

J. V. BURLESON
Vice President & General Manager
Minerals Operations



CERTIFIED MAIL
RETURN RECEIPT REQUESTED

September 18, 1990

Mr. J. Harry Kerns
Department of Environmental Regulation
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Re: Permit Modification A053-138648, Noralyn C20 Pit Transfer Scrubber

Dear Mr. Kerns:

The application, and copies, for the modification of the Air Operating Permit for the Noralyn C20 Pit Transfer Scrubber is attached. A check in the amount of \$1000 is included for the renewal of the permit. This is based on 15 lbs/hr for 8760 hours per year.

Accompanying this application, is a request that the Permit No. A053-116215 for the Noralyn C Track Load Out Scrubber be eliminated. The Load Out is no longer used. The scrubber from this unit is being moved to replace the scrubber currently controlling C17 Transfer Point. This project is discussed in the permit application. Other "non Air Pollution Sources" points will vent to the scrubber when it is installed.

Thank you for your attention in this matter. If you have further questions, please contact me.

Very truly yours,

A handwritten signature in cursive script, appearing to read "James V. Burleson", written over a horizontal line.

James V. Burleson
Vice President & General Manager

1031

1990 OCT -8 AM 10: 27

RECEIVED
DER - MAIL ROOM



FERTILIZER, INC.

IMC FERTILIZER, INC., MINERALS OPERATIONS
BARTOW, FLORIDA

THE FIRST NATIONAL BANK OF CHICAGO
PAYABLE THROUGH
FCC NATIONAL BANK, DELAWARE

62-28
311

Product for Growth

CHECK NO. 190622

09	21	90
MONTH	DAY	YEAR

AMOUNT
*****1,000.00

PAY
TO THE
ORDER
OF

DEPT OF ENVIRONMENTAL REG
4520 OAK FAIR BLVD
TAMPA FL 33610

OPERATING ACCOUNT

APPROVED SIGNATURE

Re: Permit Modification A053-138648, Noralyn C20 Pit Transfer Scrubber

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Vice President & General Manager

1081

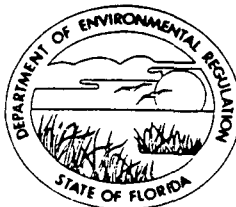
1990 OCT -8 AM 10:27

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DEPARTMENT OF ENVIRONMENTAL REGULATION

\$1,000 pd
10-8-90
Receipt #151196

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400



A 253-187665

BOB MARTINEZ
GOVERNORDALE TWACHTMANN
SECRETARY

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Particulate New¹ Existing¹APPLICATION TYPE: Construction Operation ModificationCOMPANY NAME: IMC Fertilizer, Inc. COUNTY: PolkIdentify 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) C20 Pit Transfer ScrubberSOURCE LOCATION: Street Noralyn Mine Road City BartowUTM: East (17) 414.7 km North 3080.3 kmLatitude ° ' "N Longitude ° ' "WAPPLICANT NAME AND TITLE: James V. Burleson, Vice President & General ManagerAPPLICANT ADDRESS: P.O. Box 867, Bartow, FL 33830

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of IMC Fertilizer, Inc.

I certify that the statements made in this application for a Operating 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: James V. BurlesonJames V. Burleson, Vice President & General Manager
Name and Title (Please Type)Date: 9/18/90 Telephone No. (813) 533-1121

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 _____

Charles David Turley

Name (Please Type)

IMC Fertilizer, Inc.

Company Name (Please Type)

P.O. Box 1035, Mulberry, FL 33860-1035

Mailing Address (Please Type)

Florida Registration No. 23344 Date: 9/18/90 Telephone No. (813) 428-2531

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 application will modify the current operating permit, A053-138648, by replacing the existing scrubber with a Ducon UW3 Scrubber. This scrubber will be removed from the C Track L/O, A053-116215. The scrubber will vent C17 and internal transfer points. This is described in Attachment A.

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

Start of Construction 11/15/90 Completion of Construction _____

- 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.)

\$14,000 Materials

\$25,000 Installation

\$ 9,000 Labor

Total \$48,000

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

Permit No. A053-138648 Issued: 11/13/87 Expires: 11/9/92; and A053-116215

issued: 5/16/86 Expires: 5/14/91

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 - XXXXXX TPH	Relate to Flow Diagram
	Type	% Wt		
Phosphate Rock	Dust	Varies	723	G20 Pit

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

- Total Process Input Rate (lbs/hr): See Above (NOMINAL = 50 TPH)
- Product Weight (lbs/hr): See Above

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 ² Rate per Rule 17-2	Allowable ³ Emission lbs/hr	Potential ⁴ Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
Particulate	0.4	1.2	17-2.650(2) (b)2.	15.0	N/A	N/A	T3S

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).

