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C.P. Inorganics
ILD062480850
SF/HRS

CERCLA

Environmental Priorities Initiative Preliminary Assessment Report

EPA Region 5 Records Ctr.
305123

Illinois Environmental Protection Agency
P.O. Box 19276,
Springfield, Il 62794-9276

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I. EXECUTIVE SUMMARY

C.P. Inorganics is an inorganic chemical manufacturer specializing in the production of industrial, agricultural and specialty metal finishing chemicals. Process operations include the adding of chemicals and water to the waste products received at the facility to adjust their chemical composition. (Filtering of waste is needed, in some instances, when a high amount of suspended solids are present). These products are then sold as raw materials. Hazardous waste codes handled at C.P. Inorganics include D-wastes and F-wastes (see Table 2).

Based on information acquired during the Preliminary Review, a list of Solid Waste Management Units (SWMUs) was completed. The list of SWMUs included container storage areas, laboratories, loading/unloading areas, process units and a wastewater treatment unit. The Visual Site Inspection identified additional SWMUs and some SWMUs were grouped into specific processes. Spill information from Illinois EPA Office of Chemical Safety files did not identify any areas of concern due to spills.

The final list of Solid Waste Management Units identified are the result of the Preliminary Review, Visual Site Inspection and information provided by the facility. This list contains 35 SWMUs, which are described in Section III and shown in Attachment A. Based on a review of the information acquired and summarized for this site, the following generalizations can be made:

- No further action is recommended for the hazardous waste storage tanks (SWMU Nos. 11 and 24 thru 35), pretreatment system (SWMU No. 2), laboratories (SWMU Nos. 3, 14 and 15), laboratory sample storage area (SWMU No. 5), and the drum washing area (SWMU No. 10).

- Soil sampling is recommended for the container storage areas (SWMU Nos. 1 and 9), sludge storage pad (SWMU No. 7), outside drum storage area 1 (SWMU No. 8), tank truck loading/unloading area (SWMU No. 13), outside drum storage area 2 (SWMU No. 21), outside drum storage area 3 (SWMU No. 22) and the rail car loading/unloading area (SWMU No. 12).

- Soil sampling is recommended for the cupric chloride process (SWMU No. 4), process units (SWMU Nos. 16 thru 20), process sewer system (SWMU No. 23) and the chemical sewer system (SWMU No. 6) if the integrity of the sumps and sewer lines has been breached.

TABLE 1

LIST OF SOLID WASTE MANAGEMENT UNITS

C.P. Inorganics
Joliet, Illinois

Hazardous/Solid Waste Storage Areas

SWMU No. 1 Container Storage Area 1
SWMU No. 5 Laboratory Sample Storage Area
SWMU No. 7 Sludge Storage Pad
SWMU No. 8 Outside Drum Storage Area 1
SWMU No. 9 Container Storage Area 2
SWMU No. 11 Tank T-3
SWMU No. 21 Outside Drum Storage Area 2
SWMU No. 22 Outside Drum Storage Area 3
SWMU Nos.24-35 Hazardous Waste Storage Tanks

Process Units

SWMU No. 2 Pretreatment System
SWMU No. 4 Cupric Chloride Process
SWMU No. 16 Copper Sulfate Process
SWMU NO. 17 Copper Nickel Nitrate Process
SWMU No. 18 Copper Ammonia Chloride Process
SWMU NO. 19 Nickel Nitrate Process
SWMU No. 20 Ferric Chloride Filter Presses

Miscellaneous

SWMU No. 3 Old Laboratory Room
SWMU No. 6 Chemical Sewer System
SWMU No. 10 Drum Washing Area
SWMU No. 12 Rail Car Loading/Unloading Area
SWMU No. 13 Tank Truck Loading/Unloading Area
SWMU No. 14 Upstairs Laboratory
SWMU No. 15 Downstairs Laboratory
SWMU No. 23 Process Sewer System

II. GENERAL DESCRIPTION

A. FACILITY DESCRIPTION

C.P. Inorganics is located on a 1.6 acre parcel of land in Will County, within the NE 1/4 of the NE 1/4 of Section 4, Township 35 North, Range 10 East (see Figures 1 and 2). The facility address is 10 Industry Avenue, Joliet, Illinois and is owned by Philipp Brothers Chemicals, Inc. One Parker Plaza, Fort Lee, New Jersey.

