

File: D. A/P- Baton Rouge No

MEMORANDUM

DATE May 13, 1971

SUBJECT: LOUISIANA STATE AIR CONTROL
COMMISSION QUESTIONNAIRE

TO: Mr. C. R. Walbridge

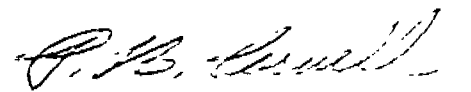
The attached questionnaire has been filled out with the best knowledge that we presently have. Problem areas that are highlighted are:

- 1) Unsaturated hydrocarbons - 1,245 tons/year
- 2) Chlorinated hydrocarbons - 2,372 tons/year
- 3) Ammonia - 451 tons/year

The items under 6D, page 6, have been checked out with the production department and they feel that the jobs as listed will proceed.

In conversations with the Commission's people they are looking for improvement and want to be able to report such. However, the extensive data that we are providing them leaves us vulnerable for many demands and large capital expenditures to correct them. Except for the vent condensers at the vinyl plant, most of the other changes listed are normal maintenance items or apparatus to get rid of an irritating problem. There are many major dust and fume losses that are not directly associated with a stack that we have not listed except in a general manner on page 4.

The attached copy of the letter from Mr. John Trygg is self-explanatory.


P. B. Cornell, Manager
Baton Rouge North Works

AJL:ew

Attach.

cc: Mr. P. N. Shellenberger
Mr. R. E. Mumford
Mr. O. J. Parr

ASI-PR 0004212

ANDREW HEDMEG, M.D., M.P.H., CHAIRMAN
WM. T. HACKETT, VICE CHAIRMAN
CHARLES J. PASQUA
J. M. GARRETT, M.D.



DAVE L. PEARCE

EVERETT JACOB
JOHN E. TRYGG, TECHNICAL SECRETARY

LOUISIANA AIR CONTROL COMMISSION

Louisiana State Office Building
P.O. Box 60630
NEW ORLEANS 70160

RECEIVED BATON ROUGE WORKS	
APR 29 '71	
PDC	
RIC	
JGL	
LSE	
AIL	☒
ASR	
JMCN	
ASCR	
File	

Dear Sir:

It is requested that you complete the enclosed form and return it to our office at your earliest convenience. We would like to receive a reply within thirty days of your receipt of this letter.

The Louisiana Air Control Commission, created by Act 259 of the 1964 Legislature, has been charged with maintaining the purity of the air of our State. The Commission has been given certain specific duties including the collection and dissemination of information on air control.

The information collected will be held strictly confidential according to Commission policy. The Commission plans to continue this policy unless prevented from doing so by State or Federal legislation or legal action. In general, this information will be used developing the implementation plan for achieving and maintaining pure air for Louisiana.

I realize that some questions may be difficult to answer. Give us the best information you can and if a question is not applicable, mark N.A.

If there are questions, either call or write us. Your cooperation is appreciated.

Very truly yours,

John E. Trygg
John E. Trygg
Technical Secretary

Enclosure

ASI-PR 0004213

LOUISIANA STATE AIR CONTROL COMMISSION
LOUISIANA STATE OFFICE BUILDING

P. O. Box 60630

New Orleans, La. 70160

EMISSION INVENTORY QUESTIONNAIRE

Page 1 of 6

To: Allied Chemical Corporation
Industrial Chemicals Division
271
(P. O. Box No.) (Street Address)
Baton Rouge EBR La. 70821
(City or Town) (Parish) (Zip)

PLEASE CORRECT IF NAME OR ADDRESS IS
INCORRECT

AUTHORITY: In accordance with the provisions of R.S. 40:2201 et. seq., The Louisiana Air Control Commission has directed the Technical Secretary to make a survey of Air Pollution in Louisiana and to report the results to the Commission.

INSTRUCTION: (Please Read Carefully)

1. File a separate report for each of your establishments physically located in Louisiana.
2. Use accurate estimates when records are not available.
3. Principal means the major portion of a half or more.
- 4a. Answer All Questions. If certain questions are not applicable to your activity, indicate NONE or NOT APPLICABLE.
- b. Attach descriptions in cases where question is not applicable.
5. IF OTHER is marked, specify in all cases use additional sheets if necessary.
6. The policy of The Commission has been to keep all information received in this questionnaire CONFIDENTIAL. The Commission plans to continue this policy unless prevented to do so by State or Federal legislation or legal action.

Item 1

Activities

A. Days per week normally in operation (check all that apply):

1. ☒ Monday 2. ☒ Tuesday 3. ☒ Wednesday 4. ☒ Thursday 5. ☒ Friday
6. ☒ Saturday 7. ☒ Sunday

B. Days per year normally in operation:

365 Days

C. Peak production season:

1. ☒ Year round 2. ☐ Summer 3. ☐ Fall 4. ☐ Winter 5. ☐ Spring

D. Shifts normally operated:

1. ☒ Evening (4pm-12pm, 3pm-11pm, etc.) 2. ☒ Day (8am-4pm, 7am-3pm, etc.)
3. ☒ Night (12pm-8am, 11pm-7am, etc.)