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;
if power plant, hrs/yr _____ ; if seasonal, describe: Average operating hours: 13.1 hrs/day
See Attachment A

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? NO
b. If yes, has "Lowest Achievable Emission Rate" been applied? NO
c. If yes, list non-attainment pollutants. N/A

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

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

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

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

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

a. If yes, for what pollutants? Particulate Area of Influence.

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 justifi-
cation for any answer of "No" that might be considered questionable.

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)
Ducon Imp Scrubber UW3 III 48, SN 077-678	Part	97.7%	+ 10 microns	Estimate

E. Fuels

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

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

Fuel Analysis:

Percent Sulfur: _____ Percent Ash: _____

Density: _____ lbs/gal Typical Percent Nitrogen: _____

Heat Capacity: _____ BTU/lb _____ BTU/gal

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

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

Annual Average N/A Maximum _____

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

Scrubber underflow discharged to settling area

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):
 For each of the three mills

Stack Height: 43 ft. Stack Diameter: 24 ft.
 Gas Flow Rate: 5000 ACFM 4800 DSCFM Gas Exit Temperature: 86 °F.
 Water Vapor Content: 1.7 % Velocity: 26.5 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) _____

Brief description of operating characteristics of control devices: _____

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

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

SECTION V: SUPPLEMENTAL REQUIREMENTS

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
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, design pressure drop, 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 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY

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

Yes No

Contaminant	Rate or Concentration

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

Yes No

Contaminant	Rate or Concentration

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

Contaminant	Rate or Concentration

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

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

*Explain method of determining

- 5. Useful Life:
- 7. Energy:
- 9. Emissions:

- 6. Operating Costs:
- 8. Maintenance Cost:

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).

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

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

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

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

State of Florida



Department of State

I certify from the records of this office that IMC FERTILIZER, INC. is a corporation organized under the laws of Delaware, authorized to transact business in the State of Florida, qualified on July 1, 1987.

The document number of this corporation is P15049.

I further certify that said corporation has paid all fees due this office through December 31, 1987, and its status is active.

Given under my hand and the
Great Seal of the State of Florida,
at Tallahassee, the Capital, this the
10th day of September, 1987.



Jim Smith

Jim Smith
Secretary of State

ATTACHMENT A

PROJECT SCOPE

THIS PROJECT WILL REMOVE THE SCRUBBER FROM THE NORALYN C TRACK LOAD OUT STATION AND USE IT TO REPLACE THE FUME SCRUBBER FROM C17 HEAD PULLEY AND ADD DUST CONTROL FOR INTERNAL TRANSFER POINTS IN C20 PIT AREA. THESE INCLUDE THE NO 1 DRYER DISCHARGE, THE TWO CYCLONE DISCHARGE POINTS, AND C18 HEAD PULLEY. THESE POINTS ARE LOCATED IN THE DRYER BUILDING. THE CONTROL FOR THESE POINTS IS BEING ADDED A "REASONABLE PRECAUTION TO PREVENT UNCONFINED EMISSIONS" FROM THE BUILDING. THE POINTS ARE NOT AIR POLLUTION SOURCES AS SUCH SINCE THEY DO NOT DISCHARGE TO THE AMBIENT AIR. THE USE OF A CONTROL DEVICE TO ELIMINATE INTERNAL EMISSIONS CANNOT MAKE THOSE POINTS BECOME SOURCES. THE PERMITTED SOURCE WHICH THIS SCRUBBER ARRANGEMENT WILL BE THE C17 HEAD PULLEY TRANSFER. THE RACT EXEMPTION OF 15 LBS/HR WAS MODELED AS IT WAS AT C TRACK LOAD OUT AND IS A CHANGE FROM THE 10 LBS/HR OF C17. THE MODELING PARAMETERS HAVE NOT CHANGED OTHER THAN IT HAS MOVED 200-300 FT TO THE SOUTHEAST AWAY FROM THE NON-ATTAINMENT AREA. THE ORIGINAL 15 LBS/HR AT NO LONGER IN EFFECT, HENCE THE NET IMPACT POSSIBLE ON THE NON-ATTAINMENT AREA HAS DECREASED WITH THE REVISION OF THESE SOURCES.

PROCESS WEIGHT CALCULATION

DRYER YEAR	NO 2		NO 1		C TRACK	
	TONS	HOURS	TONS	HOURS	TONS	HOURS
1985	1626405	4088	295363	1066	74834	125
1986	1341073	3037	356107	1163	77742	130
1987	1786538	4545	1272345	3926	158951	265
1988	2243395	5841	1538297	4705	0	0
1989	2552163	6435	1715131	5107	0	0
TOTALS	9549574	23946	5177243	15967	311527	519

