

PLANT "A" ENVIRONMENTAL SURVEY

PART III

SHIPPING DEPARTMENT

M-9223

Environmental

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ABSTRACT

A task force was assigned to conduct an environmental survey of Plant A Shipping areas. The task force members were comprised of personnel from Plant A Shipping, Operations and Technical Departments and the Environmental Department. The survey was conducted February 26 - March 1, 1985. The task force reviewed environmental regulations and past environmental upsets pertaining to the Plant A Shipping operation. During the survey, the environmental condition of each shipping area was evaluated, loading procedures were examined, and hourly and supervisory Shipping personnel were interviewed.

Two major problem areas were identified: 1) Outfall 021 receives process water from the chlorine tank car and ton cylinder test areas. This outfall is permitted only for storm run-off and once through, non-contaminated cooling water; 2) Proper material handling and the containment of spills is inadequate for organic products which have a one pound minimum reportable release quantity. These products are: ethyl chloride, vinyl chloride, trichloroethane and perchloroethylene. Other problems found during the survey for the most part were minor in nature.

Recommendations for rectification of these problems are given. Some recommendations may involve engineering and construction. They include the elevation of dock loading lines, construction of organic sumps at the dock areas and the relocation of test facility drains to the 30" process sewer. The relocation of test facility drains to the 30" process sewer is part of engineering project P-1031, which is awaiting approval from the General Office at this writing.

INTRODUCTION

The purpose of this report is to present the findings of the Plant A Shipping Department environmental survey. The survey was conducted to identify environmental problem areas and recommend corrective action as needed. The task force organized to conduct the survey was made up of the following people:

Darrell Moore	Shipping (Chairman)
Carey Hardaway	Process Engineering
Andy Plauche'	Environmental
Cliff Beadle	Shipping
Rick Gros	Shipping
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The survey was conducted from February 26 to March 1, 1985 and completes the review of Plant A from an environmental point of view. Two other surveys conducted in 1984 identified problems in all Plant A operating areas. The findings of these surveys are contained in two reports, "Plant A Environmental Survey, Part I - North Half" and "Plant A Environmental Survey, Part II - South Half".

PROCEDURE

This section will outline the basic steps that the task force took to conduct the Shipping environmental survey.

I. Review of Shipping Related Environmental Upsets

The task force obtained a list of reported environmental upsets which had occurred over the last 2½ years. These upsets were reviewed before any actual surveying was done. Each upset was discussed with recognition given to the cause and possible prevention. The problems identified were given close attention during the actual survey. The environmental reports for each upset reviewed is included in the appendix of this report.

II. Survey of All Plant A Shipping Areas

Plant A Shipping was divided into the following major areas:

- 1) Chlorine tank car prep and loading stations, including the valve repair and test areas.
- 2) Chlorine tank car test area, including the caustic car used for a vent scrubber.
- 3) Heavy chlorine tank car unloading, patio (chlorine valve manifold area for tank car loading), and sniff tank.
- 4) Ton cylinder building.
- 5) Tank car repair shop area.
- 6) Caustic truck loading facility.
- 7) Caustic tank car loading area.
- 8) Barge and ship loading docks (A B C D & E).
- 9) Organics storage tank area.
- 10) Sulfuric acid unloading at Liquefaction and Mercury Cell.

The task force surveyed each of the areas. Upon arrival in each area, the products and potential wastes that were being handled were pointed out as well as which outfall or part of the environment would be affected should a spill occur. Procedures for handling the product/potential waste were explained and sometimes demonstrated. The condition of the equipment and overall area was evaluated for how it could effect the environment. Past environmental problems (not necessarily reported) were discussed. Questions and comments were directed to personnel working in the area. Notes were taken by all members of the task force.

III. Wrap-up Session for Each Area

At the end of each day, the task force would discuss the major items found in each area. Risk analysis and recommendations for improvements were determined. Questions on specific items were prepared for the interview with the foremen and supervisors of the area.

IV. Interview With Foremen and Supervisors of Each Area

The interviews presented the information found during the survey to the foremen and supervisors in the Plant A Shipping Department. Questions were answered and recommendations for improvements were discussed.

ENVIRONMENTAL REGULATIONS

This section will describe the environmental regulations that pertain to the Plant A Shipping area. The regulations deal with limiting the number of accidental chemical spills to the environment and quality of all the plant's effluent streams. The regulations discussed in this report will be in the four following areas:

- I. Non-containable and Non-treatable Spills and Vapor Releases of Chemicals Found in the Plant A Shipping Area
- II. Plant A Shipping Effluent Outfalls - Regulations and Monitoring
- III. Regulations for Plant A Shipping Dock Facilities
- IV. Other Environmental Considerations

I. Non-containable and Non-treatable Spills and Vapor Releases of Chemicals Found in the Plant A Shipping Area

When a chemical is released to the environment where it cannot be contained and recovered or treated at a permitted location, the amount of the release must be determined and promptly reported to the appropriate Plant A Shipping supervisor. If the amount exceeds the minimum reportable quantity listed below, the chemical release must be reported to the proper environmental agency (done by PPG's Environmental Control Department).

Minimum Reportable Quantities for Chemicals
in Plant A Shipping

<u>Chemical</u>	<u>Minimum Reportable Quantity</u>
Chlorine	10 lbs
Ethyl Chloride	1 lb
Ethylene Dichloride	5,000 lbs
Perchloroethylene	1 lb
Sodium Hydroxide (Ab)	1,000 lbs
Sulfuric Acid	1,000 lbs
Trichloroethane (1,1,1)	1 lb
Trichloroethylene	1,000 lbs
Vinyl Chloride	1 lb

Oil - the minimum reportable quantity of an oil spill is any amount that creates a sheen in the effluent or outfall.

Due to safety factors and the many other environmental considerations, it must always be stressed that all chemical spills be promptly reported to supervision whether the minimum reportable quantity was exceeded or not.

II. Plant A Shipping Effluent Outfalls - Regulations and Monitoring

Nearly all liquids which flow out of the process and shipping areas of the plant are routed through outfalls. Outfalls throughout the plant are distinguished by their location and are permitted by the National Pollutant Discharge Elimination Systems (NPDES) for type of effluent, type of monitoring and limitations placed on them. General information about Plant A Shipping outfalls are listed below. Drawings and outfall permits are contained in the appendix.

A. Outfall 014, 001

Outfall 014 is presently an internal monitoring station which collects process effluents from Mercury Cell (outfalls 011 and 111), Plant A Electrolyzer Chlorine process waste water and once-through cooling water, and process streams from the north half of Plant A. Outfall 014 is commonly referred to as the 30" process sewer. Some drainage from the caustic car loading area is collected and sent to the 30" sewer.

Outfall 014 discharges into the PPG canal which flows through outfall 001. Outfall 001 is the final monitoring point for PPG's process waste water. It is monitored for flow, temperature, pH, mercury, and organics. The pH is recorded in the Shift Superintendent's office. The acceptable pH range is 6 to 9. Any pH value which is outside of the range of 4 to 11 is a reportable violation. Any pH outside the range of 6 to 9 is known as an excursion. Excursions which exceed one hour become reportable violations.

The 30" process sewer is monitored for pH at the southwest corner of the rectifier building. This pH is indicated in the Plant A Electrolyzer Chlorine control room, Plant A Caustic control room and the Shift Superintendent's office. This pH monitoring is used to identify pH upsets before the flow reaches outfall 001.

Outfall 014 has a chlorine and pH monitor which is indicated in the Shift Superintendent's office. A high chlorine alarm is in the guard office. A grab sample is caught once per shift by the Electrolyzer operator. The sample point is located at the 30" process sewer pH monitoring probe. The sample is analyzed for pH and chlorine.

B. Outfall 021

Outfall 021 discharges north of the 50% caustic storage tanks 108, 109 and 110 into Bayou Verdine (Olin Ditch). The north and south 54" and north 72" sewers combine to form outfall 021. In the Plant A Shipping area these sewers primarily collect surface drainage from the caustic car and truck loading, car repair shop and chlorine car loading areas. Elsewhere outfall 021 collects the surface runoff from the Pels area tank farm, north and south liquefaction, brine treatment and sulfur chloride areas. Areas with once-through uncontaminated cooling water are the Plant A Caustic B set weak pan condenser, anhydrous concentrator condensers, and the Pels coolers.

Outfall 021 is currently permitted to discharge only surface runoff and once-through uncontaminated cooling water. There are no other limitations established in the permit.

The outfall is monitored continuously for flow, pH and temperature. The results are recorded in the Pels control room. High and low pH alarms are set for 9 and 6 respectively. Strip charts and log sheets are saved and sent to the Records Department.

C. Outfall 024

Outfall 024 discharges into the Calcasieu River. It collects storm runoff from Powerhouse A, overflows from the rainwater collection tank and sump and the surface drainage from the caustic and chlorinated hydrocarbon dock storage areas. Outfall 024 is permitted for surface drainage and must maintain a pH level between 6 and 11. The pH is monitored via 5 grab samples per week (when flowing).

D. Outfall 005

Outfall 005 discharges into the PPG barge slip and collects once-through cooling water from Plant A Electrolyzer Chlorine, treated sanitary waste water from Plant A, storm runoff from Powerhouse A, and surface drainage from the caustic and chlorinated hydrocarbon dock storage areas. The permit limits the pH from this outfall to be between 6 and 9. The pH is monitored 3 times a week via grab samples.

III. Regulations for Plant A Shipping Dock Facilities

The environmental regulations for loading products on barges and ships fall under the jurisdiction of the U.S. Coast Guard. A detailed description of these regulations would be beyond the scope of this report. Copies of the regulations can be obtained from the Plant A Shipping Department. Extensive training in these regulations is required for all licensed tankermen. Currently the shipping lead tankermen are licensed.

In addition to the U.S. Coast Guard regulations, the EPA regulations are also in effect while loading ships and barges unless the Coast Guard regulations specifically state otherwise.

IV. Other Environmental Considerations

Many more environmental regulations exist than have been covered in this section of the report. In order to assure the compliance of all environmental regulations, it must always be stressed that all spills and environmental upsets be reported to supervision. Prompt action in reporting gas releases and spills is also necessary. A chlorine gas release could involve coordination between PPG supervision and the State Police to safely secure sections of highways. A chemical spill on the ground that doesn't even reach an outfall ditch could involve the immediate excavation and proper disposal of the area that collected the spill.

The Environmental Control department has the responsibility of identifying and defining the environmental regulations and reporting environmental upsets to the proper authorities. But, it is the responsibility of each employee to report any and all environmental upsets.

SURVEY REPORT

This section contains an area-by-area outline of the task force findings during the Plant A Shipping environmental survey. Descriptions of existing or potential problems are given along with an analysis of the risk involved. The risk analysis for the major sources of environmental upsets ranges from High to Rare. These are used to give some indication of the overall probability of the upset occurring as well as the frequency and quantity of pollutant. The risk is assigned based on the analysis of the survey task force, and may differ from that of the General Foreman or Environmental Department. However, the risk can be used as a guideline by which area priorities can be arranged. The risk assigned to each item is on the basis of the environmental impact it has and not on the safety aspect.

High Risk: Occurs frequently or results in large amounts of the listed pollutant. These items appear frequently in historical records of the outfalls.

Moderate Risk: Occurs often enough to be an area of concern, but rarely results in violations.

Low Risk: These upsets are uncommon.

Rare: These items are mostly potentials only, where an actual upset is not expected and in most cases have never occurred. Major cause of these upsets would be human error or extremely unlikely conditions.

The comments in this section pertain only to the environmental condition of the area when it was surveyed. Recommendations are given in a latter section of this report.

I. Area: Chlorine Tank Car Loading Rack

- A) Description: Chlorine leaks in valves, fittings and hose connections while loading or preparing a chlorine car.

Pollutant: Chlorine in the air

Risk: Low

Comments: 1) Leaks are infrequent on valves and flanges and are promptly repaired. Leaks are readily detected with ammonia water.

2) Hose leaks are due to the hose becoming old and worn. Some hoses get worn spots due to the way they are bent while in the process of connecting and disconnecting them.

3) During chlorine loading, hose and fitting leaks are sometimes checked by pressurizing with liquid chlorine. If a leak should occur, the line must be isolated, cleared and broken at the leaking fitting for repair. The use of liquid chlorine for leak testing along with improper line clearing increases the chance of chlorine release.

4) Proper clearing of chlorine through the sniff system takes longer with the ton cylinder valve and 3/8" copper tubing connection than it previously did with a 1" valve and 1" piping connection. However, the "old" 1" sniff valve required constant maintenance to reduce leakage, whereas the ton valves require little maintenance. A search for a better valve is being made.

5) A small amount of chlorine is released when a vapor sample is collected from the car. The method used is to purge the burette to the air with the chlorine sample before catching the sample.

6) The installation of 3" globe valves to replace 3" ball valves has helped in reducing chlorine leaks from idle prep stations. Required plugging of the idle hose connections has also helped. Some hoses were found not to be plugged.

7) Installation of automatic block valves on the chlorine lines at the loading stations provide a safe and fast way to block the flow of chlorine should a leak occur.

- B) Description: Grease and triethane^(R) spills at the valve repair and test area.

Pollutant: Oil sheen and triethane^(R) spill to outfall 021.

Risk: Rare

Comments: 1) Handling triethane^(R) is critical because there is a one pound minimum reportable quantity should a spill occur.

2) Possible spillage of triethane^(R) could be caused from a) improper disposal, b) carrying triethane in buckets c) overflowing the collection basin or collection drum downstairs. Triethane^(R) is disposed of via drums which are supplied to catch used triethane^(R).

3) Steam cleaning is used at the 1" angle valve repair area for removing grease from chlorine tank car valves. The steam cleaning drain discharges to outfall 021 via surface drainage sewers and creates a potential for an oil sheen at outfall 021. This discharge is considered to be a process stream and outfall 021 is not permitted for process streams.

- C) Description: Chlorine release at powerhouse stack while blowing down cars or barges.
Pollutant: Chlorine in the air
Risk: Low
Comments: 1) When waste chlorine in the 8, 6 and 4 inch lines is being neutralized at Mercury Cell, a large blowdown of a car or barge could cause a sudden buildup of pressure in the absorber or neutralizer. If the high pressure trip limit is reached in the absorber or neutralizer, the automatic valves on the 8 and 6 inch lines will divert the flow of chlorine from Mercury Cell to the powerhouse stack. The 4 inch shipping blowdown automatic valve will shut off the blowdown flow.
2) Shipping personnel are instructed to call Mercury Cell prior to blowing down a car or barge.
3) Mercury Cell personnel are instructed to manually trip the 4 inch blowdown header should the blowdown cause the pressure in the absorber or neutralizer to approach the trip limit.