E. Total number of employees at this establishment: (check range)

1. ☐ Less than 5 2. ☐ 5-49 3. ☐ 50-99 4. ☐ 100-249
5. ☐ 250-449 6. ☐ 450-749 7. ☐ 750-999 8. ☒ over 1,000

F. Type of Operation (Include brief summary of operations under ITEM 7, REMARKS)

1. ☒ Chemical 4. ☐ Mining 7. ☐ Manufacturing 10. ☐ Lumber & allied products
2. ☐ Petroleum 5. ☐ Foundry 8. ☐ Disposal 11. ☐ Metals & allied products
3. ☐ Food, etc. 6. ☐ Machine 9. ☐ Paper & allied products 12. ☐ Other (Name) _____

ASI-PR 0004214

STATE OF LOUISIANA
AIR CONTROL COMMISSION

EMISSION INVENTORY QUESTIONNAIRE

Page 2 of 6

Item 1
Cont'd

G. Raw Materials Used (Chemical name if possible or applicable)

Materials	Amount per year	Units	Form (liquid, gas or solid)	How stored	How transported or shipped
Sodium Chloride (Variable -			Liquid	Tanks	Pipeline
Calcium Carbonate Due to			Solid	Storage Pile	Belts
Coke Production)			Solid	Storage Pile	Belts
Ammonia			Gas	Tank Cars	Pipeline
Ethylene			Gas	None	Pipeline

H. Intermediate Products (Chemical name if possible or applicable)

Materials	Amount per year	Units	Form (liquid, gas or solid)	How stored	How transported or shipped
Ethylene	(Variable-due		Liquid	Tanks	Pipeline
Dichloride	to production)				barges
Chlorine			Gas	Tanks	Pipeline

I. Principal Finished Products (Chemical names if possible or applicable)

	Materials	Amount per year	Units	Form (liquid, gas or solid)	How stored	How transported or shipped
1)	Sodium Carbonate	(Variable-due to Sales)		Solid	Warehouse	Belts, elevators, Screw & Conveyor
2)	Vinyl Chloride			Liquid	Tanks	Pipes & Cars
3)	Sodium Hydroxide			Liquid	Tanks	Pipes, or Barges

J. Ownership:

1. ☐ Private 2. ☐ Municipal 3. ☐ State 4. ☐ Federal
5. ☐ Corporation 6. ☐ Partnership 7. ☒ Other Ind. Development Board
the Parish of FBR, Inc.

Item 2

COMPLETE THE FOLLOWING TABLE WITH LAST YEAR'S INFORMATION

	FUEL	QUANTITY	UNITS	QUALITY
FUEL CONSUMPTION	A. Coal used for heat & power	None	Short tons	% sulfur weight
	Coal used for production	None		
Report Quantities of fuels consumed last year	B. Light Distillate fuel oil. Nos. 1-4 (Heat & Power)	None	Gallons	% sulfur weight
	Light distillate fuel oils. Nos. 1-4 (Production)	None		

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STATE OF LOUISIANA
AIR CONTROL COMMISSION

EMISSION INVENTORY QUESTIONNAIRE

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Item 2
cont'd)

PLEASE
NOTE
UNITS OF
MEASURE
TO BE
USED

FUEL	QUANTITY	UNITS	QUALITY
C. Residual or Heavy oils Nos. 5-6 (Heat & Power)	None	Gallons	5 sulfur b. weight PPM Metals
Residual or Heavy oils. Nos. 5-6 (Production)	None		
D. Gas-natural, manufactured or mixed (Heat & Power)	15,867,000,000	Cubic Feet	0.5 ppm 5 sulfur b. weight
Gas-natural, manufactured or mixed (Production)			
E. Others - Specify kind and use 1. 2.			

Item 3

REFUSE
COLLEC-
TION
AND
DISPOSAL

- A. Amount of combustible refuse disposed of per year: 1. ☐ None
365 tons or volume (No. 28 & capacity Average 3 1/2 yds of waste containers)
- B. Form or type of refuse; (wood, rubber, paper, etc.)
All types.
- C. Principal methods of refuse collection: 1. ☐ Not Applicable
2. ☐ City pickup 3. ☐ Private pickup 4. ☒ Discosal on premises
5. ☐ Other (Specify) _____
- D. If private pickup, name of contractor and address: _____
- E. Principal Methods of Refuse Disposal: 1. ☐ Not Applicable
2. ☒ Sanitary Landfill 3. ☐ Open Dump 4. ☐ Incineration
5. ☐ Composting 6. ☐ Open Burning 7. ☐ Other _____
- F. Method of Incineration:
1. ☒ N/A 2. ☐ Single Chamber Incinerator 3. ☐ Gas Fired Incinerator
4. ☐ Multiple Chamber Incinerator 5. ☐ Boiler 6. ☐ Other _____
- G. Incinerator used: ☒ N/A
Manufacturer: _____
Model: _____
Years in operation: _____ Pollution Abatement Facilities _____
Incinerator Capacity: Pounds per hour _____
Hours of operation per week _____

STATE OF LOUISIANA
AIR CONTROL COMMISSION

EMISSION INVENTORY QUESTIONNAIRE

Page 4 of 6

am 4

EMISSIONS

A. Particulate Matter and Aerosols (exclude products of combustion)	Approximate		None	Particle size Distribution (micron range)	Present but Unable to Estimate
	#/HR	Tons/Yr			
1. Carbonaceous			☐		☐
2. Mineral Solids			☐		☐
3. Organic Particles			☐		☐
4. Other			☐		☐
5.			☐		☐
6.			☐		☐

B. Organic Gases or Vapors (exclude products of combustion)	Approximate (on stream)			None
	lbs/hr	ft ³ /hr	Tons/Yr	
1. Hydrocarbons (specify)				
a) VCM Process Vent	(See Table I attached)			☐
b)				☐
c)				☐
2. Halogenated (specify)				
a) VCM Process Vent	(See Table I attached)			☐
b)				☐
c)				☐
3. Oxidized (specify)				
a)	None			☐
b)				☐
c)				☐
4. Other (specify)				☐