5 YEAR AVERAGE RATES

ROCK TPH	399	324
HRS/YR	4789	3193
HRS/DAY	13.1	

PRODUCTION CALCULATION BASIS

TONS: NOS 1 & 2 DRYER TONS
 HOURS: NO 2 DRYER HOURS * 1.2

MASS AND VISIBLE EMISSION DATA AND CALCULATION

C Track Loadout Scrubber

DATE	TEMP	% HOH	FPS	ACFM	LB/HR	TPH	LB/TON	ALLOW	GR/SCF	VE
04/19/78	72	2.7	58.4	10,800	1.10	453	0.00243	46.1	0.0123	

C17 Transfer Scrubber

DATE	TEMP	% HOH	FPS	ACFM	LB/HR	TPH	LB/TON	ALLOW	GR/SCF	VE
08/06/87	86	1.7	18.6	877	0.04	365	0.00011	10.0	0.0055	0

PROJECTED EMISSIONS AND CONDITIONS

ESTIMATE	TEMP	% HOH	FPS	ACFM	LB/HR	TPH	LB/TON	ALLOW	GR/SCF	VE
	86	1.7	26.5	5,000	0.4	723	0.00057	15.0	0.0100	0

AVERAGE ANNUAL EMISSION AND ALLOWABLE CALCULATION

STACK	ACTUAL EMISSIONS				ALLOWABLE EMISSIONS				TPY @8760 HRS
	LB/TON	TPH	LB/HR	TPY	LB/HR	LB/TON	TPY		
C20 PIT	0.00057	723	0.41	1.2	15.0	0.0207	23.8	65.7	
C17 HOOD CONTRIBUTION			0.09	0.2					
NON SOURCE CONTRIBUTION			0.32	1.0					
C TRACK	0.00243	453	1.10	0.1	15.0	0.0331	1.0	65.7	
C17 OLD	0.00011	365	0.04	0.1	10.0	0.0274	26.2	43.8	

QUALITATIVE EFFICIENCY AND OPACITY ANALYSIS

THE QUALITATIVE OPACITY ANALYSIS FOR C TRACK SCRUBBER AT C20 PIT WAS DONE USING THE HOOD SIZE DISTRIBUTION AND THE COLLECTION EFFICIENCY OF THE DUCON UW3 SCRUBBER TO ESTIMATE IT'S PERFORMANCE. THE FOLLOWING ARE THE ESTIMATED VALUES FOR THIS UNIT BASED ON A MAX 6 MINUTE AVERAGE OF 5%.

ESTIMATED OPERATING EFFICIENCY	97.7%
MINIMUM EFFICIENCY FOR OPACITY COMPLIANCE (20%)	89.8%
MINIMUM EFFICIENCY FOR MASS COMPLIANCE	18.3%

PROPOSED PERMIT CONDITIONS C20 PIT SCRUBBER

VISIBLE EMISSION LIMIT:	20%	17-2.610(2)
PARTICULATE EMISSION LIMIT:	15.0 LB/HR	17-2.650(2)(b)2.
PERMITTED HOURS OF OPERATION:	8760 HRS/YEAR	NO REFERENCE
MAXIMUM PERMITTED OPERATION:	REFERENCE TPH + 20%	NO REFERENCE
OPERATING TEST CONDITION:	TEST AT >119 mCFH GAS (NO 1) AND 136 mCFH GAS (NO 2) FOR 296 AND 392 TPH (NOMINAL)	NO REFERENCE
APPLICABLE TEST METHODS:	1,2,4,5, AND 9	17-2.700
INITIAL START-UP TEST:	PARTICULATE AND VE	17-2.700(2)
COMPLIANCE TEST SPECIFICATION:	VE	17-2.700(2)
COMPLIANCE TEST FREQUENCY:	SEMI-ANNUAL	17-2.700(2)
PERMIT RENEWAL TEST:	VE = 0%	17-2.700(3)(d)

THIS IS A REQUEST FOR THE SUBSTITUTION OF ONE VISIBLE EMISSION TEST FOR THE REQUIRED PARTICULATE TEST, 17-2.700(2)(a)3., F.A.C., FOR PERMIT RENEWAL NOT A REQUEST FOR A CHANGE IN THE ALLOWABLE VISIBLE EMISSIONS FOR THIS SOURCE.