The older buildings used by C.P. Inorganics were built in the early 1900's, with the Calumet Baking Powder Plant occupying the land until the 1950's. The history of the site from the 1950's to the 1970's is unclear since a number of small businesses may have occupied the buildings. C.P. Inorganics bought the buildings in 1970 and began operations at the site in 1973.

B. PROCESS DESCRIPTION

C.P. Inorganics began at this facility in 1973, with current operations in the manufacturing of industrial, agricultural and specialty metal finishing chemicals. The company also provides temporary storage prior to the treatment or transfer of hazardous wastes. The waste accepted for treatment include: copper ammonium chloride (spent etchant), cupric chloride, copper sulfate solution, copper sulfate crystal, nickel plating solution and copper nickel nitrate solution (rack strip). Ferric chloride is the only waste that is received on-site for temporary storage (in rail cars), until it can be shipped off-site to Ohio for disposal.

The first process at C.P. Inorganics is to prescreen a sample from a prospective customer prior to acceptance of the customer's waste on-site. A sample of the waste is analyzed in C.P. Inorganics' laboratory and a determination is made on whether or not the waste can be treated. If the waste is accepted, the generator can begin shipping waste to the site in either drums, tanker trucks or rail cars. Once the waste is received at C.P. Inorganics, a physical/chemical analysis is performed to verify the contents of the shipment (see Table 3 for test parameters). Based on the results of the analysis, the shipment is either rejected or accepted. If accepted, the waste will be stored on-site in designated hazardous waste storage areas until it can be used in one of the processes. (An annual waste recharacterization is also completed on all waste received at the facility to identify the hazardous waste characteristics, see Table 3).