C. Inorganic Gases (include products of combustion (indicate if calculated from fuel))	Approximate		None	Present but Unable to Estimate
	#/HR	Tons/Yr		
1. Sulfur Dioxide (SO ₂)	0.15	0.7 (Nat. Gas)	☐	☐
2. Hydrogen Sulfide (H ₂ S)			☐	☐
3. Halogens (specify)			☐	☐
a)			☐	☐
b)			☐	☐
c)			☐	☐
4. Other (specify)				
Hydrogen (old plant)	125	550		
(Also see Table II attached)				

ASI-PR 0004217

STATE OF LOUISIANA
AIR CONTROL COMMISSION

EMISSION INVENTORY QUESTIONNAIRE

Page 5 of 6

em 5 STACK INFOR- MATION USE " " ADDI- " " TIONAL SHEETS IF NECES- SARY	A. NAME or Description of Sources	Identi- fication Number	E M I S S I O N				S T A C K		
			Conc. PPM	Rate (cfs)	Temp. F	Exit Velocity Ft./Sec.	Diam. Feet	Elev. Above Grade	Can be Sample Yes or No
	Lime Kilns	A1 to A13	Table II	25	400	18	1.33	98	Yes
	Kilns-Dust Collector N	A14	No Data	-	-	-	3.00	98	"
	Dust Collector C	A15	No Data	-	-	-	1.33	98	"
	Dust Collector S	A16	No Data	-	-	-	1.67	98	"
	Lime Slaker (MLT) Vapors	A17 to A21	Water Vapor				2.50	105	"
	Lime (MLT) Spalls	A22 to A23	Water Vapor				1.00	50	"
	Soda Column Vent (LCL)	B24 to B27	Table II	73	70	52	1.33	177	"
	Filter Vacuum (LVFLR)	B28 to B31	"	65	80	47	1.33	122	"
	NH ₂ Absorber (LAB)	B32 to B33	"	3	70	16	0.50	28	"
	L.A. Dryers	B34 to B59	"	725	860	5	7.00	170	"
	Bag Dust Coll. S.A.	B60 to B63	(No visible emissions)				1.00	170	"
	Old Power House	C64 to C70	Table II	555	300	7	10.00	100	"
	Gas Turbine House	D71 to D74	"	4850	400	96	8.00	60	"
	(Continued-Next page)								

B. Stack Use: (indicate stack number from above)

1. ☐ Not Applicable 2. All others Process Emissions

3. 34-59; 64-70; 71-74 Fuel Combustion Product 4. Combined

Item 6 AIR POLLUTION CONTROL INFOR- MATION	A. Air Pollution Control Units in use: (indicate efficiency) 1. ☐ None 2. ☐ Settling Chamber 3. ☐ Baffles 4. ☐ Electrostatic Precipitator 5. ☐ Multiple Cyclones 6. ☒ Cloth Filters 7. ☐ Adsorption 8. ☐ Vapor Recovery System 9. ☐ Direct Fired Afterburner 10. ☐ Other Powered Inertial Separator 11. ☐ Catalytic Afterburner 12. ☐ Demister 13. ☒ Scrubber 14. ☒ Cyclone 15. ☐ Type Emission Monitor or Control System 16. ☐ Other <u> </u>
---	--

B. Do you have an established program of preventive or operational maintenance on your Air Pollution Control Equipment?

1. ☐ N/A 2. ☒ Yes 3. ☐ No 4. If Yes, Describe on separate sheet.

It is part of the normal preventative maintenance program for the plant.

STATE OF LOUISIANA
AIR CONTROL COMMISSION

EMISSION INVENTORY QUESTIONNAIRE

Page 5 of 6 (C)

Item 5

STACK
INFOR-
MATION

USE
ADDI-
TIONAL
SHEETS
IF NECES-
SARY

A. NAME or Description of Sources	Identi- fication Number	E M I S S I O N				S T A C K		
		Conc. PPM	Rate (cfs)	Temp. F	Exit Velocity Ft./Sec.	Diam. Feet	El v. Above Grade	Can be Sample Yes or No
Bag Dust Coll-P&L	E75	(No visible emission)				2.13	170	Yes
" " D.A.	F76 to F79	"	"	"	"	2.13	197	"
Dense Ash RGS	F80	(Water vapor)				2.33	169	"
Ducon RGS	F81	(" ")				3.00	205	"
S.Cl ₂ Sect.-H ₂ Vents	G82 to G90	95%+	0.37	110	7.5	0.25	25	"
" " Salt Scrub.	G91	(No data)				1.50	60	"
" " " "	G92	(No data)				1.33	52	"
N.Cl ₂ Sect.-H ₂ Vents	H93 to H95	(Water vapor)				3.00	40	"
" " Mastic Pots	H96	(Discontinued use)				1.07	30	"
" " Lead Furn.	H97	(Combust.gases-little lead and smoke)				2.50	30	"
" " Tinning Furn	H98	(Combust. gases-little tin and HCl)				0.83	30	"
" " Acid dip	H99	(Combust. gases-Small amt. H ₂ and HCl)				1.50	30	"
VCM process	J100	Table I	117	115	84	1.33	165	"
Vinyl Furnaces	J101 to J112	Table II	36	800	19	1.67	50	"

B. Stack Use: (indicate stack number from above)

1. ☐ Not Applicable 2. All others Process Emissions
3. J 101 Fuel Combustion Product 4. H97 to H98 Combined