TABLE
OPACITY &
EFFICIENCY
ESTIMATES
C17 NEW
09/13/90

TEST: 5000 scfm
0.0100 gr/scf
0.41 lb/hr
5.0 %VE

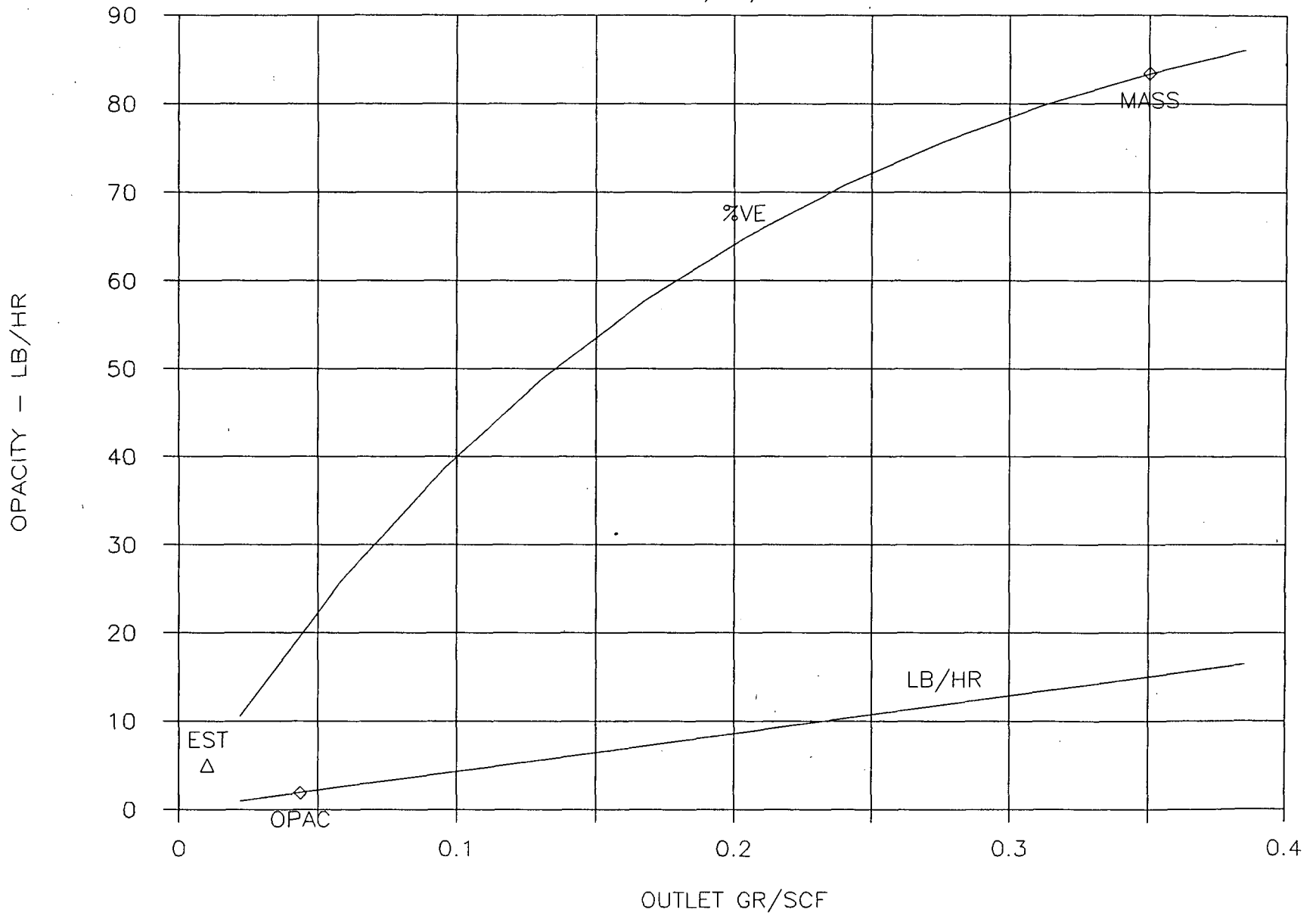
24 dia L
Estimated Inlet
0.4283 gr/scf
2.6 Density