II. Area: Chlorine Tank Car Test Rack

- A) Description: Chlorine leaks from hose connections and piping while blowing down.
Pollutant: Chlorine in the air
Risk: Low
Comments: 1) Leaks are infrequent on valves and flanges and are promptly repaired. Leaks are readily detected with ammonia water.
2) Hose leaks are due to the hose becoming old and worn. Some hoses get worn spots due to the way they are bent while in the process of connecting and disconnecting them.
3) Proper clearing of chlorine through the sniff system takes longer with the ton cylinder valve and 3/8" copper tubing connection than it previously did with a 1" valve and 1" piping connection. However, the "old" 1" sniff valve required constant maintenance to reduce leakage, whereas the ton valves require little maintenance. A search for a better valve is being made.
- B) Description: Chlorine release at powerhouse stack while blowdown down car.
Pollutant: Chlorine in the air
Risk: Low
Comments: 1) When the 8, 6 and 4 inch waste chlorine lines are being neutralized at Mercury Cell, a large blowdown of a car or barge could cause a sudden buildup of pressure in the absorber or neutralizer. If the high pressure trip limit is reached in the absorber or neutralizer, the automatic valves on the 8 and 6 inch lines will divert the flow of chlorine from Mercury Cell to the powerhouse stack. The 4 inch shipping blowdown automatic valve will shut off the blowdown flow.
2) Shipping personnel are instructed to call Mercury Cell prior to blowing down a car or barge.
3) Mercury Cell personnel are instructed to manually trip the 4 inch blowdown header should the blowdown cause the pressure in the absorber or neutralizer to approach the trip limit.

- C) Description: Chlorine release or caustic spill while filling car with water.
Pollutant: Chlorine in the air and/or Caustic spillage in outfall 021
Risk: Low
Comments: 1) While filling a test car with water, vapors are vented to a caustic car where chlorine can be neutralized. The caustic car is located at the sulfuric acid unloading station.
2) A chlorine release could be caused from a) rupture in the PVC vent line, b) improper vent line hook-up to the caustic car, c) low liquid level in the caustic car and d) insufficient caustic concentration in the caustic car.
3) A caustic spill to outfall 021 could occur if the vapor/liquid check valve on the vent line fails (often does) and water flows through the vent line overflowing the caustic car.
4) The caustic car is replenished with caustic at the caustic tank car loading rack. When the caustic car gets too full, a vacuum truck removes some of the weak caustic and either puts it into the Shift Superintendent's outfall 001 caustic tank or the Plant B Waste Treatment Unit bleach storage tank, depending on the hypochlorite concentration.
5) Whenever a sulfuric acid car is unloaded all venting from the test car rack is stopped. The "absences" of the caustic car is logged in the log book.
- D) Description: Draining hydrostatic test water to outfall 021.
Pollutant: Process water to a non-permitted sewer, pH upsets in outfall 021
Risk: High
Comments: Outfall 021 is not permitted for any process streams. Only surface drainage and uncontaminated once-through cooling water are permissible.

III. Area: Heavy Tank Car Unloading, Patio and Sniff Tank

- A) Description: Chlorine leaks in valves, fittings and hose connections while unloading heavy tank cars.
Pollutants: Chlorine in the air
Risk: Low
Comments: 1) Leaks are infrequent on valves and flanges and are promptly repaired. Leaks are readily detected with ammonia water.
2) Hose leaks are due to the hose becoming old and worn. Some hoses get worn spots due to the way they are bent while in the process of connecting and disconnecting them.
- B) Description: Vacuum loss in sniff system while sampling a heavy chlorine car.
Pollutant: Chlorine in the air
Risk: Rare
Comments: Liquid chlorine is purged to the sniff system while sampling a heavy chlorine car. Having liquid chlorine in the sniff system piping presents the risk of losing the sniff system vacuum and possibly causing chlorine to leak at another location where the sniff system is in use. There was no indication that this has ever been a problem before.

- C) Description: Undesired movement of railroad car while unloading
Pollutant: Chlorine in the air
Risk: Rare
Comments: 1) This risk potential applies for all stations that service railroad cars whether it is for chlorine, caustic or acid. It is mentioned in this section because of one such occurrence while unloading a heavy chlorine car.
 2) To prevent future occurrences, much attention has been given to stress the required use of brakes and chocks on the car being serviced as well as the proper use of derails and blue flags.
- D) Description: Chlorine leaks in valves and expansion bottles on the patio
Pollutant: Chlorine in the air
Risk: Low
Comments: 1) Newer types of valves and packing has reduced the potential for valve leaks. Other types of valves are being tested.
 2) The expansion bottles have not been within plant specifications. This can cause problems at weak points in the system such as valves and flanges because adequate expansion was not supplied. Presently work is being done to meet the specifications. This will reduce the possibility of a chlorine release due to lack of expansion space.
- E) Description: Draining the sniff tank to outfall 021
Pollutant: Process water to a non-permitted sewer, low pH upsets in outfall 021
Risk: Rare
Comments: Work has already been planned to adapt the sniff tank drain line for vacuum trucks.

IV. Area: Ton Cylinder Building

- A) Description: Chlorine leaks while loading cylinders
Pollutant: Chlorine in the air
Risk: Low
Comments: 1) Minor leaks can be easily corrected.
 2) There is a potential for the copper tubing filling line to break and release liquid chlorine. Breaks can occur from high pressure "blowing out" weak points or personnel tripping over the tubing.
- B) Description: Chlorine venting to atmosphere at the ton cylinder test area
Pollutant: Chlorine in the air
Risk: High
Comments: Chlorine ton cylinders being tested are vented to the atmosphere (just outside ton cylinder building) while steaming or filling with hydrostatic test water.
- C) Description: Draining hydrostatic test water from ton cylinder to outfall 021
Pollutant: Process water to a non-permitted sewer
Risk: High
Comments: Outfall 021 is not permitted for any process streams.

V. Area: Tank Car Repair Shop

- A) Description: Draining excess material left in cars to outfall 021
Pollutant: The material which was last loaded into the car.
Risk: Rare
Comments: Outfall 021 is not permitted for any process streams.
- B) Description: Oil spills creating oil sheens at outfall 021
Pollutant: Oil sheen at outfall 021
Risk: Rare
Comments: Lubrication oil from car wheel systems that have not been converted to roller bearings is stored in a drum and is picked up for disposal by the oiler. This hazard will be eliminated as wheel systems are converted to roller bearings.

VI. Area: Caustic Truck Loading

- A) Description: Spillage not contained by the truck loading sump.
Pollutant: Caustic spill. High pH in outfall 021.
Risk: Rare
Comments: 1) The truck loading sump is pumped to the 50% area overflow sump. A valve on the east boundary of the truck loading platform can be opened to allow the truck loading sump to overflow to the 50% area sump.
2) Spillage not contained by the truck loading sump can occur because, a) truck dump valve is open when filling is initiated b) truck loading sump overflow valve is closed and sump pump is not running, c) caustic overfills and runs over the truck due to scale or automatic valve malfunction.

VII. Area: Caustic Tank Car Loading

- A) Description: Caustic spills to outfall 021
Pollutant: Caustic spill. High pH upset at outfall 021.
Risk: Low
Comments: 1) Spills to the ground that occur in the vicinity of the north tracks will be washed to outfall 021 via rainfall.
2) Overfilling a car has occurred due to inattention of the tankerman. Car levels are manually gauged while filling.
3) Belly pans are used to collect drainage of tank car washings. These pans can be bent by passing tank cars, tearing the pan away from its drain pipe. If this condition goes unnoticed, material can leak under the pan to the ground. In addition, splash screens used while draining wash water can become worn, losing their effectiveness in preventing splashing outside of the pans.
4) When unloading caustic from a car, splashing is avoided by using a 10" pipe designed to be placed under the nozzle allowing the liquid to drain out of holes located on the bottom. This apparatus could not be located at the time of the survey.
5) Automatic shut-off switches for the E-50 and MC-50 loading pumps are located on the loading platform. In addition to safety, these switches can help minimize spills due to pipe leaks and overflows. There were no switches for the 70% caustic loading pumps that were operational during the survey. Work orders have been written for the installation of switches and flange guards.

6) Steam that is used for clearing out the caustic tank car loading arms sometimes leaks into a loading arm when not in use. This causes caustic contaminated condensate to overflow from the raised end of the idle loading hose to the ground.

- B) Description: Caustic spills to 30" sewer
Pollutant: Caustic causing possible high pH upset at outfall 001
Risk: Low
Comments: 1) Spills on the ground that occur in the vicinity of the south tracks will be washed to the 30" sewer. All caustic loading pump pads south of the tracks also drain to the 30" sewer.
2) All comments in Section VII, A apply.
3) Spills on the caustic loading pump pads can be caused as a result of packing leaks and improper drainage of caustic piping when caustic from the storage tank drains out of the pump suction bleed.

VIII. Area: Barge and Ship Loading Docks, A, B, C, D & E

- A) Description: Insufficient drainage of loading lines causing product to spill into the river
Pollutant: Ethyl chloride, vinyl chloride, trichloroethane and perchloroethylene will probably result in a reportable violation since the minimum reportable quantity is one pound. All the other products will also be addressed since it is desired to have nothing unnecessarily spilled into the river.
Risk: High
Comments: 1) Adequate provisions for the draining of loading lines and hoses downstream of the block valves did not exist except for the following: a) caustic at 'C' dock could be drained to the caustic sump b) vinyl chloride and ethyl chloride at 'D' dock and 'A' dock would be cleared back to the Plant B incinerator (however other problems exist in clearing vinyl chloride lines at 'A' dock).
2) Instances were found where a nitrogen hose was used to drain the dock piping and loading hose to the river after attempts had been made to blow the piping through to the barge.
3) With regards to loading vinyl chloride at 'A' dock, some ships have an expansion spool piece which joins the loading hose to the block valve on the ship. There is usually no practical or timely way of draining the residual vinyl chloride left in the spool piece. Instances were found where vinyl chloride spills resulted while disconnecting loading hoses from such spool pieces.
- B) Description: Spills caused by leaks in piping, hoses and fittings while loading product on a barge or ship
Pollutant: Potential for spillage of all products into the river
Risk: Moderate
Comments: 1) Automatic shutdown switches for all the products at all of the docks exists and are periodically checked. Inadequate labeling was found on some switches.
2) Engineering is being done to relocate all product lines at 'C' dock in a pipe rack over the dock. This will eliminate undetected leaks.

3) There was no means for spill containment on any dock should a hose or fitting leak develop. 'C', 'D', and 'E' docks have concrete surfaces suitable for curbing to contain spills.

4) Hoses are inspected yearly and are providing 3-5 years of service.

5) Flange leaks can occur due to the bad condition of customer barges.

- C) Description: Spills caused by pumping or draining material from barges.
Pollutant: Potential for any contaminant to enter the river
Risk: Low
Comments: 1) Pumping water from the dry compartments of barges is necessary before loading the barge. This water is pumped via steam siphon to the river. Contamination of this water can be a result of leaks in the product storage compartments. There is no sampling routine established for determining if contamination of the water exists.
- D) Description: Chlorine leaks at 'B' dock
Pollutant: Chlorine in the air
Risk: Low
Comments: 1) Leaks are infrequent on valves and flanges and are promptly repaired. Leaks are readily detected with ammonia water.
2) Crane valves in use at the supply manifold appear to be inferior to the Stockham valves which are in use at the chlorine tank car loading rack.
- E) Description: Diesel spillage around dock areas
Pollutant: Diesel can cause an oil sheen at outfall 024 or on the river
Risk: Low
Comments: 1) Diesel storage tanks are located near 'D' dock and 'C' dock. These tanks are diked. The dikes are constructed of clay and shell and show wear in places where people step over them.
2) Potential for diesel spillage exist when filling the diesel tank on a barge. Any spill will go directly into the river. Tanks on barges aren't equipped with enclosed dikes.
3) Sufficient room must be left in the diesel tank after filling for expansion of the diesel when the temperature increases.
4) At 'C' dock, a bucket is used to collect diesel drips from the disconnected filling hose nozzle.
- F) Description: Hydraulic oil spill from dock loading cranes
Pollutant: Oil sheen on river
Risk: Rare
Comments: 1) An oil sheen on the river can be caused from the rupture of a hydraulic oil line on one of the dock loading cranes. There are no provisions to contain such a spill.
- G) Description: Spills resulting in overflow of the caustic sump at 'C' dock
Pollutant: Caustic spill at river
Risk: High
Comments: 1) Maintenance attention is required for sump pump to maintain full pumping capacity. Sump level is hard to maintain when pump problems develop.

2) The sump has a high level alarm which is located at 'C' dock. Instances were found where the personnel did not know what the alarm was for, which resulted in sump overflows.

IX. Area: Organics Storage Tanks

- A) Description: Spills resulting in leaks around pumps and transfer lines to the docks
Pollutant: Spills of all products to river and outfalls 005, 021 & 024
Risk: Rare
Comments: Pipe clamps have been used to repair leaks in transfer lines because of instances where the line could not be properly cleared in a timely manner.
- B) Description: Leaks in the trichloroethane storage tank, pump and filter area
Pollutant: Trichloroethane spill to outfall 024
Risk: High
Comments: 1) No containment for spills from triethane^(R) tanks, pumps or filter exist. One dike wall which doesn't encircle anything has recently been formed to prevent leaks around the pumps and filters from flowing directly into the surface drainage ditch supplying outfall 024.
2) The triethane^(R) filter has been a source of numerous leaks. The Shipping and Operation Departments are not certain of who has responsibility of the filter.
3) Spills and leaks of triethane^(R) usually result in excavation and disposal of the area where the spill occurred.

X. Area: Sulfuric Acid Unloading at Liquefaction & Mercury Cells

- A) Description: Acid spills resulting from hose and transfer line leaks
Pollutant: Sulfuric acid spill to outfall 021 or the Powerhouse ditch.
Low pH upsets.
Risk: Rare
Comments: 1) Leaks in hoses and piping are rare and are promptly repaired.
2) A new unloading procedure has been written with respect to acid unloading at Mercury Cell.
3) There are no emergency air shut-off valves with bleeds to quickly depressurize the acid car should a leak occur. Such a device could reduce the amount of acid spilled.
- B) Description: Acid spills resulting in the overflow of a storage tank
Pollutant: Sulfuric acid spill to outfall 021 or the Powerhouse ditch.
Low pH upsets.
Risk: Rare
Comments: 1) The storage tank level is monitored by the Shipping Department personnel while the car is being unloaded. Overflows can result from inattention to level monitoring or faulty gauges.
2) Sulfuric acid is being supplied in larger capacity tank cars. This increases the chance of overflowing a storage tank.

XI. Area: General Conclusions & Comments

- A) Description: Inspection of hazardous waste trucks leaving PPG boundary limits.
Comments: The Shipping Shift Foreman inspects all hazardous waste trucks which leave the Lake Charles PPG complex. The waste container must be sealed in a manner to keep the contaminant from escaping.
- B) Description: Knowledge and competency of Shipping personnel in loading procedures.
Comments: 1) Several spills and environmental upsets in the past have been a direct result of errors committed by the personnel involved with the loading. However, there was no lack of knowledge or competency demonstrated by the people interviewed and observed during the survey.
2) Written loading and unloading procedures were not readily obtainable. Most procedures that were written require updating.
- C) Description: Environmental awareness of Shipping personnel
Comments: Most Shipping personnel interviewed lacked knowledge in the environmental regulations concerning spills and outfall monitoring conditions. Few were aware that a one pound release of trichloroethane, perchloroethylene or vinyl chloride would be a reportable violation.
2) The overall environmental concern and awareness for Shipping personnel was very positive. Everyone interviewed has been aware of the changes in policies and procedures regarding the environment over the past years. Many of the older employees see the impact that these changes have had on improving the quality of the river and surrounding areas of the plant and community.