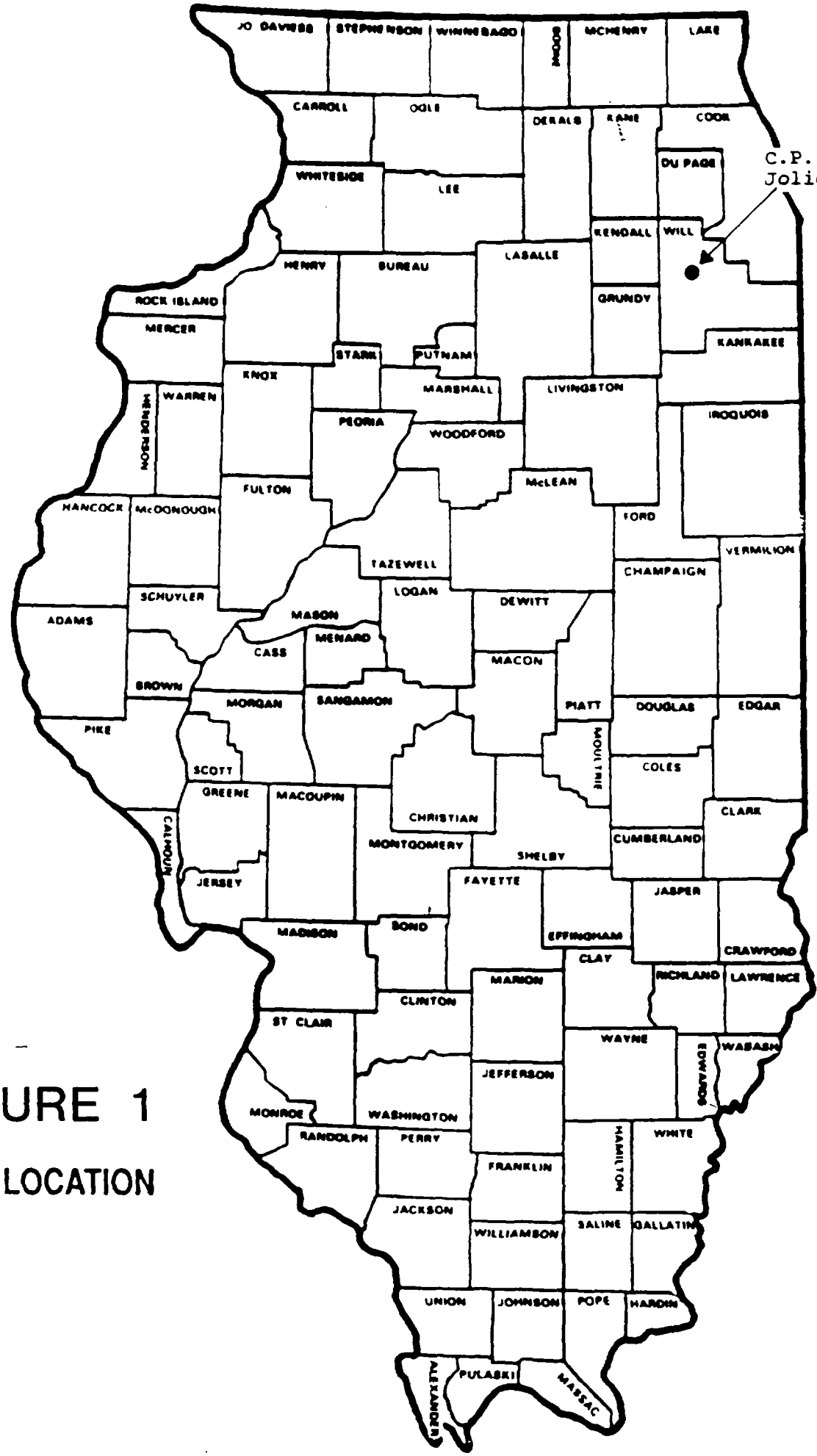
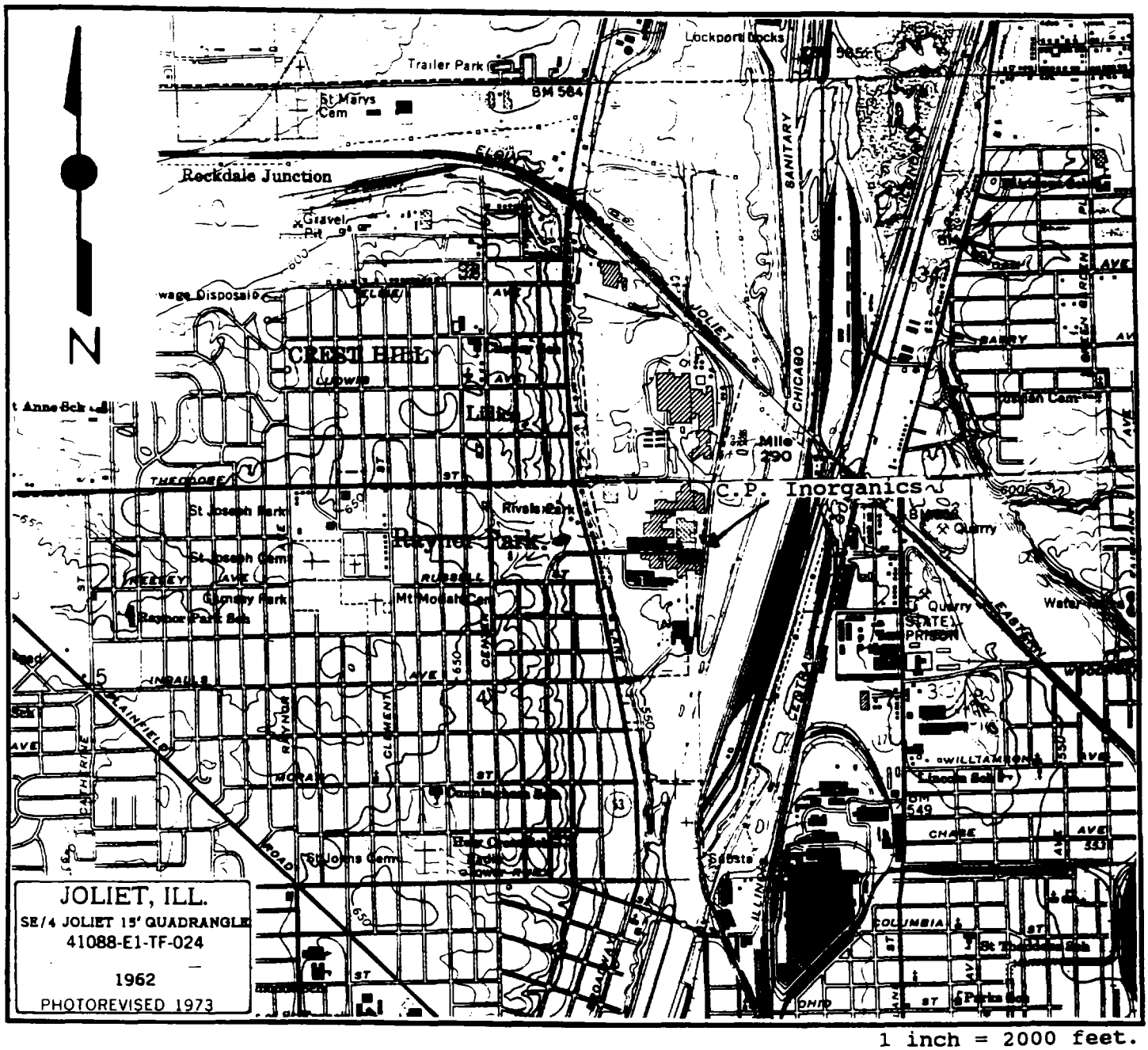