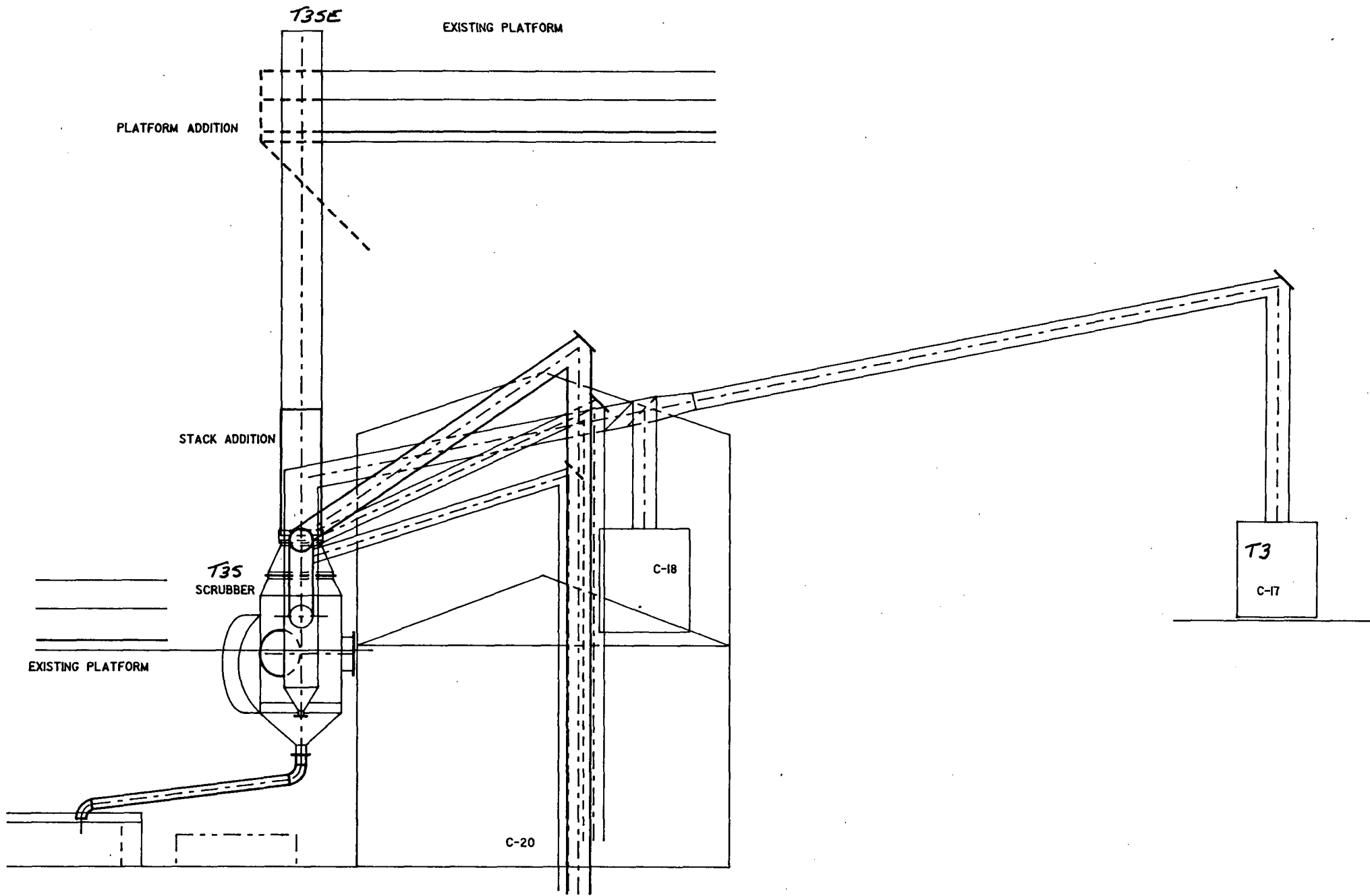
Resulting EFF
CALC 97.7%
MIN: OPAC 89.8%
MASS 18.3%
0.01

SIZE RANGE	mean dia	DCN 3	HOOD wt dist	INLET lb/hr	1.2632 gr/scf	=Kf CALC	0.481 EXTN	=Sfi CUM	FINAL lb/hr	5.045 gr/scf	=Sfo CUM
Dl-Du	D	EFF	V%	PMRI	Gin	POP RN	COEF Q	OPAC in	PMRo	Gout	OPAC out
0.00-0.10	0.0794	0.0020	0.0002	0.00	0.00009	0.412	1.058	0.1	0.004	0.00009	0.12
0.10-0.13	0.1169	0.0100	0.0002	0.00	0.00009	0.129	1.559	0.2	0.004	0.00008	0.23
0.13-0.16	0.1465	0.0260	0.0003	0.01	0.00013	0.098	1.954	0.4	0.005	0.00013	0.40
0.16-0.20	0.1822	0.0500	0.0005	0.01	0.00021	0.085	2.429	0.7	0.009	0.00020	0.67
0.20-0.25	0.2277	0.1100	0.0008	0.01	0.00034	0.070	3.037	1.2	0.013	0.00030	1.08
0.25-0.32	0.2892	0.1900	0.0014	0.03	0.00060	0.060	3.856	2.0	0.021	0.00049	1.73
0.32-0.40	0.3644	0.2900	0.0018	0.03	0.00077	0.038	4.000	2.8	0.023	0.00055	2.33
0.40-0.50	0.4555	0.4400	0.0028	0.05	0.00120	0.030	4.000	3.8	0.029	0.00067	2.92
0.50-0.64	0.5785	0.5600	0.0050	0.09	0.00214	0.027	4.000	5.3	0.040	0.00094	3.56
0.64-0.79	0.7228	0.6900	0.0060	0.11	0.00257	0.016	4.000	6.6	0.034	0.00080	3.99
0.79-1.00	0.9072	0.7800	0.0090	0.17	0.00386	0.012	4.000	8.2	0.036	0.00085	4.35
1.00-1.26	1.1448	0.8500	0.0120	0.22	0.00514	0.008	3.710	9.8	0.033	0.00077	4.59
1.26-1.59	1.4439	0.8900	0.0180	0.33	0.00771	0.006	3.112	11.3	0.036	0.00085	4.77