RECOMMENDATIONS

I. Chlorine Tank Car Loading Rack

- A) Improve hose connecting/disconnecting procedure to minimize hose bending that creates weak spots.
- B) Change the procedure for testing hose connections for leaks to use 250 psig air instead of liquid chlorine.
- C) Revise sampling procedure for chlorine vapor in tank cars so chlorine will not bleed to the atmosphere.
- D) Install additional valve activation switches for chlorine loading automatic valves in different locations.
- E) Install drainage piping for the trichloroethane collection basin.
- F) Reroute valve repair steam cleaning drain to 30" process sewer.

II. Chlorine Tank Car Test Rack

- A) Establish specific procedures for monitoring the strength and level in the caustic car.

- B) Use a NOTICE or DO NOT OPERATE tag on the test rack vent line supply valve whenever the caustic car is out of service.
- C) Reroute the drain for the hydrostatic test water to the 30" process sewer. Incorporate with the new test rack facility if approved.

III. Heavy Tank Car Unloading, Patio and Sniff Tank

Dispose of sniff tank drainage by use of a vacuum truck.

IV. Ton Cylinder Building

- A) Provide a means of neutralization of the ton cylinder vapors that are vented during the testing procedures.
- B) Reroute the drain for the hydrostatic test water to the 30" process sewer.

V. Tank Car Repair Shop

Should a car that is to be serviced have some residual product remaining inside, send the car back to the proper production area where the product can be removed.

VI. Caustic Truck Loading - no recommendations

VII. Caustic Tank Car Loading

- A) Fabricate some drain pipe devices used to prevent splashing when unloading caustic from a tank car.
- B) Install additional pump kill switches in different locations on the loading rack for all caustic loading pumps.

VIII. Barge and Ship Loading Docks A, B, C, D & E

- A) Install an adequate system for drainage of all product lines and hoses on all docks. This system should involve the elevation of most of the loading lines and the possible construction of organic sumps.
- B) Eliminate vinyl chloride loading at 'D' dock.
- C) Stress that it is the ship's responsibility to provide a means of clearing all product lines and hoses before disconnecting. Be sure this is communicated to the person who is responsible on the ship before any loading takes place.
- D) Replace any defective labeling for pump motor switches at the docks and pumps.
- E) Evaluate the installation of curbing for 'C', 'D' and 'E' docks.
- F) Refuse to load customer barges that are in bad condition and have the potential to cause leaks.

- G) Establish a sampling procedure for determining the proper disposal of barge dry compartment water.
- H) Discontinue use of Crane valves at the 'B' dock chlorine supply manifold. Use Stockham valves or experiment with other types.
- I) Improve diking around diesel tanks.
- J) Install a means of containing hydraulic oil leaks from loading cranes. Use catch pans where dock curbing cannot be provided. Keep an adequate supply of Hi-Dri and diapers at each dock.
- K) Implement measures to prevent overflows of the caustic sump such as the installation of signs, firming up training, lowering the high level alarm set point and frequent checks to the level indication and alarm. Install an automatic reset on the sump alarm acknowledge button.
- L) Initiate use of radios at the dock area to help eliminate environmental problems during upsets by allowing audio contact between the tankerman at the dock and the helper at the loading pumps beside the storage tanks.

IX. Organics Storage Area

- A) Have a system to clear transfer lines from Plant B to the shipping docks. Install pig traps to clear lines in a timely manner to make permanent pipe repairs. Avoid the use of pipe clamps.
- B) Provide adequate means for the containment of trichloroethane spills such as pump pads and additional diking.
- C) Improve the reliability of the trichloroethane filter. Assign operational responsibility.

X. Sulfuric Acid Unloading at Liquefaction & Mercury Cells

- A) Implement the new unloading procedures for the Mercury Cell sulfuric acid tank car station. Procedure is in appendix.
- B) Install emergency air cut off and bleed valves for fast depressurization of the sulfuric acid tank car. The location for the emergency valves should be removed from potential sources of acid leaks.
- C) Investigate a central sulfuric acid unloading station and tank for all Plant A sulfuric acid users.

XI. General Conclusions & Comments

- A) Shipping Shift Foremen need to be trained in federal regulations governing the transportation of hazardous waste containers.
- B) Update and revise all loading procedures as necessary. Organize and distribute the procedures so they are readily accessible to all Shipping personnel.

- C) Conduct periodic environmental training for all Shipping personnel. The training should provide an update of all environmental regulations which pertain to Shipping and promote environmental awareness.

A P P E N D I X

Memo, February 7, 1985 from Porter

SL 087224

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO A. J. Kubicek

DATE February 7, 1985

FROM J. M. Porter

SUBJECT Shipping Environmental Survey

In order to identify environmental problems associated with loading/shipping activities in Plant A, a Task Force is being established to survey the situation and recommend corrective action as needed. The Task Force will be expected to review past history of environmental upsets associated with shipping, review the previous Plant A environmental surveys, and include all products loaded in Plant A in the survey. The Task Force will be made up of the following people:

Darrell Moore	-	Shipping (Chairman)
Carey Hardaway	-	Process Engineering
Andy Plauche	-	Environmental
Cliff Beadle	-	Shipping
Rick Gros	-	Shipping
Barney Tyson	-	Operations

The survey is scheduled to be conducted during the week of February 25, and the survey report should be submitted by the end of March. With the completion of this survey, we will have reviewed all of Plant A from an environmental standpoint.

dt

cc: Task Force Members
R. P. Byars/L. C. Comeaux
J. C. Lafleur
W. J. Peard
R. J. Whitaker/B. J. Green

SL 087225

Outfall Permits

SL 087226

A-1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through expiration date
the permittee is authorized to discharge from outfall(s) serial number(s) 001 Final monitoring point

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow - m ³ /Day (MGD)	—	—	—	—	Continuous	Record
Temperature, °F	N/A	N/A	N/A	N/A	Continuous	Record

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously and recorded.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
001 Final monitoring point, Mobile Bridge No. 1 and Mobile Bridge No. 2.

SL 087227

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Permit N. LA0000761

A-2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through expiration date.
the permittee is authorized to discharge from outfall(s) serial number(s) 005, surface runoff

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	3/week	Grab
Temperature, °F	N/A	N/A	N/A	N/A	3/week	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 3/week via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
005, East 24" Sewer to Turning Basin of Calcasieu Ship Channel.

SL 087228

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A-11 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through expiration date the permittee is authorized to discharge from outfall(s) serial number(s) 021, once-through uncontaminated cooling

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	Continuous	Record
Temperature, °F	N/A	N/A	N/A	N/A	Continuous	Record
pH	N/A	N/A	N/A	N/A	Continuous	Record

The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored

There shall be no discharge of floating solids or visible foam in other than trace amounts,

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
021 (Combined 002, 003 & 004 - See PPG Dwg. 20A-1577-P-2 at streams 13, 14 and 15) discharge to Olin Ditch, to Calcasieu Ship Channel.

SL 087229

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Permit No. LA0000761

A-12 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning effective date and lasting through expiration date
the permittee is authorized to discharge from outfall(s) serial number(s) 024 Surface drainage from product storage

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>	
	kg/day (lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Daily Avg	Daily Max	Daily Avg	Daily Max		
Flow—m ³ /Day (MGD)	—	—	—	—	5/week*	Indicate

*When flowing.

The pH shall not be less than 6.0 standard units nor greater than 11.0 standard units and shall be monitored 5/week via grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):
024 storm drainage from product storage area to Calcasieu Ship Channel turning basin.

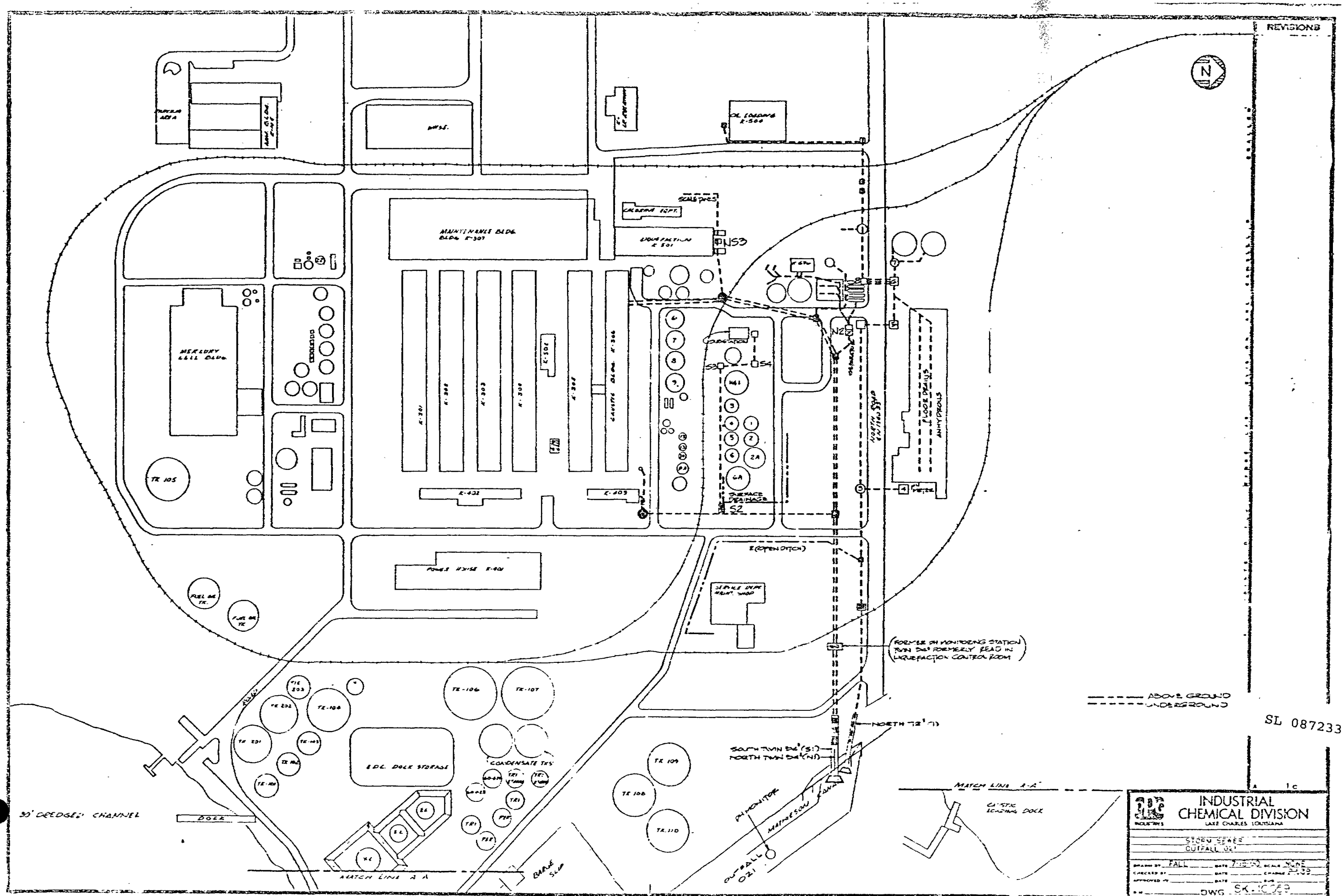
SL 087230

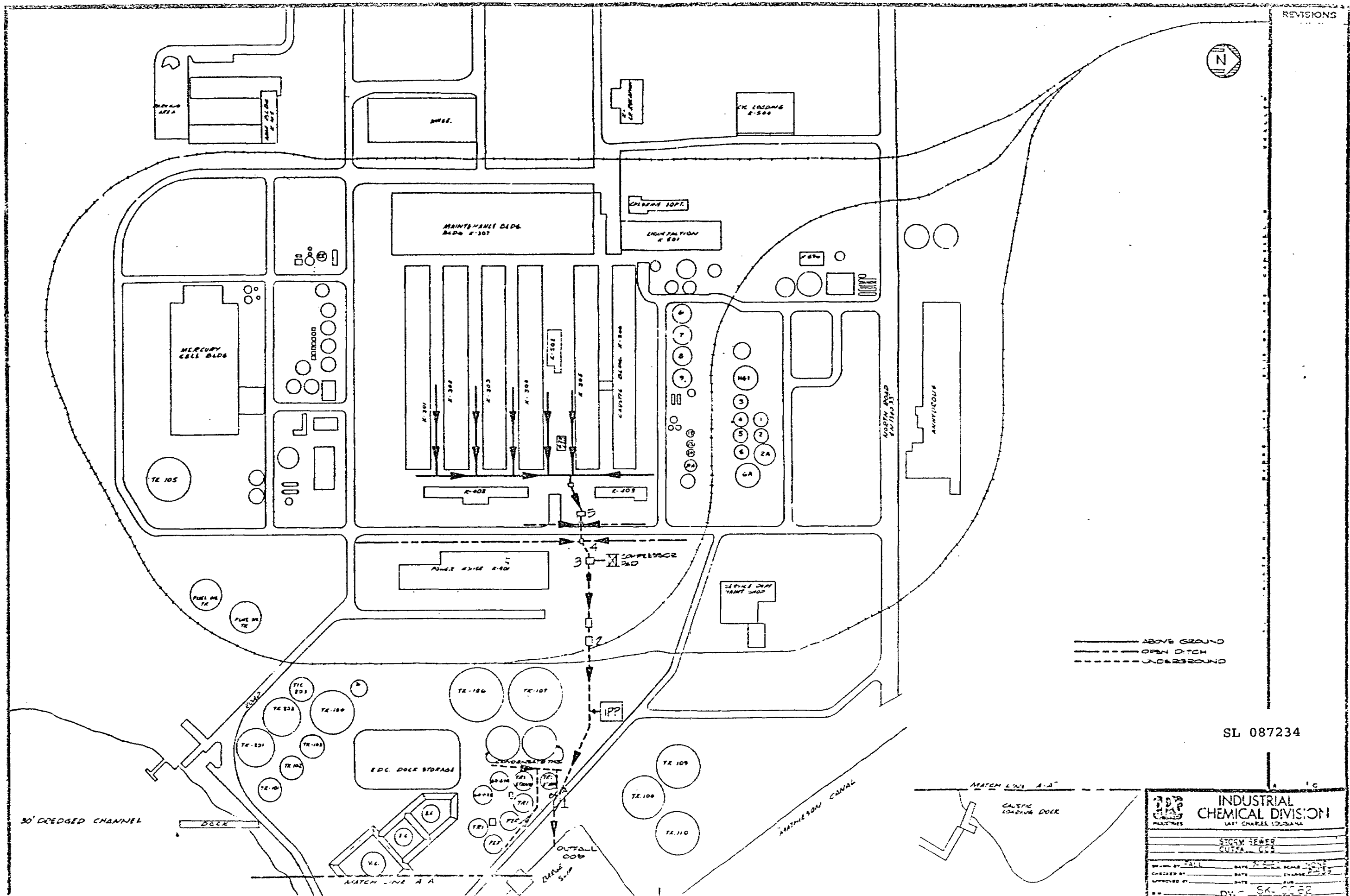
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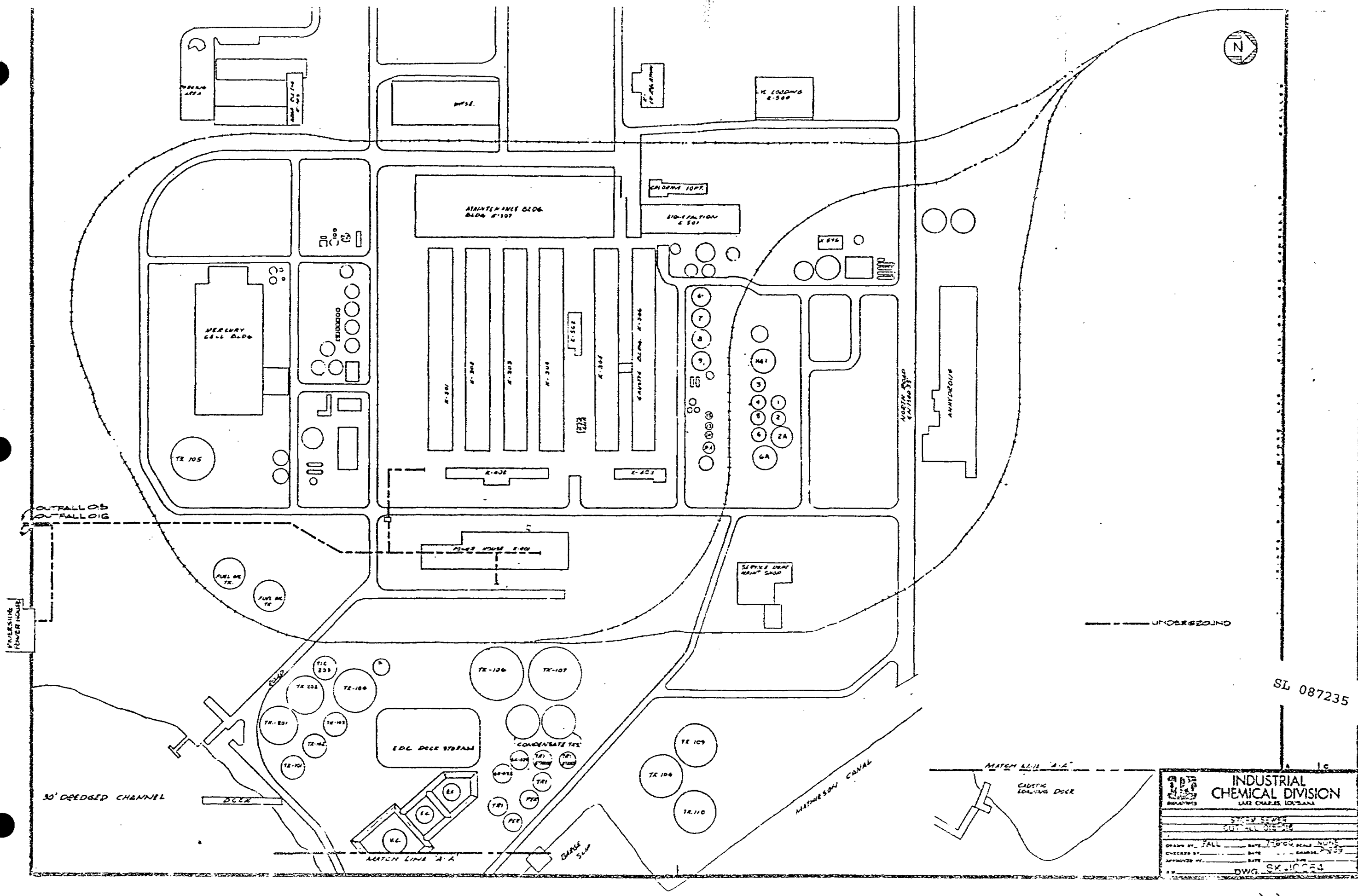
PART I

