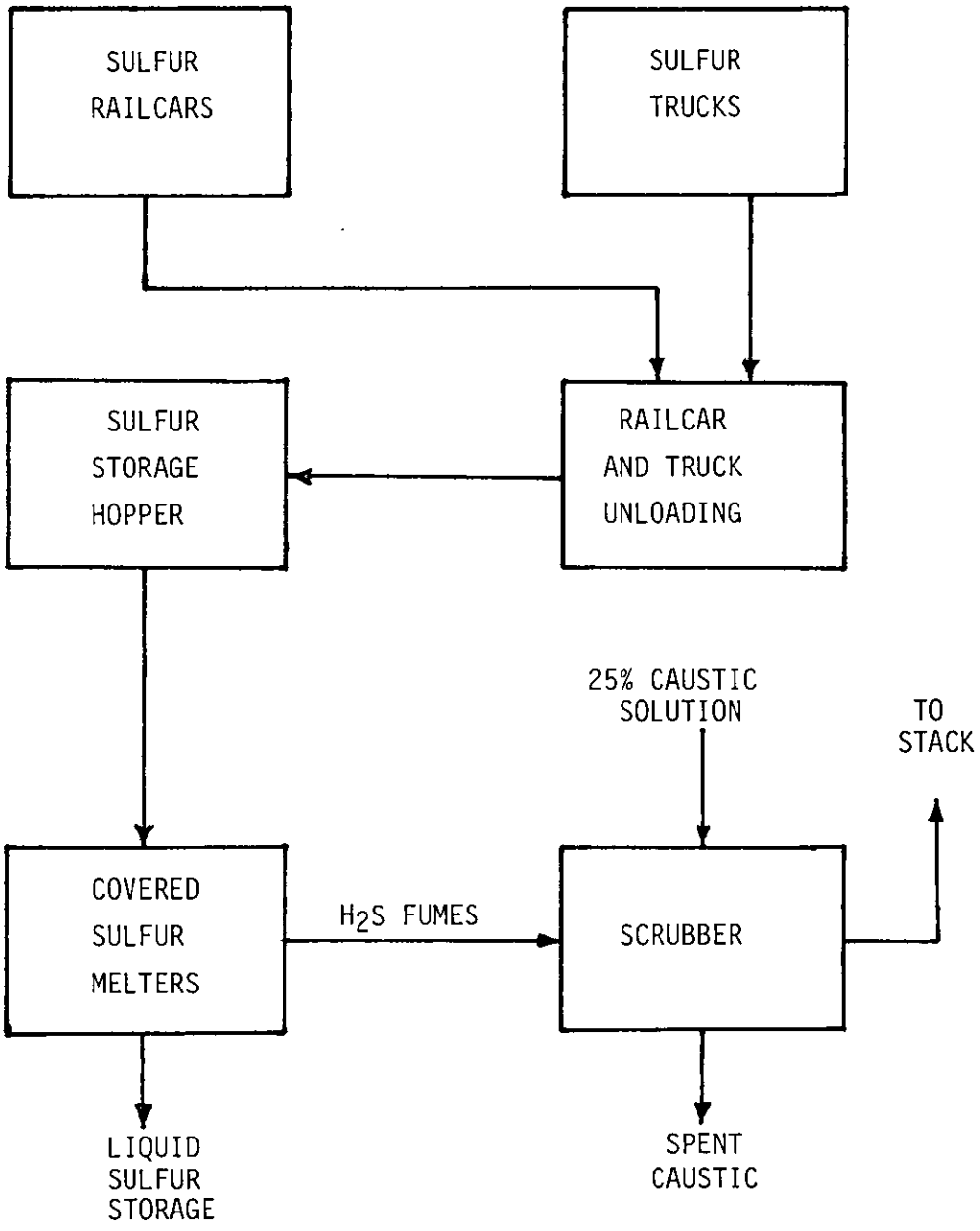
PROJECT NUMBER: 256301-00

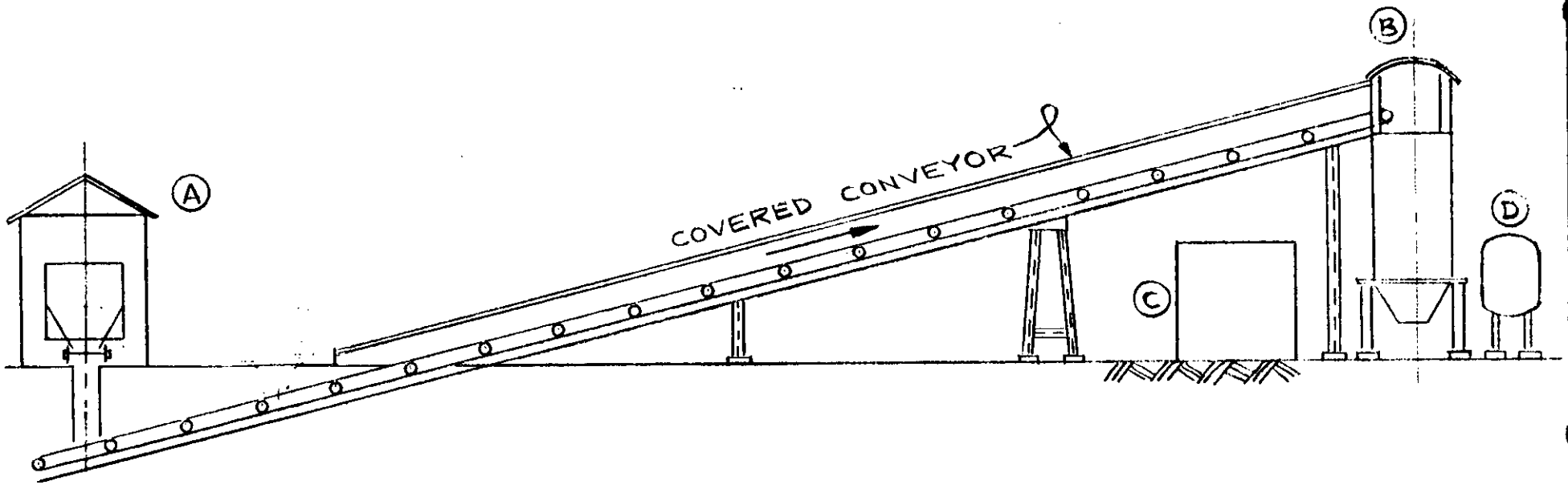
DRAWING NUMBER: REV.

SUPPLEMENT #6

FLOW DIAGRAM

PRILLED SULFUR - S.P.C.W.