1.59-2.00	1.8181	0.9200	0.0220	0.40	0.00942	0.004	2.364	12.4	0.032	0.00075	4.87
2.00-2.52	2.2895	0.9430	0.0220	0.40	0.00942	0.002	2.000	13.1	0.023	0.00054	4.91
2.52-3.17	2.8817	0.9600	0.0336	0.62	0.01439	0.001	2.000	14.0	0.025	0.00058	4.95
3.17-4.00	3.6324	0.9720	0.0297	0.55	0.01272	0.001	2.000	14.6	0.015	0.00036	4.97
4.00-5.04	4.5790	0.9820	0.0368	0.68	0.01576	0.000	2.000	15.2	0.012	0.00028	4.98
5.04-6.35	5.7694	0.9880	0.0455	0.84	0.01949	0.000	2.000	15.8	0.010	0.00023	4.99
6.35-8.00	7.2686	0.9920	0.0536	0.98	0.02296	0.000	2.000	16.3	0.008	0.00018	4.99
8.00-10.08	9.1581	0.9952	0.0629	1.15	0.02694	0.000	2.000	16.8	0.006	0.00013	5.00
10.08-12.70	11.5387	0.9970	0.0661	1.21	0.02831	0.000	2.000	17.2	0.004	0.00008	5.00
12.70-16.00	14.5373	0.9983	0.0766	1.41	0.03281	0.000	2.000	17.6	0.002	0.00006	5.00
16.00-20.16	18.3162	0.9990	0.0975	1.79	0.04176	0.000	2.000	18.0	0.002	0.00004	5.00
20.16-25.40	23.0774	0.9994	0.1035	1.90	0.04433	0.000	2.000	18.3	0.001	0.00003	5.00
25.40-32.00	29.0745	0.9997	0.1051	1.93	0.04502	0.000	2.000	18.6	0.001	0.00001	5.00
32.00-40.30	36.6203	0.9998	0.1042	1.91	0.04463	0.000	2.000	18.8	0.000	0.00001	5.00
40.30-50.80	46.1472	1.0000	0.0560	1.03	0.02399	0.000	2.000	18.8	0.000	0.00000	5.00
50.80-64.00	58.1491	1.0000	0.0269	0.49	0.01152	0.000	2.000	18.9	0.000	0.00000	5.00