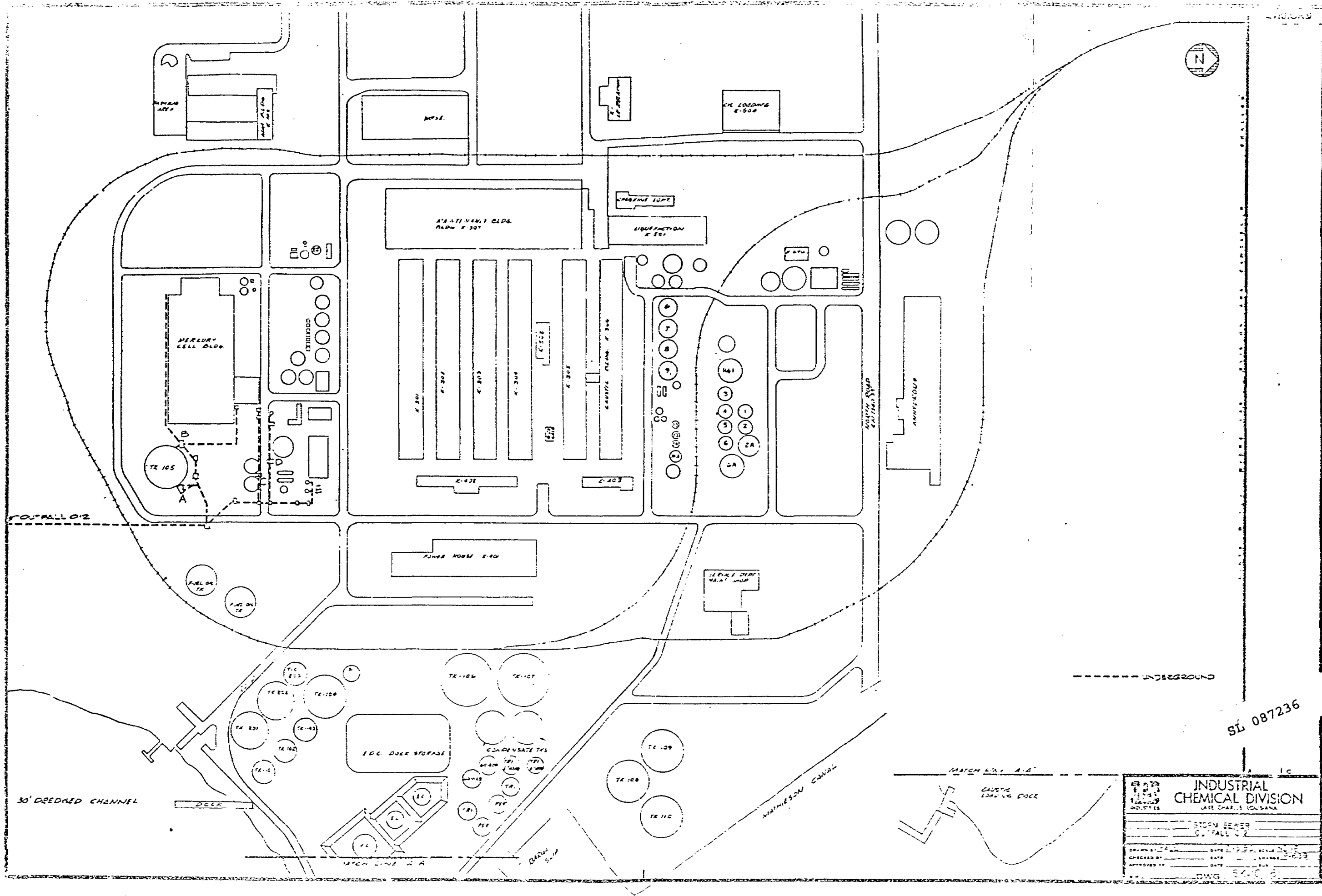
Outfall Drawings

SL 087231









SL 087236

INDUSTRIAL CHEMICAL DIVISION	
LAKE CHARLES, LOUISIANA	
STORM SEWER	
OUTFALL #2	
DRAWN BY: [blank]	DATE: [blank]
CHECKED BY: [blank]	DATE: [blank]
APPROVED BY: [blank]	DATE: [blank]
DWG. 84-10-8	

1983 SPILL/RELEASE SUMMARY

<u>Date</u>	<u>Source</u>	<u>Pollutant</u>	<u>Cause</u>	<u>Quantity</u>	<u>Agency Contracted</u>
1/1-3	Tetra	HCL	Vent Compressor Maint.	14,890 lb.	DNR
1/3	Pit. A	Oil	Diesel Spill	Unknown	CG/DNR
1/10	Caustic Dk	NaOH	Overfilled Dock Sump	Unknown	NO
1/12	Tetra	CIHC	Vent Compressor Maint.	44 lbs.	NO
1/13	TE-II	VCM✓	Pipe Corrosion	200 lbs.	NRC/DNR
1/16	TE-II	VCM	Corrosion to Stripper Condenser	11 lbs.	NO
1/17	<u>Shipping</u>	Cl ₂		2 lbs.	NO
1/17	TE-II	CuCl ₂ ✓	Catalyst Spill	10 lbs.	NO
1/17	TE-II	HCl	DCE Stg. Tk. Vent	Unknown	NO
1/17	Pit. C	KOH	Overfilled Storage Tk.	8,880 lbs.	NO
1/18	LP-EDC	CIHC	Non-Incineration of Vents	300 lbs.	DNR
1/18	VDCM	CIHC	Non-Incineration of Vents	800 lbs.	DNR
1/19	Tetra	CIHC	Vent Compressor Maint.	Unknown	NO
1/19	Tetra	CIHC	Vent Compressor Maint.	2,436 lbs.	DNR
1/18-20	LP-EDC	CIHC	Non-Incineration of Vents	879 lbs.	DNR
1/20	LP-EDC	CIHC	Non-Incineration of Vents	2,800 lbs.	NO
1/21	Pit. A	NaOH	Valve Open During Transfer	400 lbs.	NO
1/28	Power A	Oil	Compressor Leak	2 gals.	NO
2/4	VCM-II	CIHC	OHC Rx Rupture Disc Blew	2,556 lbs.	DNR
2/4	VCM-II	EDC	Quench Tower Rupture Disc	Unknown	NO
2/10	LP-EDC	Cl ₂	Cl ₂ Vaporizer SRV Lifted	50 lbs.	DNR
2/14	Pit. A	Cl ₂	Power Loss at Absorber	75 lbs.	DNR/NRC
2/21	VCM-II	CIHC	OHC-III Rx Rupture Disc Blew	2,885 lbs.	DNR
2/25	TE-II	CIHC	Leak on Catalyst Catch Pot	385 lbs.	NO
2/25	OHC-I	CIHC	Leaks in OHC-I Vent Header	2 lbs.	NO
3/3	Pit. C	Cl ₂	Power Failure, Seals Blew	1 lb.	DNR/NRC
3/5	<u>Shipping</u>	MC	Shipping Tank Overfilled	500 gals.	NO
3/6	LP-EDC	CIHC	Vent Line Leaked	370 lbs.	DNR
3/11	VCM-I	Cl ₂	Leak on Cl ₂ Cylinder No. 8 Well	2,000 lbs.	DNR
3/18	Hg Cell	Cl ₂	Absorber Pump Shutdown	10 lbs.	NO
3/25	Liq.	Cl ₂	Lost Two Refrigeration Units	270 lbs.	DNR/NRC
3/28	TE-II	VC	Non-Incineration of Vents	Unknown	EPA
3/29	TE-II	HCl	Gasket Leak on H.P. Accumulator	169 lbs.	NO
4/3	VC-I	VC	Vent Header Rupture Disc Blew	Unknown	EPA
4/5	Tetra	CIHC	Tetra Rx Rupture Disc Blew	97 lbs.	NO
4/6	Pit. C	Brine	Corrosion on Storage Tk.	3,000 gals.	NO
4/7	TE-II	VC ✓	Leak on VC Stripper Feed Pump	4 lbs.	DNR/NRC/CC
4/14	Pit. C	HCl	Block Valve Leaked by on Storage Tank	5,810 lbs.	NO

SL 087238

<u>Date</u>	<u>Source</u> <u>Per/Tri</u>	<u>Pollutant</u> <u>CIHC</u>	<u>Cause</u>	<u>Quantity</u>	<u>Agency</u> <u>Contracted</u>
4/18		CIHC	Vent Header Rupture Disc Blew	3,000 lbs.	DNR
4/20	Pit. C	HCl	Tank Overflow at Regeneration Unit	620 lbs.	NO
4/25	VC-I	VC	Vent Header Rupture Disc Blew	Unknown	EPA
4/25-27	Liq.	Oil	Leaking Equipment	100 gals.	NO
4/27	TE-II	Oil	Hydraulic Hose Ruptured	4 gals.	NO
4/28	VC-I	VC	Gasket Leak on Transfer Line	Unknown	NO
4/29	VC-I	VC	Vent Header Rupture Disc Blew	Unknown	NO
5/8	Pit. C	NaOH	Cell Liquor Tk. Collapsed	240 gals.	NO
5/10	Pit. A	Cl ₂	Tail Gas Diversion	10 lbs.	NO
5/12	LP-EDC	Cl ₂	Liquid Cl ₂ Line Leak	400 lbs.	DNR/NRC
5/13	Liq.	Cl ₂	Ruptured Hose on Sniff Line	237 lbs.	DNR/NRC
5/16	VC-II	VC	Pump Broke in VC Sphere Area	4,022 lbs.	DNR/NRC
5/16	VC-II	VC	SRV Release	2,800 lbs.	EPA
5/18	Per/Tri	NH ₃	Valve Leak on Lewis Unit	500 lbs.	DNR/NRC
5/18	LP-EDC	CIHC	No. 1 Plant Refrigeration Unit Down	190 lbs.	DNR
5/20	VC-II	CIHC	OHC Rx Rupture Disc Blew	861 lbs.	DNR
5/22	VC-I	VC	Leak in VC Vent Header	1 lb.	NO
5/23	LP-EDC	CIHC	No. 1 Plant Refrigeration Unit Down	190 lbs.	DNR
5/23	VC-I	VC	SRV Release During Transfer	3,899 lbs.	DNR/EPA
5/23	Hg	NaOH	Maint. Open Manway on E. Day Tank	4,400 lbs.	NO
5/24	VDCM	CIHC	Blown Rupture Disc on Vent Header	106 lbs.	NO
5/28	LP-EDC	Cl ₂	Cl ₂ Vaporizer SRV	10 lbs.	NO
6/2	TE-II	Cl ₂	Cl ₂ Vaporizer SRV	895 lbs.	DNR/NRC
6/2	Pit. A	HCl	Blown Gasket on Weak Acid Line	2,000 gals.	NO
6/11	Pit. A	HCl	Weak Acid Line Leak	Unknown	NO
6/16	<u>Shipping</u>	Cl ₂	Bowdown too Fast Caused Absorber Trip	10 lbs.	NO
6/20	Hg	Hg	Fume Blower Down	2,300 grs.	DNR
6/22	LP-EDC	EDC	Spill at EDC Dryers (South Terminal)	16,000 lbs.	DNR/NRC
6/23	Liq.	Oil	Seal Leak on Diaphragm Centrifugal	2 lbs.	NO
6/25	LP-EDC	EDC	EDC Dump Tank Rupture Disc	100 lbs.	NO
6/28	TE-II	HCl	Water Off Emerg. Scrubber	2,260 lbs.	NO
6/28	TE-II	HCl	HCl Preheater Leak	1,606 lbs.	NO
6/29	VCM-II	CuCl ₂	Catalyst washed to ditch	20 lbs.	NO
7/7	Bottoms Pit.	CIHC	Vent header ruptured	500 lbs.	NO