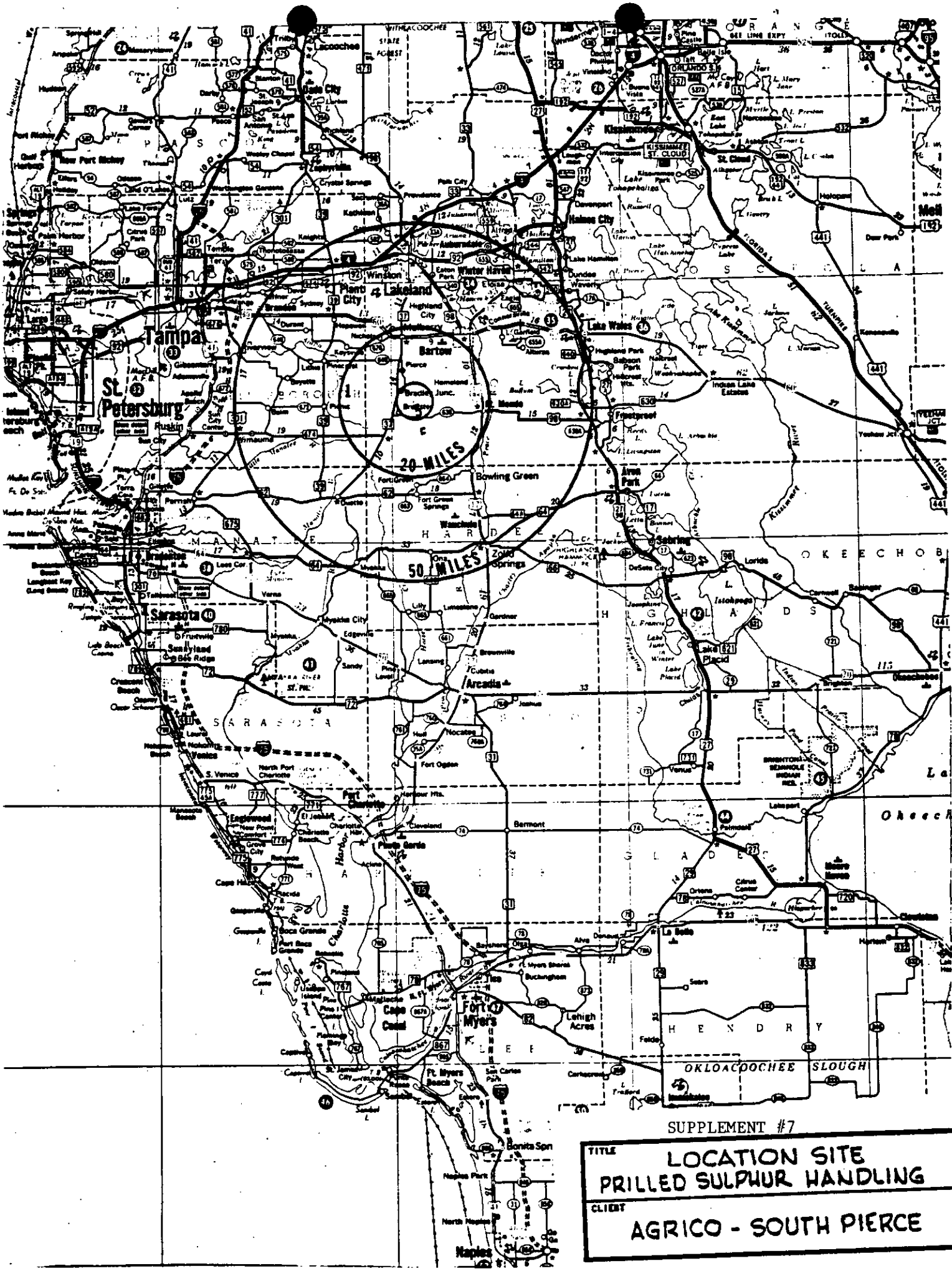
(A) RAILCAR AND TRUCK UNLOADING SHED
(B) COVERED STORAGE HOPPER
(C) COVERED MELTERS
(D) H_2S SCRUBBER

BARNARD AND BURK ENGINEERS & CONSTRUCTORS, INC.