C17 NEW

09/13/90





EL. T/STACK 42'-6" ABOVE SLAB

EXISTING PLATFORM

T35E

MODIFY PLATFORM
AS REQUIRED

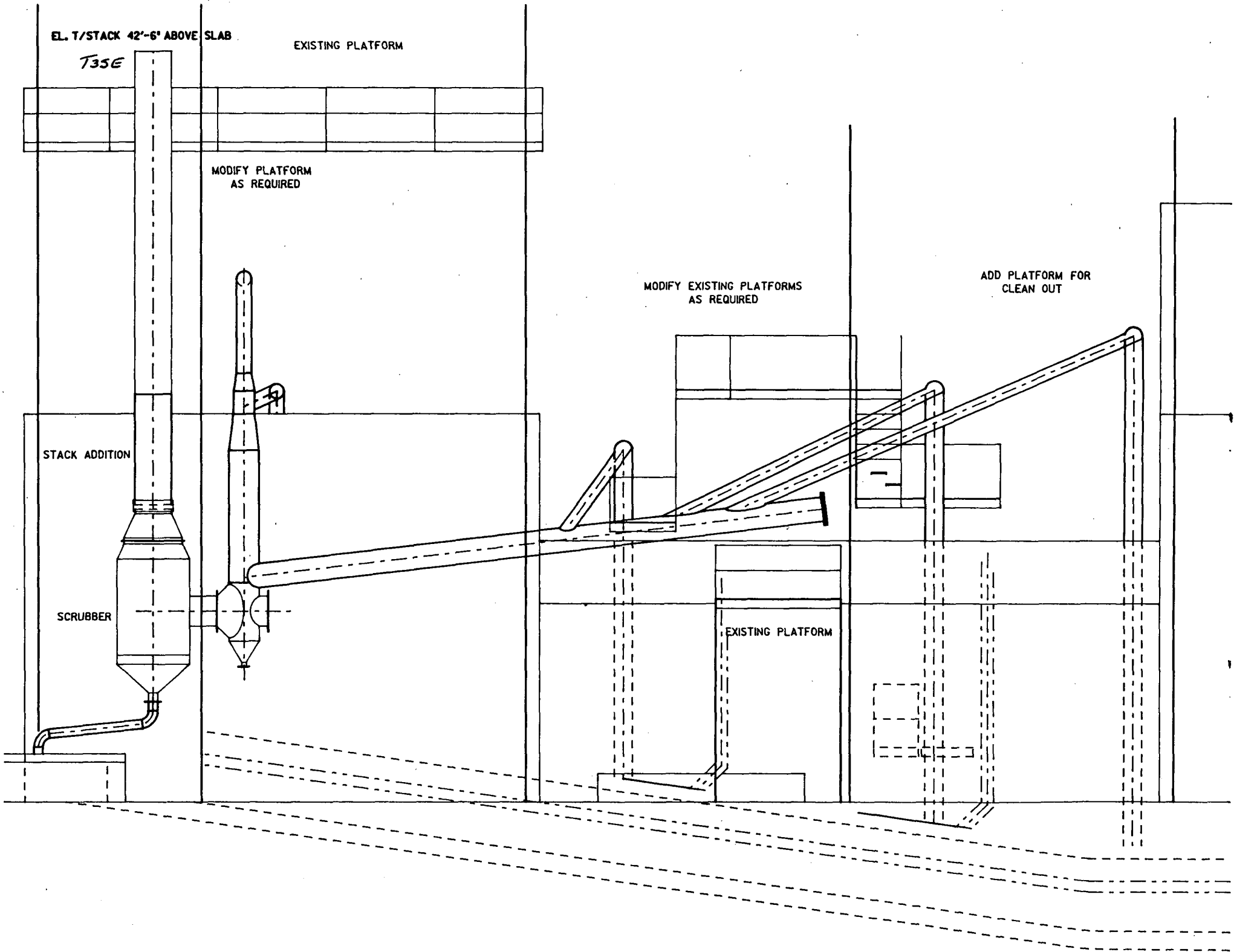
MODIFY EXISTING PLATFORMS
AS REQUIRED

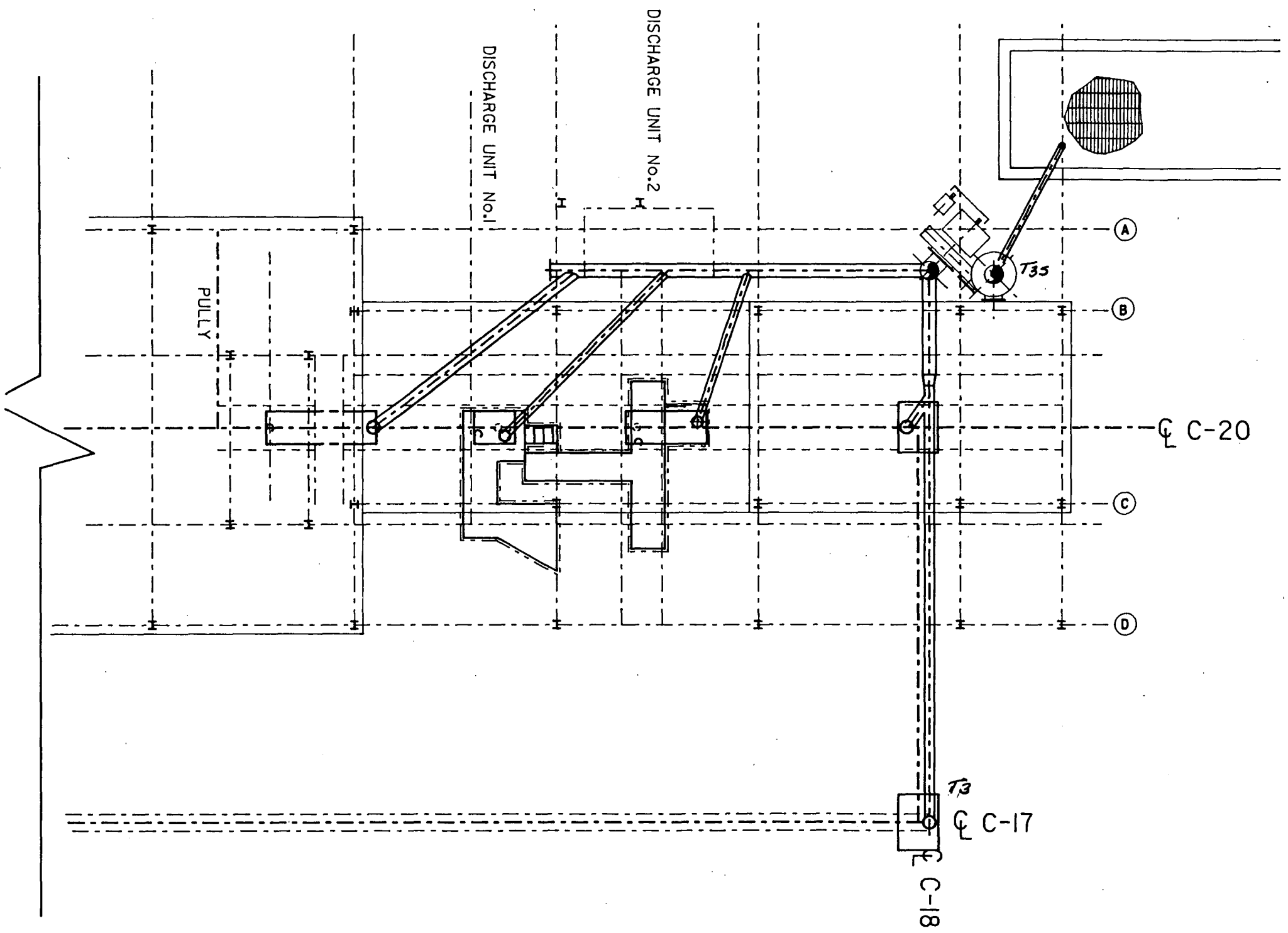
ADD PLATFORM FOR
CLEAN OUT