Date	Source	Pollutant	Cause	Quantity	Agency Contracted
7/12	P.H. A	NaOH	Dumped condensate tank	430,000 gal.	EPA
7/14	"B" Shipping	EC	EC loading line SRV	1140 lbs.	NO
7/15	TE-II	Cl ₂	SRV on Cl ₂ Surge drum	909 lbs.	DNR/NRC
7/15	Liq.	Cl ₂	Scale tks seal pot leak	40 lbs.	DNR/NRC
7/18	Per/Tri	ClHC	Lost Lewis unit (burnt motor)	900 lbs.	DNR
7/21	Pit. A NaOH	NaOH	Overfilled No. 5 Stg. Tk.	35 tons	NO
7/24	Silica	HCl	1" valve Bonnet failed	578 lbs.	NO
7/27	Silica	HCl	Opened manway on stg. tk	400 lbs.	NO
8/6	EC	EC	#4 Day Tank SRV	150 lbs.	NO
8/8	Bottoms Pit	ClHC	Sight glass broken	200 lbs.	NO
8/8	Pit. B	ClHC	Spill to Outfall 010	Unknown	NO
8/18	Cl ₂ loading	Cl ₂	Cl ₂ Loading Line Leak	210 lbs.	NO
8/24	Bottoms pH	ClHC	Blown rupture disc on DH Tank	200 lbs.	NO
8/24	Per/Tri	ClHC	Hole in vent line DH still	300 lbs.	DNR
8/24	Pit. A	Brine	Spill to Outfall 021	Unknown	NO
8/25	Pit. A	Brine	Spill to Outfall 021	Unknown	NO
8/31	Power A	Oil	Leak in equipment	4 gal.	NRC
9/8	OHC-I	ClHC	Diversion to scrubber	< 10 lbs.	NO
9/24	VCM-II	Cl ₂	SRV on Cl ₂ Vaporizer	820 lbs.	DNR/NF
10/3	Per/Tri	HCL	SRV on P/T DH Still	25 lbs.	NO
10/5	HCL	HCL	Leak on impulse line	27 lbs.	DNR
10/5	TE-II	VCM	Non-incineration of OHC	18 lbs.	DNR
10/11	VCM-II	EDC	R. D. on OHC Rx	7200 lbs. (cat) 2685 lbs. (EDC) 1300 lbs. (HCL)	DNR
10/25	Power A	Oil	Unknown	5 gal.	NRC
11/1	Plant C	Cl ₂	Total Plant Shutdown	760 lbs.	NRC/DI
11/8	TE-II	HCL	Partial power failure	1600 lbs.	NO
11/12	PH. C	Cl ₂	Operator error at Neut.	21 lbs.	NO
11/8	Hg Cell	Therminol	Valve left open	40 gal.	NO
11/21	LP-EDC	ClHC	No. 2 LP-EDC vented 5 hrs. 23 min.	500 lbs.	DNR
11/23	S ₂ CL ₂	S ₂ CL ₂ /Cl ₂	Leak on equipment at S ₂ CL ₂	10,000 lbs.	DNR/NF
12/11	Shipping	NaOH	Tank ² Truck spill (valve open)	600 lbs.	NO
12/15	Liq.	Cl ₂	Maintenance	< 10 lbs.	NO
12/16	VDCM	HQMME	Rupture disc blew	1750 lbs.	NO
12/16	Pit. A	Cl ₂	Absorber shutdown causing diversion to Powerhouse	250 lbs.	DNR/N
12/22	Silica	S.O ₂	Tank developed a leak	3400 lbs.	EPA
12/23	VC-II	VCM	Valve left open between R. D. & SRV	400 lbs.	DNR
12/26	VC-II	Cl ₂	SRV on vaporizer blew	45 lbs.	NO
12/26	VC-II	Cl ₂	SRV on vaporizer blew	45 lbs.	NO

SL 087240

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
1/1	Oil (l) 1 gallon		C - Powerhouse	Operator forgot to close off supply line.	Operators counselled
1/3-6	EC(g) 500 lbs.	NRC/DEQ	B - EC	Cooler plugged in the normal EC vent system.	Cooler will be routinely cleaned whenever the EC unit is shutdown
1/6	EDC (l) 100 lbs.		B - OHC-1	Corroded box	Box replaced
1/12	HCl (l) 950 lbs.		C - Silicas	Expansion joint burst	Joint replaced
1/22	NaOH (l) 3600 lbs.	NRC/DEQ	A - Caustic	Frozen NaOH plug not found until line was put into use	Ditch flow beneath line being changed (9/84) and dam was built to collect future leaks
1/24	HCl (g) 10 lbs.		B - VCM-1	Failure of packing in valve	Tightened up packing gland
1/25	NaOH (l) 300 lbs.		A - Shipping	Relief valve not closed off after loading	Loaders counselled
1/31	HCl (l) 100 lbs.		B - VCM-1	Steam hammer ruptured line	Chemtite line being replaced with different pipe
2/5	EC (g) 100 lbs.		B - EC	Lost both vent compressors (spare included)	Both compressors have been repaired
2/6	VCM (g) 5.2 tons	DEQ	B - VCM-11	Refrigeration problems at VCM-1 allowed VCM to enter HCl distribution system	Procedures at VC-1 changed to prevent VCM from entering HCl system
2/6	HCl (l) 5400 lbs.	NRC/DEQ/CG	A - Powerhouse A	Overflowed tank due to a combination of failed high-level alarm and operator inattentiveness	Alarm repaired and operator procedures for tank filling were changed

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
2/7	VCM (g) 1400 lbs.	DEQ	B - VC-II	Equalizing line mistakenly opened by loader	Loader counselled; tag installation now logged into a Book; double block/bleed to be installed (5/84) in current equalizing line to #2 VCM Sphere
2/8	HCl (l) 200 lbs.		A - Machine Shop	Contracted acid vat had cracked weld	Contractor told to inspect equipment before use
2/9	VCM (g) 2800 lbs.	DEQ	B - VC-II	Storage tank overfilled due to faulty level transmitter	An additional alternate means of measuring VCM level is in use
2/11	NaOH (l) 5 tons		A - Caustic	Transfer line clearing added too much product to tank	Operator counselled; Tank #5 roof drain to be repaired (6/84)
2/21	NaOH (l) Unknown		A - Shipping	Blown gasket in transfer line	Gasket repaired
2/22	NaOH (l) 2100 lbs.	NRC/DEQ/CG	A - Shipping	Loading unattended while loaders checked on Barge tilt, overfilled Barge	Barge loading procedures have been rewritten
2/27	Organics (g) 42 lbs.		B - Per/Tri	Maintenance done on Per/Tri Still Line Scrubber	Started repair of leaking flange
2/28	Organics (g) 63 lbs.		B - Per/Tri	Maintenance done on Per/Tri Still Line Scrubber	Finished repair of leaking flange
2/28	EDC (l) 500 lbs.		B - EDC	Sightglass/valve leak	Equipment repaired
2/28	Oil (l) 2 gallons		COMPLEX	Drain not tied to oil weir box	Drain was connected to weir box

SL 087242

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
2/29	Tri-ethane (l) 1645 lbs.	NRC/DEQ	B - Shipping	Misinformation from contractor on capacity of tank truck	Loaders counselled to check strapping and loading to be done on containment pad (under construction)
3/6	Cl ₂ (g) 45 lbs.		B - VCM-11	LP-EDC startup problems	Recalibrated steam control valve
3/6	HCl (g) 16 lbs.		B - TE-11	Valve leak by	Piping/valves to be replaced (5/84)
3/7	VDCM (g) 1200 lbs.		B - EDC	Complex power failure, steam to VDC reactor not closed off quickly enough	Reviewed the procedures for steam blocked-off during power failure with operators
3/7	EDC (g)/810 lbs. HCl (g)/940 lbs. Catalyst (s)/7.2 tons		B - VCM-11	Premature failing of rupture disc	Supervision interacted with Maintenance on the careful installation of rupture discs
3/7	Cl ₂ (g) 40 lbs.	NRC/DEQ	B - EDC	Complex power failure caused automatic valve closure/timing problems	No operational changes planned
3/7	Ethylene (g) 57 lbs.		B - VC-11	Plant power failure	
3/13	Cl ₂ (g) 5 lbs.		A - Shipping	Car was insufficiently "sniffed off" when opened	Operator counselled
3/14	Ethylene (g) 341 lbs.		B - VC-11	PCV leaked by	
3/19	NaOH (l) 340 lbs.		C - Caustic	Plugged drain line	Operating procedures changed; Work Orders initiated for area reliability study and continuous pH monitor in runoff to 025 (both in 7/84)

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
3/22	EC (g) 3635 lbs.		B - Shipping	Overfilled tankcar	Loaders counselled
3/23	NaOH (l) 6 1/2 tons	NRC/DEQ/CG	A - Mercury Cell	Communications problem resulted in inadvertent draining	Operations/Supervision corrected the communications problem
3/26	Dowtherm (l) 490 lbs.		A - Pels	Maintenance on unit, gunk plug, rodded out which released pent-up material	Different type of bleed valve (not liable to plug) to be installed in April
3/27	Cl ₂ (g) 10 lbs.	NRC/DEQ	A - Shipping	Header not sufficiently "sniffed" prior to opening to repair leak	Shift foremen told to allow longer "sniff" time on line before future repairs
3/29	NaOH (l) 5750 lbs.		A - Caustic	High level alarm broken and communications problem resulted in pump not being turned on	Operator counselled; alarms to be repaired (April); pump to be put on automatic (7/84)
4/05	EC (g) 530 lbs.	NRC/DEQ	B - Shipping	Material (EC ?) found in stack. No apparent source	Not applicable No cause determined
4/05	Trichlor (l) 61 lbs.		B - Shipping	Overfilled tank car	Set up new logbook and new procedure
4/05	EC (g) 10 lbs.		B - Shipping	Leak developed on EC tank truck. (See 5/8 EC Spill)	Material offloaded to a tank. Customer contaminated truck.
4/11	Chlorine (g) 9 lbs.		A - Shipping	Electrical breaker mistakenly opened. S/D blower, etc.	Tie-in to Sulfur Chloride (9/84) will prevent in future
4/11	NaOH (l) 4 tons A.B.	NRC/DEQ	A - Caustic	Chlorate destruction test, NaOH XS exceeded expected amount	Rerouted condensate line to cell liquor tanks

SL 087244

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
4/17	EC (g) 150 lbs.	NRC/DEQ	B - Shipping	Pump on tank truck corroded and leaked	See 5/8 EC Spill
4/24	S2Cl4 (g) 6 lbs.		A - Sulfur Chloride	Gasket on filter basket blew out during pressure check	Gasket surface has been/will be modified for all filters
4/26	Chlorine (g) 6 lbs.		A - Liquefaction	Barge transfer line overpressured. No gasket after R/D	Maintenance notified
4/27	VCM (g) 4 lbs.	DEQ	B - VC-11	SRV relieved, automatic valve did not reopen prior to VCM transfer	Checked instruments. New procedure for starting transfer
5/02	Chlorine (g) 35 lbs.	NRC/DEQ	A - Powerhouse A	Construction sandblasted hole in chlorine header	Requested construction to notify Operations in advance of work
5/02	Dowtherm (g) 200 lbs.		B - Per/Tri	Unexpected reaction in RX during startup - SRV relieved	New procedure - will not circulate Dowtherm with vent blocked
5/03	NaOH (l) 2 tons A.B.		C - Caustic	Incorrect valve alignment. Unintentionally drained filter	Operators counselled
5/05	VCM (g) 273 lbs.	DEQ	B - TE-11	Scrubber valve leaked by	Repaired valve. Instructed Operators how to detect
5/06	HCl (l) 4300 lbs. A.B.		A - Powerhouse A	S/G retainer ring blew out. Wrong valve position indicated	New procedure for Operators to monitor valve position
5/07	NaOH (l) 44 tons A.B.	NRC/DEQ	A - Mercury Cell	Expansion joint on discharge of caustic pump failed	Temporary pump removed. Engineering Work Order written to curb and pad area
5/08	EC (g) 400 lbs.	NRC/DEQ	B - Shipping	Hose ruptured on tank truck. Customer contaminated truck	Customer agreed to revise procedures for unloading EC
5/09	EDC (l) 200 lbs.		B - VC-1	Super valve leaked in into furnace. 25% of EDC leaked off pad	Super valve replaced. EDC was quickly removed from ditch

SL 087245

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
5/10	NaOH (l) 171 lbs.		B - VC-11	PCV did not seat off; line overpressured and lifted SRV	Overhauled PCV; Engineering Work Order written to upgrade pipe
5/10	NaOH (l) 500 lbs. A.B.		A - Powerhouse A	Gasket failure on transfer line	Replaced gasket
5/14	EC (g) .7 lbs.		B - EC	Valve inadvertently opened. SRV relieved due to thermal expansion	Changed R/D. Advised Operators and Shipping to check this line
5/16	Chlorine (g) 9 lbs.		A - Electrolyzers	Hole developed in acid tower cover. Leaked during startup	Replaced cover. Improved liner has been/will be used on cover
5/18	VCM (g) 3100 lbs.	DEQ	B - VC-11	SRV relieved. Sphere overpressured - inadequate vent purging	Operators reprimanded. Engineering Work Order to replace switch with transmitter
5/23	PCB Cont. Oil (l) 10 gal.		A - Mercury Cell	Bushing broke off transformer because of stuck gasket	Gasket will be broken loose before lift next time
5/24	EC (g) 1201 lbs.	NRC/DEQ	B - Shipping	Overfilled tank car. Level gauge stuck	Loader counselled. Alarm procedure put into operation
5/26	HCL (l) 1500 lbs. A.B.		A - Powerhouse A	Automatic valve broke. Acid bypassed to sewer	New procedure for Operators to monitor valve position
5/27	VCM/DCE/HCL (g) 10 lbs. Total		B - TE-11	Leak developed on vinyl stripper condenser vent line	Repaired pipe
6/01	EDC (l) 30 lbs.		B - EDC	Transfer line corroded	Repaired pipe
6/03	CHCs & HCL (g) 300 lbs.		B - TE-11	Blown seals on #1 and #2 low pressure condensate pumps	All organics contained. 15 lbs. of HCL escaped to atmosphere

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
7/28	EDC (g) 100 lbs.		B - EDC	Rupture disc blew on #3 LP RX Dopp kettle. Valve leaked by.	Steam valve repaired. Level and pressure alarms reinstalled.
7/31	EC (g) 45 lbs.	NRC/DEQ	B - Shipping	Underground transfer line leaked.	Line repaired.
8/1	EDC (l) 29,000 lbs.	NRC/DEQ (2000 lbs.)	B - EDC	DHC to TE-II transfer line put in service before repairs were complete.	Operator reprimanded. Super- visors were counselled.
8/2	VCM/EDC/HCl (l) 11/413/46 lbs.		B - VC-I	Organics hose broke during draining of stripper.	Replaced hose.
8/9	Cl2 (g) 9 lbs.		B - VC-I	Leak on chlorine addition line to the EDC Reaction Tank (corrosion).	Attempts will be made to clear lines before stripping insulation.
8/9	NaOH (l) 500 lbs.		A - Shipping	Valve leaked by on sump.	Counselled Operators.
8/12	HCl (g) 3000 lbs.		B - TE-II	Leak on HCl heater for high pressure HCl system.	Replaced steel tubes with monel. Replaced B/Vs.
8/14	Cl2 (g) 3 lbs.		A - Liquefaction	Leak on transfer line (corrosion).	Repaired pipe. Checked other equipment in area.
8/24	ClHC-Contam. H O (l) 200 gal. H O		B - TE-II	Valve fell off back of vacuum truck.	Vacuum truck owner notified.
8/31	HCl/TCE/EDC (g) 3/8/3 lbs.	NRC/DEQ (3 lbs. TCE)	B - MTU	Valve in Bottoms Plant vent compressor installed back- wards. Chemtite line blew off.	Work done by main shop will be checked by area maintenance personnel.
9/5	Cl2 (g) 6 lbs.		A - Shipping	Cl2 leaked through valve.	Counselled Operators.