Item 6

AIR
POLLUTION
CONTROL
INFOR-
MATION

A. Air Pollution Control Units in use: (Indicate efficiency)
(See preceding page)

- | | |
|--|--|
| 1. ☐ None | 8. ☐ Vapor Recovery System |
| 2. ☐ Settling Chamber | 9. ☐ Direct Fired Afterburner |
| 3. ☐ Baffles | 10. ☐ Other Powered Inertial Separator |
| 4. ☐ Electrostatic Precipitator | 11. ☐ Catalytic Afterburner |
| 5. ☐ Multiple Cyclones | 12. ☐ Demister |
| 6. ☐ Cloth Filters | 13. ☐ Scrubber |
| 7. ☐ Adsorption | 14. ☐ Cyclone |
| | 15. ☐ Type Emission Monitor or Control System |
| 16. ☐ Other _____ | |

B. Do you have an established program of preventive or operational maintenance on your Air Pollution Control Equipment?

1. ☐ N/A 2. ☐ Yes 3. ☐ No 4. If Yes, Describe on separate sheet.

STATE OF LOUISIANA
AIR CONTROL COMMISSION

EMISSION INVENTORY QUESTIONNAIRE

Page 6 of 6

Item 6
(cont'd)

C. Approximately how much money have you spent on Air Pollution Control Equipment and operation in the past 10 years or in the _____ Years the plant has been in operation?

☐ None

Equipment \$ 1,083,000

Operation \$ 1,552,000

Combined \$ 2,635,000

D. On a separate sheet list air pollution abatement measures which are or otherwise incomplete. What is the projected reduction in emissions after completion (tons/year reduction)? (Include type and level of emissions for specific years.)

Item 7
REMARKS

Please supply a simplified flow diagram or block diagram of plant or plants on a separate sheet. Type or print pertinent information. Include brief summary of process or operations.

Item 8
PER-
SONNEL

List plant personnel responsible for Air Control.
(To be contacted for visits and communication)

A. Name: Frank P. Turk

Title Supervisor Exits & Effluents

Telephone No. 356-3341

B. Name: A. J. LaVine

Title Superintendent-Quality Control

Telephone No. 356-3341

C. Name: P. B. Cornell

Title Plant Manager

Telephone No. 356-3341

Name of responsible member of operation

Date

Paul B. Cornell

May 25, 1971

Title of responsible member listed above and address and telephone No.

Manager-Baton Rouge North Works (Phone-356-3341)

P.O. Box 271

Industrial Chemicals Division, Allied Chemical Corp.

Baton Rouge, La

Print or Type name of person preparing report.

Frank P. Turk

Title of above person

Telephone No.

Area Code

Supervisor-Exits & Effluents

356-3341

504

ASI-PR 0004220

TABLE I

VCM Process Vent

Addenda-Page 1

		% by Volume	Lbs per Hour	Cu.Ft. per Hour	Tons per Year
*	1) N ₂	82.1	23,150	347,000	101,500
	2) CH ₄	7.9	1,128	33,600	4,940
	3) O ₂	4.6	1,480	19,400	6,480
	4) CO ₂	3.3	1,460	13,900	6,390
	5) C ₂ H ₄	1.0	284	4,260	1,245
	6) 1-2 C ₂ H ₄ Cl ₂	0.4	418	1,770	1,830
	7) CO	0.2	48	715	210
	8) 1-2 C ₂ H ₄ Cl ₂	0.2	166	704	727
	9) H ₂ O	0.1	25	580	110
	10) CHCl ₃	0.1	146	519	639
	11) C ₄ H ₅ Cl	0.04	39	184	171
	12) C ₂ H ₅ Cl	0.03	23	153	101
	13) C ₂ H ₆	0.005	3.84	21	16.8
	14) C ₂ HCl ₂	0.0009	1.25	4	5.5
		100.0	28,372	422,807	124,365

Stack Diameter = 16"
 Stack Height = 165'
 Vent Gas Temperature = 115°F
 Vent Gas Flow = 117.4 Cu.Ft./Sec.
 Vent Exit Velocity = 84 Ft/Sec.

- | | |
|----------------------------|----------------------------|
| * 1) Nitrogen | 8) 1,1 Ethylene Dichloride |
| 2) Methane | 9) Water |
| 3) Oxygen | 10) Chloroform |
| 4) Carbon Dioxide | 11) Chloroprene |
| 5) Ethylene | 12) Ethyl chloride |
| 6) 1,2 Ethylene Dichloride | 13) Ethane |
| 7) Carbon Monoxide | 14) Trichloroethylene |