TITLE
FLOW DIAGRAM
PRILLED SULPHUR HANDLING

CLIENT
AGRICO - SOUTH PIERCE

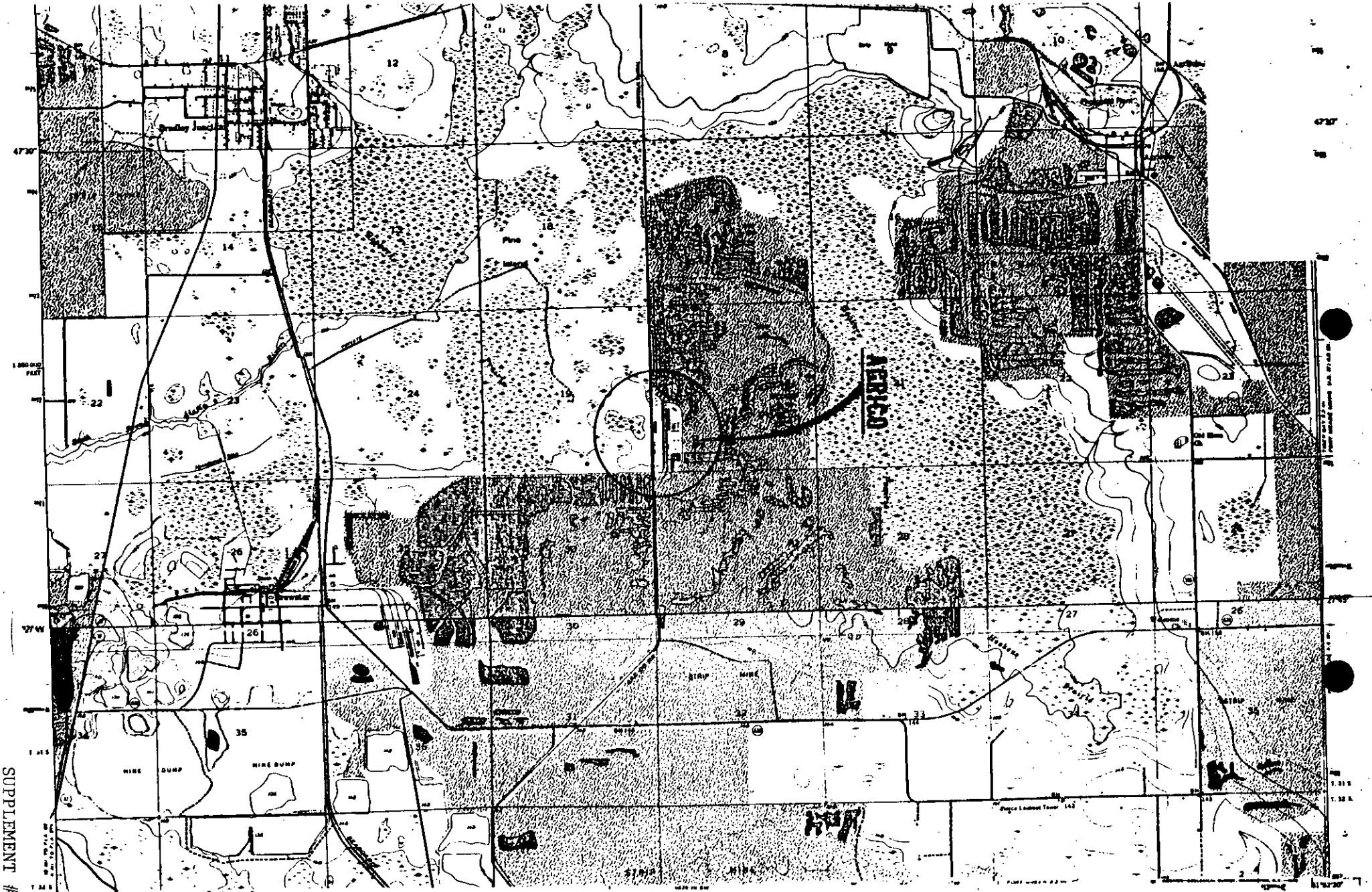
SUPPLEMENT #6



SUPPLEMENT #7

TITLE
LOCATION SITE
PRILLED SULPHUR HANDLING

CLIENT
AGRICO - SOUTH PIERCE



SUPPLEMENT # 7

Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and Florida Geodetic Survey

Culture and drainage in part compiled from aerial photographs taken 1951-1952. Topography by planetable surveys 1955

Polyconic projection. 1927 North American datum
10,000 foot grid based on Florida coordinate system, east zone

1000 meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

Revisions shown in purple compiled from aerial photographs taken 1972. This information not field checked

SCALE 1:24 000

CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U S GEOLOGICAL SURVEY, WASHINGTON D C 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