SL 087247

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
9/6	EDC (l) 2000 lbs.		B - EDC	3" hose broke during vacuum truck unloading.	Vacuum truck owner notified.
9/6	EDC (l) 200 lbs.		B - Shipping	Overfilled tank truck.	Operator reprimanded.
9/8	Cl2 (g) 7.5 tons	NRC/DEQ (4.5 tons/7.5 tons)	A - Liquefaction	#2 York primary and secondary tripped. Operator response was inappropriate.	Operators and supervision counselled.
9/9	HCl/ClHCs (g) 30/10 lbs.		B - Per/Tri	Vent header overpressured due to throttled condenser valve.	Replaced valve.
9/10	VCM (g) 100 lbs.		B - Shipping	2" transfer hose broke.	Replaced hose.
9/10	C Cl4 (l) 130 lbs.		B - VC-I	Tank sightglass broke.	S/G's will be kept isolated except during level measurements.
9/12	HCl/ClHCs (g) 146/388 lbs.		B - Per/Tri	DH feed tank R/D failed prematurely.	Replaced R/D.
9/14	VCM/EDC (l) 0.9/44.5 lbs.		B - TE-II	Leak on pipe at quench tower.	Replaced pipe.
9/17	VCM/EDC/CHCl (g) 4/11/8 lbs.	NRC/DEQ (4 lbs. VCM)	B - MTU	Bleed valve nipple broke at CSS.	Frequent inspections will be made.
9/19	EDC (l) 100 lbs.		B - EDC	Overfilled day tank. Sand-blasting had broken LT.	Repaired tubing.
9/27	Tri-ethane (l) 50 lbs.		B - TE-II	Corrosion of transfer line.	Repaired line.
10/3	Tri-ethane (l) 750 lbs.	NRC/DEQ	B - Shipping	Overflowed tank truck when loading meter failed.	Repaired meter.

SL 087248

DATE	MATERIAL/AMOUNT	REPORTED TO	PLANT - LOCATION	DESCRIPTION	CORRECTIVE MEASURES
10/6	NaOH (l) 638 lbs.		A - Shipping	Overfilled caustic barge.	Counselled loader.
10/9	EDC (l) 25 lbs.		B - VC-II	DW Still vent line broke during sampling activities.	Counselled Lab personnel.
10/11	Dil (l) 45 lbs.		C - Silicas	Drum knocked over by delivery personnel during loading.	Counselled delivery personnel.
10/13	HCl (g) 513 lbs.		B - Per/Tri	Rupture disk blew on vent header during swapping between control valve incinerators.	Checked/repared back pressure
10/15	HCl (l) 20 lbs.		C - Caustic	Hole in pipe.	Repaired pipe.
10/17	HCl/ClHC (g) 40/30 lbs.	NRC/DEQ cis+trans/VCM 17/2	B - Per/Tri	Maintenance knocked drain valve off of vent header.	Repaired nozzle.
10/20	EDC (l) 560 lbs.		B - Tetra	Transfer line corroded.	Repaired line.
10/21	ClHC (g) 4184 lbs.	DEQ	B - Per/Tri	Due to insufficient incinerator capacity, Per/Tri vents were put to scrubber.	An incinerator was repaired and put back on-stream.
10/22	Trichlor (l) 60 lbs.		B - Shipping	Drain plugged and drain pan overflowed.	Modified drain pan.
10/23	HCl (l) 7740 lbs.		C - Silicas	Gasket blew out of line.	Replaced gasket.
10/23	EDC/TCE/Tetra/ Penta (l) 120 lbs.	NRC/DEQ TCE/Tetra/Penta 36/24/12 lbs.	B - MTU South Terminal	Underground leak on Puerto Rican transfer line.	Abandoned line.

SL 087249

1005

01/25	NaOH (l) 1.5 tons	NRC, DEQ	A - Shipping	Overfilled barge.
01/27	Cl ₂ (g) 30 lbs	NRC, DEQ	A - Electrolyzers	Blew condensate seal pot on Ckt. 16 during startup.
01/29	VCM/DCE/NCL (g) 5/5/15 lbs	NRC, DEQ VCM/DCE 5/5 lbs	B - TE II	Vinyl stripper vent line corroded.
01/29	Cl ₂ (g) <10 lbs		A - Mercury Cell	Drained acid sump to M.C. sewer, liberating chlorine. Sump material was not adequately neutralized.

SL 087250

Revised: 12/15/82

ROUTING - OPERATIONS

General Foreman
Production Superintendent
Operations Superintendent
Plant Manager
Environmental Control

ENVIRONMENTAL UPSET REPORT

SUBJECT: Cl₂ Leak Under Valve on Cl₂ Car

FROM: C.W. Arnett

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within
five (5) calendar days of the incident.]

1. **DATE OF INCIDENT:** January 17, 1983
2. **SOURCE OF RELEASE:** Liquid Valve on Cl₂ Car
3. **TIME AND DURATION:** 10 Minutes
4. **WEATHER CONDITIONS (Circle One):** Clear Partly Cloudy Cloudy Rain
5. **WIND SPEED AND DIRECTION (if a gas release):** 2 mph NE
6. **HAZARDOUS MATERIAL RELEASED:** Chlorine
7. **ESTIMATED QUANTITY RELEASED:** 3 to 5 lbs. lbs
8. **CAUSE OF RELEASE:** Faulty seating surface for tung on angle valve to
seat properly in groove on tank car manway. (New Car)
9. **IMMEDIATE ACTION TAKEN:** Car put on blowdown and then to sniff.
10. **ACTION PLANS TO PREVENT REOCCURRENCE:** Machine angle valve seating
surface on car manway cover to proper size.
11. **NOTIFICATION MADE (Who, When):** Shift Superintendent

Environmental File # 1077

SL 087251

RECEIVED

JAN 19 1983

Revised: 12/15/82

CC: JGP

ROUTING - OPERATIONS

~~General Foreman~~
~~Production Superintendent~~
~~Operations Superintendent~~
Plant Manager
Environmental Control

ENVIRONMENTAL UPSET REPORT

SUBJECT: _____
FROM: Cell Control

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within five (5) calendar days of the incident.]

1. DATE OF INCIDENT: 1/16/83
2. SOURCE OF RELEASE: _____
3. TIME AND DURATION: 3:30 - 3:31
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): _____ mph West
6. HAZARDOUS MATERIAL RELEASED: 240 Chlorine
7. ESTIMATED QUANTITY RELEASED: 510 lbs
8. CAUSE OF RELEASE: Bypass around control valve in open position when working on automatic valve & higher than expected rate of flow through line from Cl₂ tank car loading rack to chamber resulted in diversion to powerhouse stack.
9. IMMEDIATE ACTION TAKEN: Closed by-pass & secured line.
Li
10. ACTION PLANS TO PREVENT REOCCURRENCE: Review SOP of system control when automatic control valve is out of service.
11. NOTIFICATION MADE (Who, When): _____
No agencies contacted, quantity released 110 lbs

Environmental File # 1097

SL 087252

RECEIVED

JUN 20 1983

revised: 12/15/82

ROUTING - OPERATIONS

General Foreman
Production Superintendent
Operations Superintendent
Plant Manager
Environmental Control

ENVIRONMENTAL UPSET REPORT

SUBJECT: Cl₂ Release on the Cl₂ Loading Rack

FROM: Rob. Haering, Shipping Shift Foreman

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within five (5) calendar days of the incident.]

1. DATE OF INCIDENT: 8-18-83.
2. SOURCE OF RELEASE: the NE Cl₂ Loading Line
3. TIME AND DURATION: 12:15 PM - 2 to 3 minutes
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): 1.2 mph SSE
6. HAZARDOUS MATERIAL RELEASED: Cl₂ gas
7. ESTIMATED QUANTITY RELEASED: less than 10 lbs
8. CAUSE OF RELEASE: After using the 250 lb. air line to clear the loading line into the car, the Tankerman, accidentally left the 250 lb air line valve open a crack. Then when he cover
9. IMMEDIATE ACTION TAKEN: As soon as the Tankerman discovered that the Cl₂ was coming out of the 250 lb air line (which was about 2-3 minutes after the release started) he cover
10. ACTION PLANS TO PREVENT REOCCURRENCE: All Tankermen will make sure that the 250 lb air line valve is completely closed before starting loading of Cl₂.
11. NOTIFICATION MADE (Who, When): Environmental Control by Shift Superintendent @ 12:20 PM.

Environmental File # _____

SL 087253

- o.) started to load the car part of the Cl_2 (which was @ 250 psi) went into the 250 lb air line, (which was @ 190 psi) traveled about 100 feet down the 1 inch air line and came out through a $\frac{1}{16}$ " to $\frac{1}{8}$ " hole in the air line at a tee section of the air line.
- i.) immediately closed the 250 lb air line valve which stopped the release of Cl_2 gas.

File #300

SIGNIFICANT INCIDENT REPORT

This form is to be used for first notice reporting of all incidents involving process upsets, near miss accidents (no injury) and chemical releases of a nature deemed to be significant. It is to be completed by the supervisor(s) of the area. Significant fire damage incidents should be called into Loss Prevention. Vehicular damage incidents should be called into the Guards.

GEOGRAPHIC LOCATION: Plant A ☒ B ☐ C ☐ ComplexDATE 12-11-85Specific Location: CAUSTIC TRUCK RACKWeather (clear - cloudy - rain - wind - etc) ClearTYPE OF INCIDENT: (Could be more than one) Near Miss Accident ☐
Operational Upset ☐ Chemical Release ☒

DESCRIPTION OF INCIDENT: Detail what occurred; Immediate action taken, i.e. clean up, evacuation, etc. How injury was avoided if a near miss accident occurred.

Started Loading caustic truck with
Truck valve open. Caustic spilled out
on scale, into pit. Dike valve was open,
standard procedure. When it was noticed
Thompson closed dike valve & truck valve
This was a side bottom underneath so most
of the caustic went out side the dike.

ESTIMATED DEGREE OF SEVERITY: (Your best estimate of equipment down time, quantity of mat'l released, injury potential) About 100 gal of

MCSD. out of compliance about 3 hr + 20 min.

FOLLOW-UP ACTION TAKEN OR RECOMMENDED: Keeping dike valve
closed & put a high level alarm on sump.

INVESTIGATED BY: Alton R. Jensen

Distribution: Originator maintains a copy. Send one copy to the appropriate Department Superintendent. Send the third copy to the appropriate Plant E.R. Supervisor (Manager of Safety & Health for the Complex Group).

Further notification or distribution will be made by the E.R. Supervisor after review with the Department Superintendent. Loss Prevention will be informed of chemical process and property insurance incidents by the E.R. Supervisor. The Manager of Safety and Health will be sent a copy of all completed reports.

Tank Truck driver reported this spill to his supervisor who then called him to the HRC & DHR. The spill was less than the R.O. 600 lb.

SL 087255

Revised: 12/15/82

ROUTING - OPERATIONS

General Foreman
Production Superintendent
Operations Superintendent
Plant Manager
Environmental Control

ENVIRONMENTAL UPSET REPORT

SUBJECT: Caustic Spill
FROM: Alton Fontenot

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within five (5) calendar days of the incident.]

1. DATE OF INCIDENT: 12-11-82
2. SOURCE OF RELEASE: Caustic Truck Loading Rack
3. TIME AND DURATION: 12:05 p.m. to 12:30 p.m. 25 min.
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): mph
6. HAZARDOUS MATERIAL RELEASED: NaOH
7. ESTIMATED QUANTITY RELEASED: 600 lbs (100 gals. of 50% NaOH)
8. CAUSE OF RELEASE: Caustic tank truck began loading with bottom valve left open. In addition, the drain valve on the spill collection sump was open to Outfall 021, (pH 10.2)
9. IMMEDIATE ACTION TAKEN: ~~Both~~ Both dike valve and truck drain valve were closed.
10. ACTION PLANS TO PREVENT REOCCURRENCE: Dike valve will be kept closed and a high level alarm will be installed on sump
11. NOTIFICATION MADE (Who, When): Shift Superintendent
PPG did not report this spill since the amount released was below the 1000 lb R.O. The tank truck driver did report this incident to his supervisor, who in turn reported the incident to the NRC / DNR.

Environmental File #

309.4

SL 087256

Revised: 12/15/82

JAN 27 1984

ENVIRONMENTAL UPSET REPORT

ROUTING - OPERATIONS

General Foreman *[initials]*
Production Superintendent *[initials]*
Operations Superintendent *[initials]*
Plant Manager *[initials]*
Environmental Control *[initials]*

SUBJECT:

Caustic Spill into Ship Channel

FROM:

ALTON FERGUSON

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within five (5) calendar days of the incident.]

1. DATE OF INCIDENT:

1/25/84

2. SOURCE OF RELEASE:

Caustic Dump @ "a" Dock

3. TIME AND DURATION:

4: ~~30~~

4. WEATHER CONDITIONS (Circle One): Clear

Partly Cloudy

Cloudy

Rain

5. WIND SPEED AND DIRECTION (if a gas release):

NA

mph

6. HAZARDOUS MATERIAL RELEASED:

NaOH

7. ESTIMATED QUANTITY RELEASED:

300

lbs

8. CAUSE OF RELEASE:

SEE ATTACHED LETTER

9. IMMEDIATE ACTION TAKEN:

SEE ATTACHED LETTER

10. ACTION PLANS TO PREVENT REOCCURRENCE:

Normal procedure is for the man to close this valve after pressure (air) is bled off of hose to pump. The checking of this valve will be re-emphasized to all of our loading people.

11. NOTIFICATION MADE (Who, When):

Andy Planché to Environmental Control; NO OUTSIDE AGENCIES WERE NOTIFIED AS THE AMOUNT DISCHARGED WAS NOT MORE THAN THE REPORTABLE QUANTITY (~1000 lbs).

Environmental File # _____

SL 087257

RECEIVED
FEB 9 1984

Subject, CAUSTIC SPILL

TO: Andy Planché
FROM: ALTON FONTENOT

1-25-84

At About 4³⁰ PM, 1-25-84, I WAS
CALLED BY Ray Gurdy, LEAD TANKERMAN.
He told me the caustic sump at
"C" dock was running over. They
had turned loading pump OFF.
Barge had been loading about
15 minutes.