TABLE II

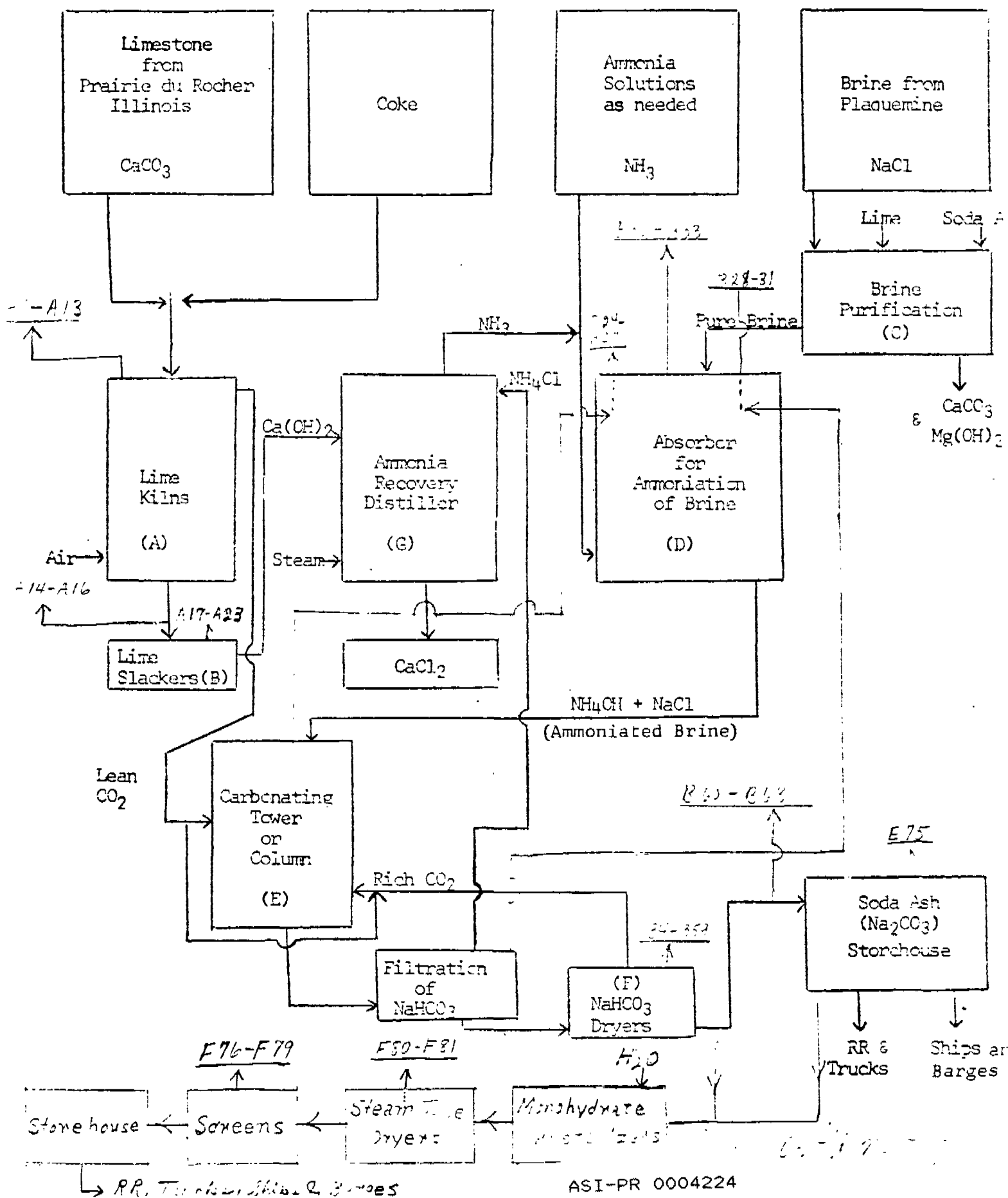
Addenda-page 2

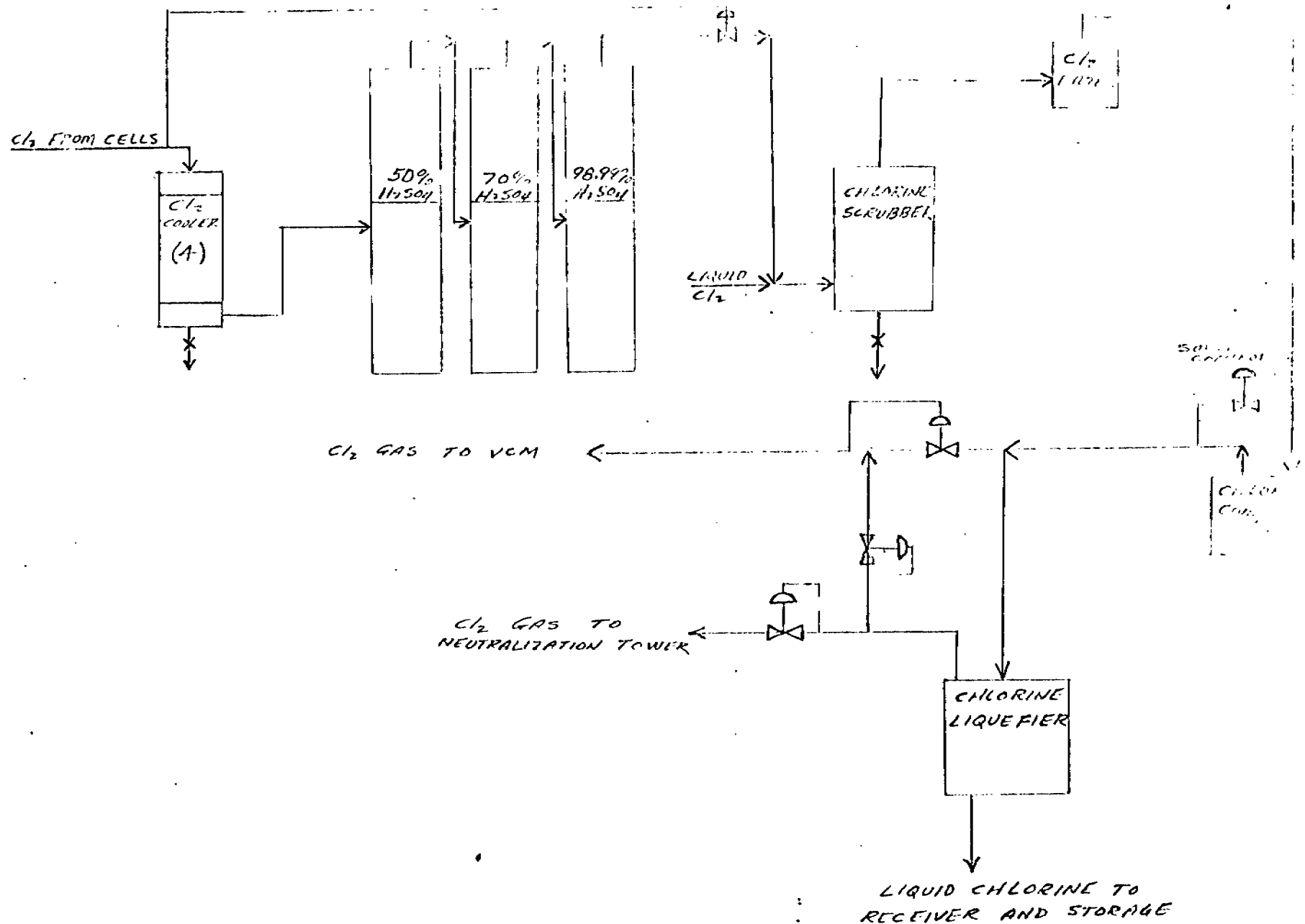
Inorganic Gases Including Products of Combustion