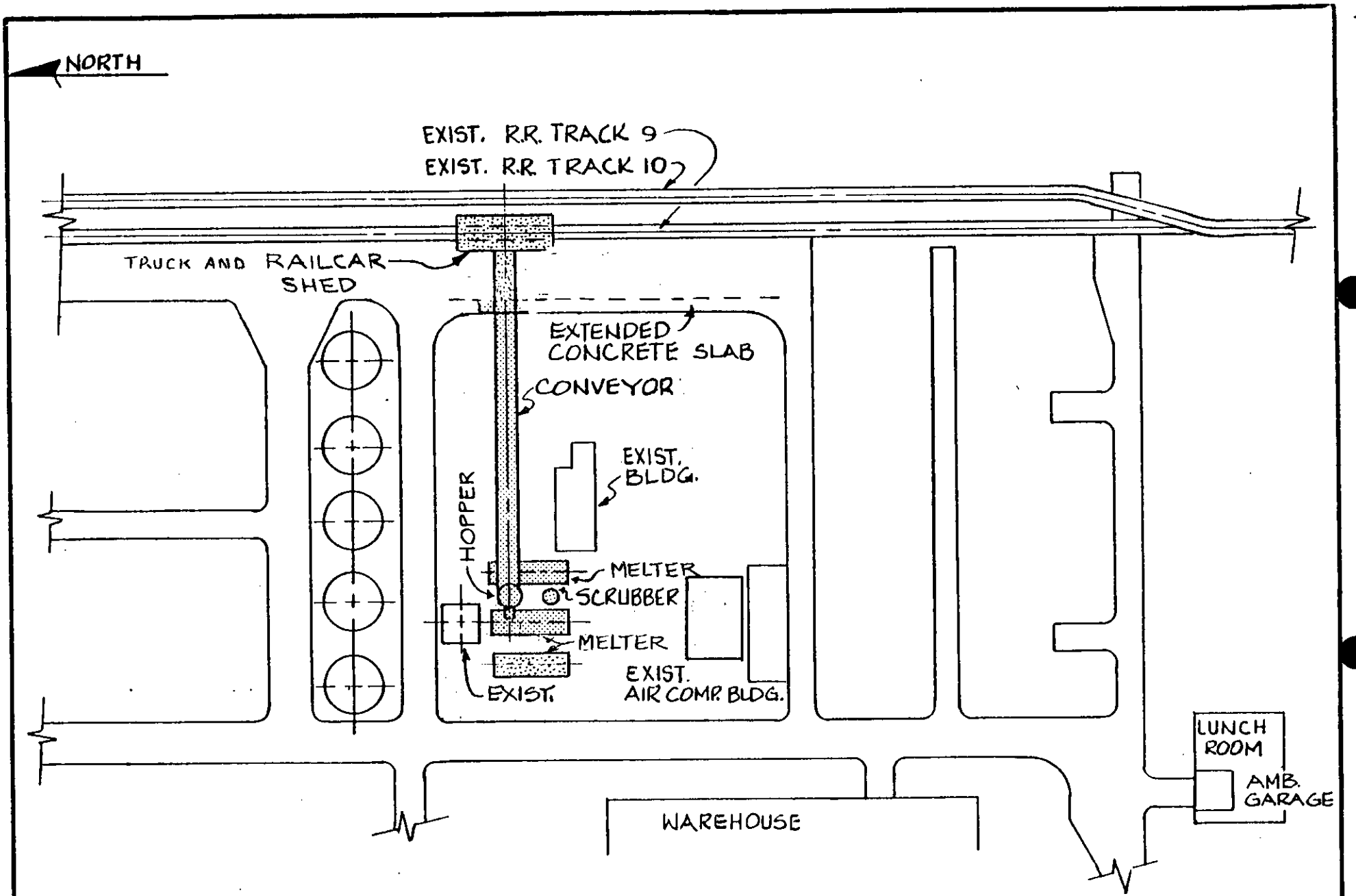
ROAD CLASSIFICATION

Heavy duty ——— Light duty ———
Medium duty ——— Unimproved dirt - - - - -
U S Route ◯ State Route

QUADRANGLE LOCATION

BAIRD, FLA.
N2737.5—W8152.5/7.5

1955
PHOTOREVISED 1972
AMS 6656 III NW—SERIES V847



PROPOSED PROJECT

SUPPLEMENT #8

BARNARD AND BURK ENGINEERS & CONSTRUCTORS, INC.

TITLE
LOCATION PLAN
PRILLED SULPHUR HANDLING

CLIENT
AGRICO - SOUTH PIERCE