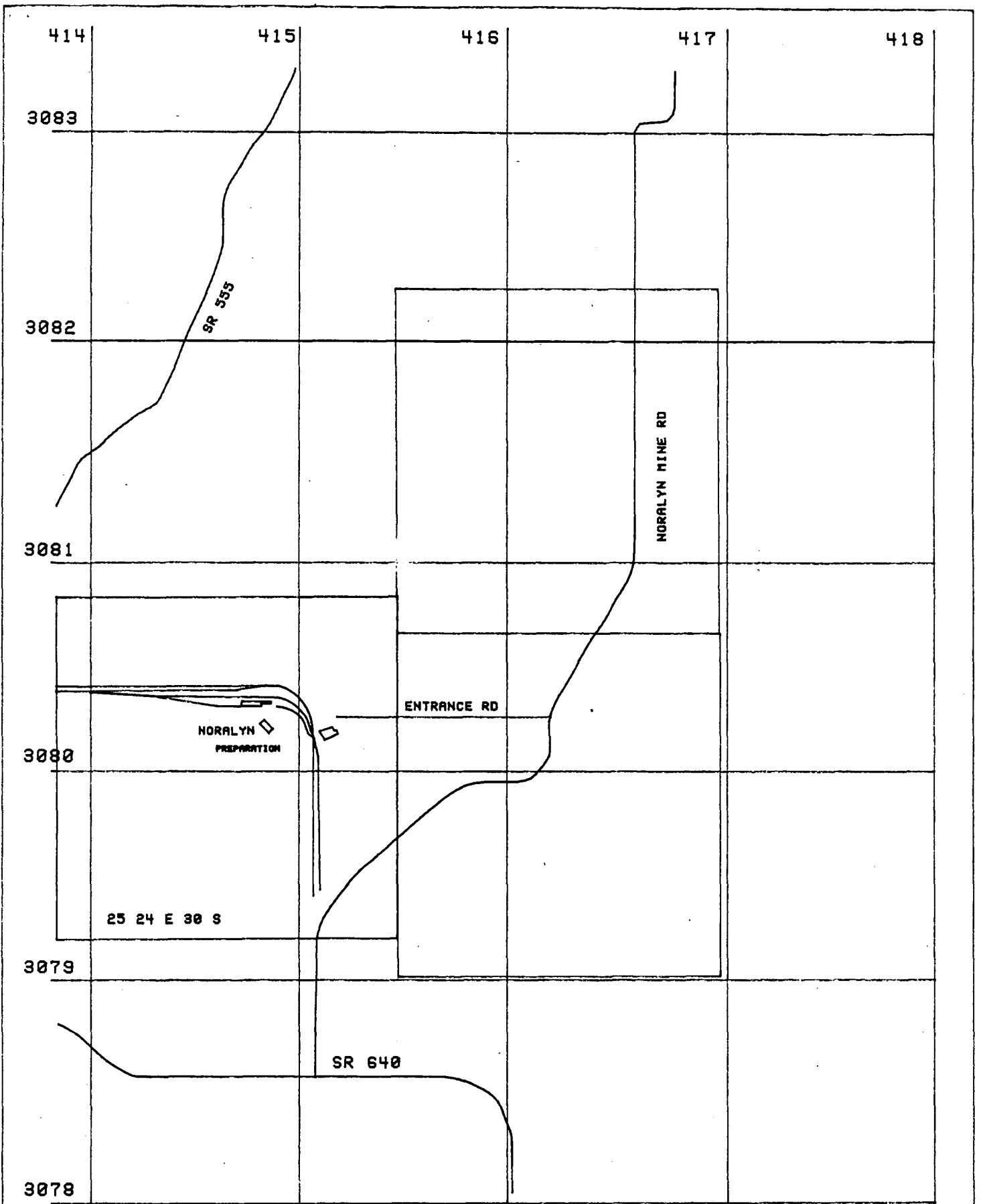
STACK ADDITION

SCRUBBER

EXISTING PLATFORM







DRAWN BY: CDT	TITLE: NORALYN PREPARATION	IMC FERTILIZER, INC.	
DATE: 4/25/88	UTM COORDINATES	LOCATION: NORALYN	SKETCH NO: 1
REVISION:		SCALE: 1" = 2000' APPROX	DEPT: ENV SER