Identification	Tons per year					
	N ₂	CO ₂	CO	O ₂	NH ₃	H ₂ O
Lime Kilns						
A1 to A13	125,436	133,744	1,273	485	-	-
Soda Column Vent (LCL)						
B24 to B27	322,749	5,121	3,750	9,940	341	-
Vacuum Filter (LVFLR)						
B28 to B31	198,500	62,230	-	59,850	103	-
Ammonia Absorber (LAB)						
B32 to B33	2,870	65	-	885	7	-
Soda Ash Dryers (SHT)						
B34 to B59	968,000	158,500	-	64,100	-	129,600
Old Power House						
C64 to C70	1,770,000	336,000	-	50,600	-	275,000
Gas Turbine Power House						
D71 to D74	10,007,424	491,424	-	2,041,080	-	409,968
Lead Melting Furnace						
H97	(No data -----)					
Tinning Furnace						
H98	(No data -----)					
Vinyl Furnaces						
J101 to J112	147,500	28,950	-	2,330	-	21,660

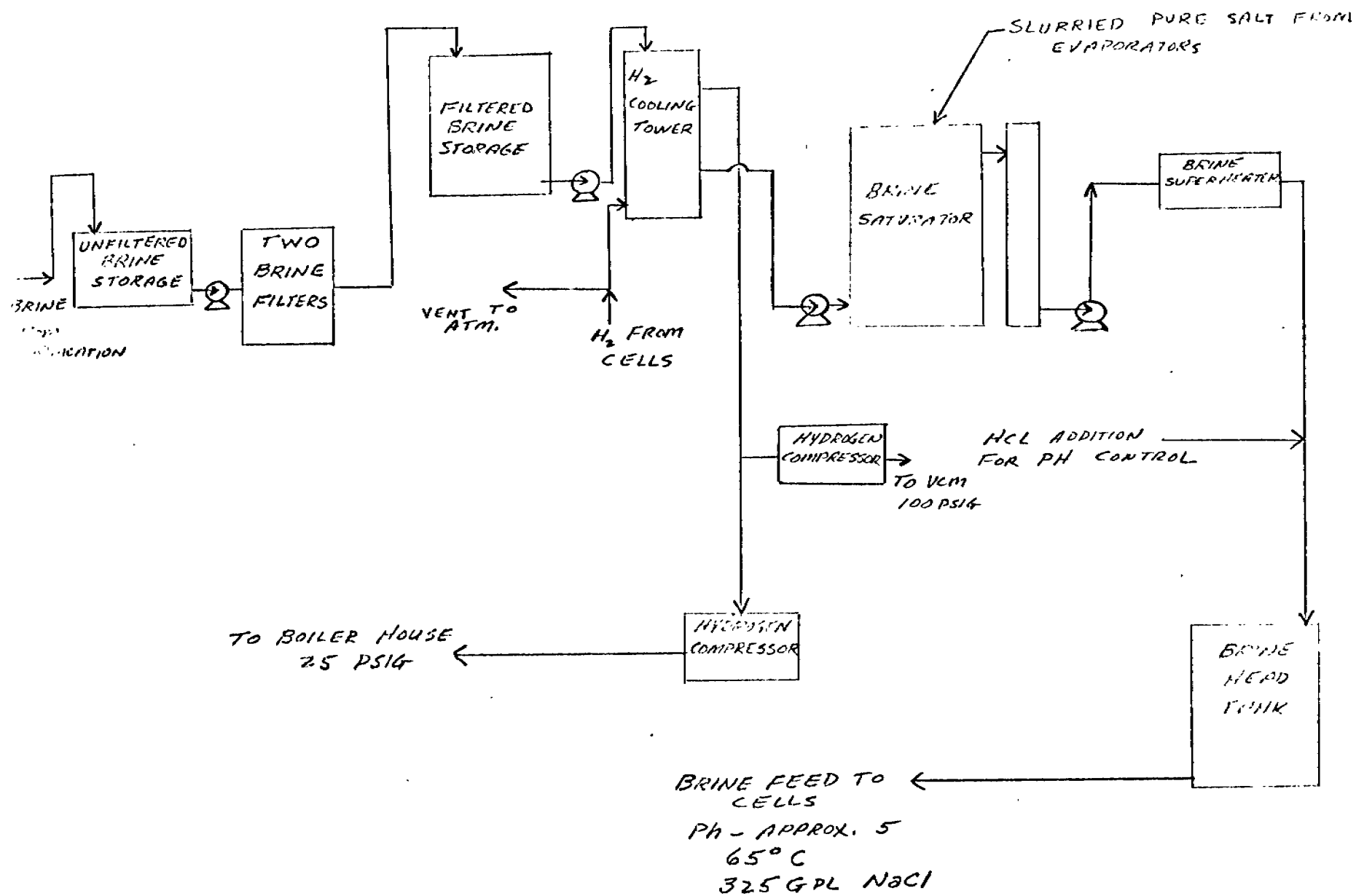
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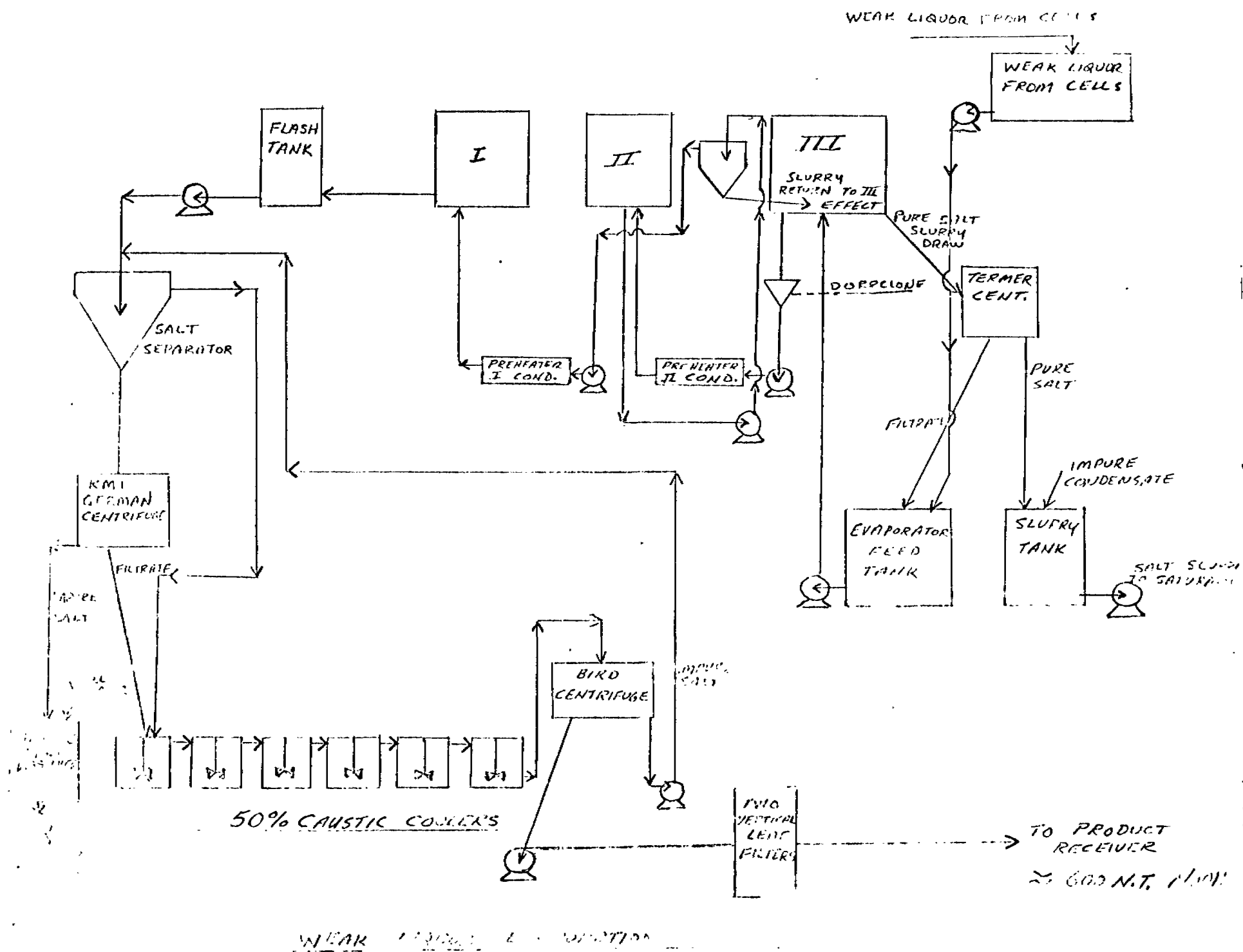
- 1) Design and install dust collecting systems on soda ash loadings into trucks and rail cars. The completion of these systems will probably be spread over the next five (5) years. The quantity of present dust loss is unknown.
- 2) Renovate and improve dust systems on kilns lime dischargers and conveyors. Action has been initiated and should be completed within a year. The present lime dust loss is unknown.
- 3) Plans call for purchase and installation of three improved bag dust collector systems to replace the ones in Nos. 1, 3 and 4 elevator towers. This is designed primarily to reduce present maintenance costs, but will also reduce dustiness. The replacement will be about one dust collector per year.
- 4) Four bag dust systems are to be replaced in the dense ash operating systems. Conditions will be similar to those in item 3 above.
- 5) Design and install a scrubber for lead and organic fumes from the cell construction furnaces at the chlorine caustic north section. Expect completion in 1972.
- 6) Provide chlorine recovery stripper on chlorine gas cooling tower condensate now going to sewer at chlorine-caustic north.
- 7) Provide vent condensers to reduce chlorinated hydrocarbons going to atmosphere.