I went to the river and
found the 2" drain line, on
hose side of 6" loading valve,
wide open. This valve is normally
open to relieve pressure on hose,
after blowing into barge. It is
then suppose to be closed OFF.

I estimate about 50 gals
OF ET50 went into river

600 lbs TOTAL
300 lbs ABS

Alton N. Fontenot

RECEIVED

JAN 26 1984

SL 087258

Revised: 12/15/82

ROUTING - OPERATIONS

~~General Foreman~~
~~Production Superintendent~~
~~Operations Superintendent~~
~~Plant Manager~~
Environmental Control

ENVIRONMENTAL UPSET REPORT

SUBJECT: E-50 Transfer line Gasket Leak
FROM: A. Ashworth JBM JLB

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within
five (5) calendar days of the incident.]

1. DATE OF INCIDENT: 2/21/84
2. SOURCE OF RELEASE: E-50 Transfer Line
3. TIME AND DURATION: Unknown
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): _____ mph
6. HAZARDOUS MATERIAL RELEASED: E-50 Caustic
7. ESTIMATED QUANTITY RELEASED: Unknown lbs
8. CAUSE OF RELEASE: Transferring C batch to old
deck TKS. Gasket blew out at E. end of
rainwater sump.
9. IMMEDIATE ACTION TAKEN: Shut transfer down
& blew out line. Replaced gasket.
10. ACTION PLANS TO PREVENT REOCCURRENCE: _____

11. NOTIFICATION MADE (Who, When): Contacted P. H. Pearson to Environmental;
NO OUTSIDE agency was contacted as it could not be determined if
the amount spilled was over the reportable quantity of 1000 lbs and
it appeared reasonable to assume that it was less.

Environmental File # 309.5

SL 087259

CHEMICALS

INTEROFFICE / LAKE CHARLES

TO Jim Lafleur DATE February 23, 1984
FROM Alton Fontenot *AF* SUBJECT PPG Barge 209

At 7:15 PM on 2/22/84, Ray Guidry paged me to check a list on PPG 209. I arrived at "D" dock about 7:20 P.M. I checked the drafts. A slight list was to the starboard side, about 3" to 4". It was straightening up at about the 8'6" to 8'7" mark.

C. LeBleu, B. Thompson and I were on the bow end of the barge. Thompson took my light and went to the stern, which was next to the dock. Thompson had painted a mark on 8'9" on the port, stern corner. As he passed #4 dome, he heard the air and caustic gurgling. He immediately proceeded to pump switch, punched all 4 stop buttons and closed the dock valve. Caustic came out of #4 dome about the time he hit the stop buttons. Very little caustic came out of #2 and #3, as the domes were closed, only the ullage hatches open. No caustic came out of #1.

At that time, the barge was at 8'8" on stern and had leveled up side to side, to about 1" difference. It was 7:30 P.M.

We proceeded to wash barge down, as caustic had stopped running over when Thompson closed the valve.

We pumped material back to shore tank 102, to about 4" air space in #4 dome.

I called D. Bourne at about 7:45 P.M., telling him about the spill. He met me at "D" dock, investigated and left to call Enviornmental.

The Coast Guard patrol boat showed up about 9:30 P.M. Shortly afterwards, I was notified that more Coast Guard people would soon be arriving. They all left about 10:30 P.M., after taking statements.

cc: J.M. Porter
A.J. Beatrice
A. Plauche
file (EPA Coast Guard)

3-6-84

Johnny Taylor informed me that barge loading procedures will be re-evaluated and re-written (to better reflect on barges of varying capacity) to prevent a recurrence of a spill of this nature.

Andy Plauche

SL 087260

Revised: 12/15/82

ENVIRONMENTAL UPSET REPORT

ROUTING - OPERATIONS

~~General Foreman
Production Superintendent
Operations Superintendent
Plant Manager
Environmental Control~~

SUBJECT: ET 50 NaOH Spill
FROM: A. Plancher

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within
five (5) calendar days of the incident.]

1. DATE OF INCIDENT: 2-22-84
2. SOURCE OF RELEASE: PPG 209 - Barge
3. TIME AND DURATION: 7:30 p.m. 1-2 minutes
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): calm mph
6. HAZARDOUS MATERIAL RELEASED: Sodium Hydroxide (ET 50)
7. ESTIMATED QUANTITY RELEASED: 2500-3000 lbs (400-500 gallons) *215 lbs contained in 215 gal drums*
8. CAUSE OF RELEASE: see reverse side *(450 gal drum) (225 lbs/gal) 1315 2*
9. IMMEDIATE ACTION TAKEN: Pumps shut down. Barge washed off. Portion of load pumped back to dock tanks.
10. ACTION PLANS TO PREVENT REOCCURRENCE: _____
11. NOTIFICATION MADE (Who, When): NRC, DEP, and Coast Guard notified - 2/22 Gerry Jordan notified 2/22.
C.D. Env. - R.T. Samelson notified 2/23 (could not reach anyone on 2/22)

Environmental File # 309,5

SL 087261

Shippers loading caustic barge PPG 209 noticed the barge listing to one side. They left the pump on and went to opposite side of barge to check the draft of the barge.

The caustic began overflowing the barge while the shippers were away from pumps, but, they were able to shut pumps down within 1 minute. The top of the barge was then washed down and some portion of the caustic was pumped back to the dock tanks.

The shipping shift supervisor estimated 400-500 gallons overflowed into the ~~the~~ barge slip. (loading line is 6" with 60 psi)



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

COMMANDING OFFICER
U.S. COAST GUARD
MARINE SAFETY OFFICE
2875 75th ST. & HWY 69
PORT ARTHUR, TEXAS
77640

16455

22 Feb. 84

PPG Industries
P.O. Box 1000
Lake Charles, LA.
70601

Gentlemen:

This is to inform you that a pollution incident occurred or threatens to occur at PPG Industries, Bridge Deck No. 0 at 1930 22 Feb. 84 for which you may be financially responsible. Under Federal Statutes, the United States Government has an interest in this incident, and further, may take appropriate action to minimize the damages which may be caused by this incident.

The discharge of a harmful quantity of ~~oil~~ ^{Hazardous Material 2% 2 (Sodium Hydroxide)} is a violation of the Federal Water Pollution Control Act as amended by the Clean Water Act. Under this Act, the person responsible for the pollution is obligated to undertake removal action. If he refuses to take adequate removal action, he is financially responsible for actions taken by the Federal Government to remove the pollutant and adequately mitigate its effects. Removal is being done properly if it is in accordance with Federal and State statutes, regulations and the procedures and criteria of the National Oil and Hazardous Substances Pollution Contingency Plan. If you undertake removal, the adequacy of your actions will be determined by the U.S. Coast Guard On-Scene-Coordinator. The On-Scene-Coordinator for this area is Captain J.J. WICKS. As long as you are taking adequate action in this matter, Federal action will be limited to monitoring the progress of your activities and to provide guidance as necessary.

If it is determined that you are not taking proper and appropriate actions to contain, clean up and dispose of the pollutant(s), Federal response may be initiated. You may then be held responsible for all actual cost incurred by the Federal Government as set forth in Section 311(f) of the Federal Water Pollution Control Act, as amended. Should you require further information concerning this matter you should contact: U.S.C.G. MARINE SAFETY OFFICE, PORT ARTHUR, TEXAS / 713-724-4330.

Sincerely,

[Signature]
On-Scene-Coordinator

SL 087263

Received and Acknowledged

[Signature]

10:35 PM
time

2/22/84
date



It's a law we

Witnessed by: [Signature] Mk

Enclosure # 1

SIGNIFICANT INCIDENT REPORT

This form is to be used for first notice reporting of all incidents involving process upsets, near miss accidents (no injury) and chemical releases of a nature deemed to be significant. It is to be completed by the supervisor(s) of the area. Significant fire damage incidents should be called into Loss Prevention. Vehicular damage incidents should be called into the Guards.

GEOGRAPHIC LOCATION: Plant A ☒ B ☐ C ☐ Complex

DATE 2-22-84

Specific Location: "D" Dock

Weather (clear - cloudy - rain - wind - etc) Clear Wind 2 MPH

TYPE OF INCIDENT: (Could be more than one) Near Miss Accident ☐
Operational Upset ☐ Chemical Release ☒

DESCRIPTION OF INCIDENT: Detail what occurred; Immediate action taken, i.e. clean up, evacuation, etc. How injury was avoided if a near miss accident occurred.

Loading PPG-209, was going to 8'9" draft.
When draft got to 8'8", caustic came out
of dome. Thompson happened to be close
to pump switch, shut it off + closed
valve on deck, about 25 seconds pumped back
to shore tank, washed barge down.

ESTIMATED DEGREE OF SEVERITY: (Your best estimate of equipment down time, quantity of mat'l released, injury potential)

300-400 gal. of ETSO caustic.

FOLLOW-UP ACTION TAKEN OR RECOMMENDED: Recommended Loading
barge not more than 8'6" draft

INVESTIGATED BY: Alton H. Zentgraf Daniel Bourne

Distribution: Originator maintains a copy. Send one copy to the appropriate Department Superintendent. Send the third copy to the appropriate Plant E.R. Supervisor (Manager of Safety & Health for the Complex Group)

Further notification or distribution will be made by the E.R. Supervisor after review with the Department Superintendent. Loss Prevention will be informed of chemical process and property insurance incidents by the E.R. Supervisor. The Manager of Safety and Health will be sent a copy of all completed reports.

File # 309.5

SL 087264



INDUSTRIES

PPG INDUSTRIES, INC. INDUSTRIAL CHEMICAL DIVISION P. O. BOX 1000 LAKE CHARLES, LA. 70602

April 5, 1984

Mr. Tom Coerver
Department of Environmental Quality
Air Quality Division
Office of Environmental Affairs
P. O. Box 44066
Baton Rouge, LA 70804

RE: Chlorine Release of 3/27/84

Dear Mr. Coerver:

In accordance with Section 17.11 of the Louisiana Air Quality Regulations, this letter is the follow-up to my telephone report of March 27, 1984, regarding a chlorine release that occurred at our facility on 3/27/84.

At approximately 4:48 p.m. on 3/27, a union to an expansion bottle on the north chlorine Barge loading header suddenly began to leak chlorine to the atmosphere. The leak developed in the header following a chlorine transfer and during clearing procedures of the header. Estimates of the amount of chlorine lost to the atmosphere was approximately 10 lbs. By 5:02 p.m. the leak of chlorine had been stopped.

If you should have any questions concerning this release, please call me at (318) 491-4420.

Respectfully,

Patrice M. McFarlain
Environmental Control Assistant

PMF/bh

cc: William Coltrin

bcc: File #109.8

SL 087265

Cl⁻ Release

Alton D. Foxenot

1. DATE OF INCIDENT: 3-27-84
2. SOURCE OF RELEASE: North CL² Barge Ld. Header end of #13 5/1
3. TIME AND DURATION: 4⁴⁸ 14 min.
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): 10 mph South
6. MATERIAL RELEASED: CL² (vapor + Liquid.)
7. ESTIMATED QUANTITY RELEASED: 10 lbs
8. CAUSE OF RELEASE: While clearing north header (barge)
put 40 lbs^{oil} for sweep, to replace a leaking union
to an expansion bottle at #13 steel tank.
9. IMMEDIATE ACTION TAKEN: Put line on blowdown then
sniff

10. ACTION PLANS TO PREVENT REOCCURRENCE: Allow time to remain on
sniff longer prior to sweeping with air.

11. NOTIFICATION MADE (Who, When): D. Bourne 4⁴⁸ 3/27/84
Patti McFarlin and DEQ

cc: Manager, Environmental Control
Manager, Operational Services

SL 087266

Ken
✓ Fri

PLANT A 24-HOUR
ENVIRONMENTAL UPSET REPORT

SUBJECT: Caustic Spill
FROM: Darrell L. Moore

Please fill out the following questionnaire as complete as possible and distribute as indicated below within 24 hours of the upset. This report must be filed when (a) a mercury violation occurs (air and water), (b) a caustic spill results in a pH violation at Outfalls 001, 005 or 021, (c) a release of chlorine that exceeds 10 lbs/day, or (d) any spill that must be reported to a governmental agency such as oil, caustic, or HCl. For incidents that occur on Friday, Saturday, or Sunday, the report must be distributed no later than 3:00 p.m. Monday.

1. DATE OF INCIDENT: 8/9/84
2. SOURCE OF RELEASE: Overflow of Caustic Dock Sump
3. TIME AND DURATION: 6:15 PM for 5 MIN
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): _____ mph _____
6. MATERIAL RELEASED: ET-50 Caustic
7. ESTIMATED QUANTITY RELEASED: 50-75 gals ~~500-750 lbs~~
8. CAUSE OF RELEASE: Drain valve at ET-50 loading manifold was left open, causing caustic to enter sump and overflow. In addition, a drain valve in the pit next to the sump was leaking around packing
9. IMMEDIATE ACTION TAKEN: Shut off transfer pump from caustic tanks. Pumped down sump via sump pump. Called in vacuum truck to suck out valve pit.
10. ACTION PLANS TO PREVENT REOCCURRENCE: Failure of Tankerman to follow Barge SOP (Itemize Procedure). Reviewed procedure and alarm system with all employees.
11. NOTIFICATION MADE (Who, When): Notified shift superintendent at 6:30 PM
Patty McFarlin notified. No investigation.

Distribution: General Foreman
Production Superintendent
Operations Superintendent
Plant Manager

cc: Manager, Environmental Control
Manager, Operational Services

Environmental File # 309.5

SL 087267

Patty McFarland

ENVIRONMENTAL UPSET REPORT

ROUTING - OPERATIONS
General Foreman
Production Superintendent
Operations Superintendent
Plant Manager
Environmental Control

SUBJECT: CL GAS LEAK - TANK CAR LOADING
FROM: GARLAND A. TURANO

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within five (5) calendar days of the incident.]

1. DATE OF INCIDENT: SEPT. 5, 1984
2. SOURCE OF RELEASE: CL RACK GAS HOSE
3. TIME AND DURATION: 7⁴⁰ AM - 10 MINUTES
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): 5 mph N/E
6. HAZARDOUS MATERIAL RELEASED: CL GAS
7. ESTIMATED QUANTITY RELEASED: 4-8 lbs
8. CAUSE OF RELEASE: GAS LEAKED THROUGH 3" RACK MANIFOLD VALVE AND GAS HOSE BALL VALVE AT N/W REDDY STATION. CL GAS ESCAPED THROUGH HOSE.
9. IMMEDIATE ACTION TAKEN: ISOLATED HEADER - SHUTTED AND INSTALLED PLUG ON END OF HOSE.
10. ACTION PLANS TO PREVENT REOCCURRENCE: PUT PLUGS ON END OF LOADING HOSE WHEN CARS ARE DISCONNECTED. ALSO, CHECK AND REPLACE LEAKING VALVES.
11. NOTIFICATION MADE (Who, When): Called Environmental Control Dept. 9/5/84
to advise of problem

ENVIRONMENTAL UPSET REPORT

General Foreman
Production Superintendent
Operations Superintendent
Plant Manager
Environmental Control

SUBJECT: CAUSTIC Spill - CAUSTIC BARGE (once 11) D Dock
FROM: Ray W. GUIDRY - SHIPPING Foreman

Please complete the following questionnaire and forward as soon as possible.
[This report must be received by the Environmental Control Department within five (5) calendar days of the incident.]