CHLORINE HANDLING

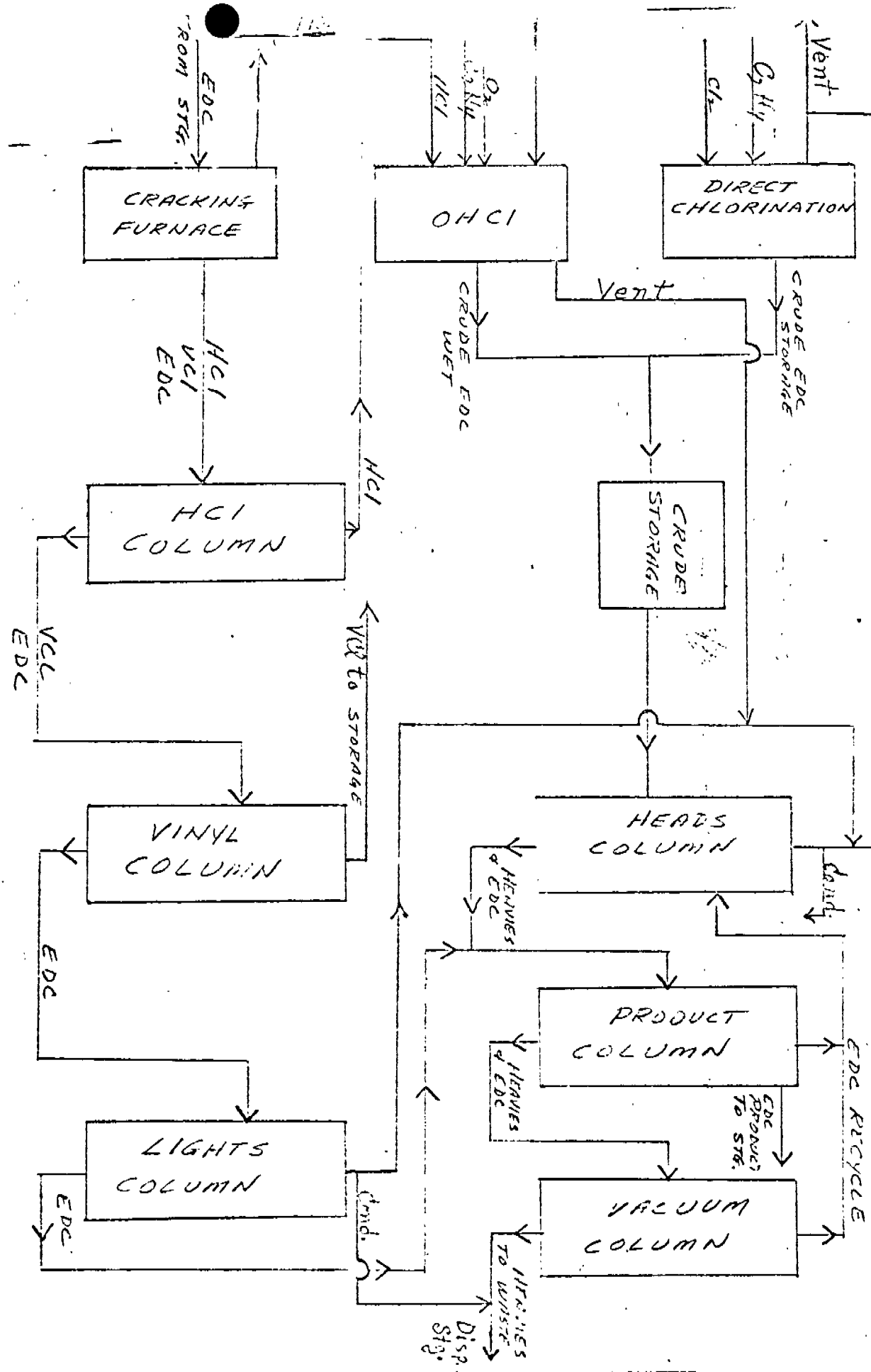




Process to Flare

Yield - 2.100

LIGHTS
w. 150



Item 7 (page 6) Continued

Stacks G82 to H99

- G82 to G90: This is the old electrolytic caustic chlorine operation. It consists of 19 electrical half banks of cells. Each bank contains 52 cells and has one H_2 vent stack common to each cell of the bank. Only 18 half banks are in operation at any particular time. The electrolytic products are chlorine gas which is liquified, H_2 gas which is vented and NaOH in brine solution which is further processed.
- G91 to G92: The above NaOH in brine solution is evaporated to drop out the salt which is recovered as pure dry salt by drying in a direct fired rotary dryer. The G91 stack is on the scrubber of the exit gases from the dryer. The G92 stack is on the scrubber of the exit air from the pneumatic conveying of the dried salt.
- H93 to H95: These are hydrogen vent stacks on the new and larger electrolytic chlorine-caustic operation. The H_2 gas from this operation is normally recovered as fuel to the boiler house. The stacks are for emergency use.
- H96 to H99: The new cells require a bed of poured lead for electrical contact with the graphite anodes. A mastic is used to insulate this lead from electrical contact with the brine anolyte. After the anodes are depleted, the lead and mastic are recovered for reuse. Due to recent improvement, the mastic pots are now electrically heated, whereby practically no fumes go to stack G96. The recovered lead containing some mastic (also new lead) is direct fired for melting and reuse. The gases go to H97 which also picks up vent from a copper bar buffing station. All copper connecting bars are buffed, dipped in acid and in flux (H99) and in a tinning vat (H98).