1. DATE OF INCIDENT: 10-6-84
2. SOURCE OF RELEASE: BARGE DOME
3. TIME AND DURATION: 5:20 PM - LESS THAN 30 SECONDS
4. WEATHER CONDITIONS (Circle One): Clear Partly Cloudy Cloudy Rain
5. WIND SPEED AND DIRECTION (if a gas release): _____ mph _____
6. HAZARDOUS MATERIAL RELEASED: ET-50 CAUSTIC
7. ESTIMATED QUANTITY RELEASED: 638 lbs (50 GAL) (TANKERMAN HELPER) (TANKERMAN)
8. CAUSE OF RELEASE: M. BOUDREAU WAS AT THE PUMP SWITCH WAITING FOR M. GUILDEAN TO GIVE HIM THE SIGNAL TO SHUT OFF PUMP. MATERIAL WAS INSIDE OF DOME. WHEN BOUDREAU SAW MATERIAL BEGIN TO SPLASH OUT, HE SHUT OFF PUMP IMMEDIATELY. (MATERIAL STOPPED COMING OUT AT THIS POINT) AND THEN SHUT OFF LINE VALVE.
9. IMMEDIATE ACTION TAKEN: SHUT OFF PUMP AND SHUT OFF LINE VALVE IMMEDIATELY.
10. ACTION PLANS TO PREVENT REOCCURRENCE: This particular barge is owned/operated by Qim and because of this, its design is different from that of PIG barges. The tankerman helper on the job was new and inexperienced in loading this type of barge and as a result misjudged the full level on the barge. The tankerman helper was instructed/counseled to be more attentive when loading this type of barge.
11. NOTIFICATION MADE (Who, When): NOTIFIED SHIFT SUPERINTENDANT DANNY BOURNE AT 5:30 PM; DANNY CONTACTED P. McFARLAN @ 10:00 PM - NO OUTSIDE AGENCY CONTACTED AS LESS THAN RQ. of 1000#

Environmental File # 309.5

SL 087269

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO Johnny Taylor DATE February 13, 1985
FROM Jim Lafleur SUBJECT Caustic Spill from
Caustic Barge PPG 208

On January 25, 1985, PPG 208 caustic barge was being loaded from Shore Tank 203. Tankerman J. Terry was topping off the barge. Loader Helper was standing by loading pump to cut it off. The barge started overflowing before the Tankerman could get the valve closed. The barge overflowed approximately 15.20 seconds before the valve was closed. Our loading rate is approximately 600 liquid tons/hour with one pump which we use when loading barges. This calculates to approximately 2.5 liquid tons lost before the valve was shut and approximately .5 liquid tons lost from the barge loading lines to the barge or a total of 3 liquid tons (1.5 AB tons) lost into the ship channel. After the barge was off loaded to the correct level in the barge, our shore tank level showed we took out 1,262 liquid tons from the shore tank and the barge ullages showed we had 1,263 liquid tons in the barge.

At the time of the spill Andy Plauche was notified and he notified all the necessary agencies.

Tankerman Jim Terry will be given a minor reprimand.

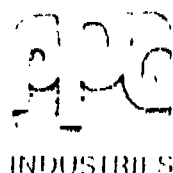
To keep from over loading barges in the future, we will load barges PPG 205 through PPG 245 to a 5 foot ullage, then shut off the loading pump and reduce the loading rate while topping the barge off to maximum load.

Barges PPG 251 through PPG 253 will be loaded to a 6 foot ullage then shut the pump off and finish loading at a reduced rate to maximum load.

On all other barges (customer) if you don't have a maximum load by the time you are up to 1 1/2 feet from the top of barge cargo tank (not from the gage point), shut off the loading pump and continue loading at a reduced rate to maximum load.

SL 087270

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO Mercury Cell Operators

DATE November 14, 1984

FROM C. L. Tinney

SUBJECT H_2SO_4 Unloading/Transfers

Recently a very "close call" occurred in the Mercury Cell area involving sulphuric acid. Shipping unloaders were in the process of setting up to unload a sulphuric acid rail car into the east sulphuric storage tank. The Utilities area operator on duty, who had just finished gauging an MC-50 day tank was walking in front of the sulphuric acid unloading manifold when a section of the unloading pipe at ground level blew out under pressure. A large stream of acid came within inches of striking the operator, passing just behind him as he moved.

It appears that the practiced unloading procedure has been to pressure up the rail car and all piping up to the storage tank inlet valve at the unloading manifold. The tank inlet valve is then opened to allow flow into the tank. Shipping has been asked to modify the unloading procedure so that only the rail car is pressured up initially with the car outlet valve closed. All unloading piping should then be lined up through the manifold into the east sulphuric storage tank and the rail car outlet valve be used to regulate flow to the tank.

Also effective immediately the Utilities Operator will be responsible for barricading the street north of the control room before all sulphuric acid transfers and before unloading either a tank truck or rail car of sulphuric acid. The barricades should be positioned at the east end of the roadway and just east of the control building in the vicinity of the chilled water pumps. Permanent barricade posts and chains are being installed at these locations for this purpose. These barricades will restrict traffic flow through the area during acid transfers and will serve as a warning to all persons who must enter the area. Before transferring sulfuric acid from the east storage tank to either the west storage tank, acid towers, or cooling tower tank the Utilities Operator and Lead Operator will be responsible for notifying all other Mercury Cell operators that the transfer is about to begin. All personnel should avoid working directly under the sulphuric acid piping during a transfer without the proper protective clothing. Anyone who must pass near or directly under the transfer header should wear goggles while a transfer is in progress. Special notification should be made to any Maintenance personnel who may be working in the vicinity of the sulphuric acid transfer header.

/gc

SL 087271

cc: SOP Manual 1-A-18

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO All Tankermen

DATE

February 22, 1985

FROM Johnny Taylor

SUBJECT

Due to having two barges overflow while loading, we need to change our loading procedure.

We will load barges PPG 205 through PPG 245 to a 5 foot ullage, then shut off the loading pump and reduce the loading rate while topping the barge off to maximum load, keeping a close watch on barge ullage so the barge does not overflow.

Barges PPG 251 through PPG 253 will be loaded to a 6 foot ullage, then shut the pump off and finish loading at a reduced rate to maximum load, while watching ullages close.

On all other barges (customer) if you don't have a maximum load by the time you are up to 1 1/2 feet from Top of Barge Cargo Tank (NOT FROM GAUGE POINT), shut off the loading pump and continue loading at a reduced rate to maximum load. This is also for our CSCC 201, 202, and 203 barges.

The pump cannot be shut off if there is not enough material in the dock tank to gravity flow to the barge. You will have to use the pump and restrict the dock valve to get a slower loading rate.

Our main concern here is NOT to overflow any more barges, so watch the cargo ullages very close. Also, the coast guard has notified us that they will be making spot checks on us when we are loading barges, so make sure everything is in order.

SL 087272

Written Procedures for Plant 'A' Shipping
that relate to the Environment

SL 087273

CH - Please implement this procedure in tank area also. Thanks.

CHEMICALS



JF 2/4/85

INTEROFFICE / LAKE CHARLES

TO Distribution DATE January 29, 1985

FROM Leo C. Comeaux *llb* SUBJECT Plant "A" Environmental
Robert P. Byars *RFB* Reporting Procedures

There is an increased level of activity in the area of agencies investigating environmental incidents. The purpose of the following notification procedure is to quickly inform those people who will have to deal with the questions raised by these outside agencies. Armed with the facts, they stand a better chance of keeping a truly minor incident from growing into a major event.

Until further notice, in addition to those procedures now in effect, the Shift Supervisor is to verbally communicate to the General Foreman of the affected area incidents that require our environmental group to notify anyone outside of the plant; i.e., EPA, DEQ, Coast Guard, General Office. This communication of the incident is to proceed through the channel of General Foreman, Area Superintendent, Operations Superintendent and Plant Manager. In the event that contact with the first level cannot be made, proceed to the next contact in the chain.

The determination as to whether or not the incident will be reported to an outside agency or to the General Office is made by the Environmental Group. The Shift Supervisor will have to get feedback from the Shift Superintendent on the notification plans. The General Foreman should be notified prior to or at the same time that the outside agency is contacted.

It is also important that the Shift Supervisors notify the Shift Superintendent of all spills or releases affecting the environment. This includes spills of short duration over which he may not have control but simply needs to be informed.

Distribution

Plant "A" Shift Supervisors
Plant "A" General Foreman
Shift Superintendents
✓ J. M. Porter
A. J. Kubicek
W. J. Peard

/da
File: ENVRPROC.LCC

SL 087274

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO J. C. LaFleur

DATE May 4, 1982

FROM J. M. DiGiglia

SUBJECT Check List for Hazardous
Waste Shipments Leaving
Lake Charles Complex

It has come to my attention that we need a double-check for hazardous waste manifests. In the recent past, we have had several instances where manifested loads have left the Complex with improperly completed manifest documents. Since the Shipping Foremen are presently inspecting the trucks, I feel that they would be our best bet to see that this check is made. The following items on each manifest need to be checked and filled out before a load of hazardous waste is allowed to leave this plant:

1. Sequence number
2. Shipping description
3. Hazard class
4. Waste number
5. Weight
6. Packaging
7. Generator name and EPA ID number
8. Transporter name and EPA ID number
9. Disposer name and EPA ID number
10. Generator signature
11. One transporter signature

Once a quick check of these items has been made, and everything has been completed, the Shipping Foreman can sign the manifest and send the load on its way. If any of the above items have not been filled out, ask the driver to wait and contact either myself (4370) or Pat Whitley (4899) as soon as possible.

/ap

cc: W. J. Ardoin
C. C. Ellender
A. D. Fontenot
D. J. Phillips
J. M. White
File #513.4.04

HOCNING

SL 087275

CHEMICALS



INTEROFFICE / LAKE CHARLES

TO See Distribution

DATE May 14, 1981

FROM J. C. LaFleur

SUBJECT Hazardous Waste Shipment
Procedures

The Shipping Department has recently been given the responsibility of signing all hazardous waste manifests for all hazardous waste shipments leaving the Plant. In order that there be no question as to what kind of waste is in each individual shipment (Shipping has no means of verifying what waste is in a specific shipment), the attached procedure has been proposed and, if no objections are received, will go into effect on May 20, 1981.

The "Generator" in this proposal is the Environmental Foreman for the area in which the waste was generated or the designated supervisor in the unit generating the waste. On back-shifts, the Shift Supervisors can sign the manifests in place of the Foreman.

/ap
Attachment

Distribution

A. J. Beatrice
E. F. Parsons
R. L. Jones
G. L. Perry
A. L. Greathouse/A. P. Plauche'
R. J. Hoening
Shift Supervisors (A, B-I, B-II, C, Powerhouse, Shipping)
Shift Superintendent
Chief, Plant Security

SL 087276

PROCEDURE FOR SHIPPING WASTE MATERIALS

1. Transporter picks up paperwork at the Main Guard Office.
2. Transporter checks in at the unit which generated the waste materials.
3. Generator of the waste materials checks the paperwork to be sure it is for the waste to be loaded and shipped.

Example:

A. For vacuum trucks --

Match the Purchase Order No. on the Driver's work ticket with the La. State manifest

B. For bulk boxes --

(1) Match the Purchase Order No. on the Driver's work ticket with the La. State manifest.

(2) Match the Box No. on the Driver's work ticket with the La. State manifest .

C. For drums --

(1) Match the Purchase Order No. on the Driver's work ticket with the La. State manifest.

(2) Match the following items on the La. State manifest with the labels on the drums:

- (a) manifest document number
- (b) shipping description
- (c) UN or NA number
- (d) EPA waste number

4. Transporter loads the waste materials.
5. Generator verifies the loading and signs the following papers:
 - A. All manifests as the generator of the waste materials
 - B. The Driver's work ticket as the shipper
6. Transporter's truck is weighed at the scales and Shipping is called.
7. The Shipping representative will do the following:
 - A. Check the gross weight of the truck
 - B. Check for placards, if required, according to the PPG manifest
 - C. Co-sign all manifests to certify that the shipment has been properly marked and labeled, and is in proper condition to be shipped
8. Transporter signs the manifest at the Main Guard Office.

9. A Guard checks all paperwork to be sure there are two signatures for the Generator on all the manifests.
10. Transporter leaves the plant.

SL 087278

Revised: 5/10/84

ENVIRONMENTAL UPSET NOTIFICATION GUIDE

	<u>Incident</u>	<u>Contact</u>	<u>Home Phone</u>
I.	<u>WATER</u>		
A.	Oil Spills	M. DiGiglia or P. McFarlain	474-3122 478-0188
B.	Chemical Spills	P. McFarlain or A. Plauche'	478-0188 625-8740
C.	By-pass or any NPDES waste-water facility (i.e., WTU, Hg Treat., Pb Treat., Sodium Formate, Silicas Sand Filters, Brine Treatment)	P. McFarlain J. Wyche	478-0188 477-5292
D.	Actual or Probable NPDES violation if: (1) due to factor(s) beyond our reasonable control; or (2) amount of discharge is twice the permitted maximum	P. McFarlain J. Wyche	478-0188 477-5292
E.	Condition Red Chlorine Absorber Discharge	P. McFarlain A. Plauche'	478-0188 625-8740
II.	<u>AIR</u>		
A.	Gas/Vapor Release		
	1. Posing danger to citizens outside the plant	<u>Safety</u> - local authorities on hot line; also Disaster Coordinator	477-2209
		<u>Environ.</u> - W. Peard or J. Wyche or A. Greathouse	478-9163 477-5292 478-7447
	2. Any other gas/vapor releases (i.e., Cl ₂ , vinyl chloride, HCl, others)	K. Komoroski or P. McFarlain	478-7983 478-0188
B.	SO ₂ Alarms	K. Komoroski	478-7983

<u>Incident</u>	<u>Contact</u>	<u>Home Phone</u>
<u>III. HAZARDOUS WASTE</u>		
A. Spills in Transit	<u>Environ.</u> - A. Plauche' or M. DiGiglia	625-8740 474-3122
	<u>Operations</u> - G. Jordan	625-5080
B. Disposal Problems	M. DiGiglia or A. Plauche'	474-3122 625-8740
C. Spills from hazardous waste facilities (WTU, Hg Treat., PH 'C' Asb. Pond, Classifiers, Incinerators, WTU, Feed Surge Pond, VCM-II API Separator)	A. Plauche' or M. DiGiglia	625-8740 474-3122
<u>IV. VISITS BY GOVERNMENT AGENCIES</u>		
A. EPA, Coast Guard, DEQ	J. Wyche or A. Greathouse W. Peard	477-5292 478-7447 478-9163
B. OSHA	R. Williams	625-7965

SL 087280

Revised: 3/1/84

ENVIRONMENTAL CONTROL DEPARTMENT PERSONNEL

	<u>Phone Number</u>	
	<u>Plant</u>	<u>Home</u>
J. M. DiGiglia	4370	474-3122
A. L. Greathouse	4422	478-7447
K. S. Komoroski	4576	478-7983
P. M. McFarlain	4420	478-0188
W. J. Peard	4848	478-9163
A. P. Plauche'	4814	625-8740
J. E. Wyche	4840	477-5292

SL 087281