FIGURE 1

SITE LOCATION



1 inch = 2000 feet.

FIGURE 2

TABLE 2

CATEGORIES OF WASTE RECEIVED AT C.P. INORGANICS

Waste No.	Description
D002	A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste.
D004	A solid waste that exhibits the characteristic of EP toxicity for arsenic at 5.0 mg/l or more.
D007	A solid waste that exhibits the characteristic of EP toxicity for chromium at 5.0 mg/l or more.
D008	A solid waste that exhibits the characteristic of EP toxicity for lead at 5.0 mg/l or more.
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; (6) chemical etching and milling of aluminum.

TABLE 3

ANNUAL WASTE RECHARACTERIZATION PARAMETERS

Color
Odor
Physical Characteristics
Layers
Free Liquids
pH
Specific Gravity
Flash Point
Total Arsenic
Total Barium
Total Cadmium
Total Chromium
Total Mercury
Total Lead
Total Selenium
Total Silver
Total Copper
Total Nickel
Total Zinc
Total Cyanide
Dissolved Sulfide
Phenol
Total Solids
% Chlorine

FINGERPRINT ANALYSIS

pH
Free Acid
Specific Gravity
Copper Concentration
Nickel Concentration
Trace Metals
Acidification of Solids
Ammonia as N

C. WASTE MANAGEMENT OPERATIONS

C.P. Inorganics specializes in the processing of solid and liquid inorganic hazardous waste to a virgin product and a non-hazardous sludge (see Attachment H for sludge analysis). (The complete list of wastes received at the facility is provided in Table 2). The wastes received are hazardous due to corrosivity or EP toxicity for metals. The typical wastes stored and treated at the C.P. Inorganics facility are discussed in the following paragraphs.

The primary inorganic waste received by C.P. Inorganics is liquid copper ammonium chloride, also called spent etchant. This material is considered hazardous because the waste exhibits characteristics of toxicity and corrosivity. This waste is designated with the following U.S. EPA RCRA hazardous waste codes: D002, D004 and D008.

The second most significant waste received by the facility is liquid cupric chloride. This material is considered hazardous due to characteristics of toxicity and corrosivity. This waste is designated with the following U.S. EPA RCRA hazardous waste codes: D002, D004 and D008.

The next largest quantity of waste received is copper nickel nitrate solution, which is a liquid. This material is considered hazardous because the waste exhibits characteristics of corrosivity and toxicity. This waste is designated with the following U.S. EPA RCRA hazardous waste codes: D002 and D007.

Liquid and solid wastes accepted at C.P. Inorganics in lesser quantities include: copper sulfate solution, nickel plating solution and copper sulfate crystals. These wastes are designated with the following U.S. EPA RCRA hazardous waste codes: D002, D007, D008 and F006.

The only waste generated by C.P. Inorganics is by means of their pretreatment operations. This waste is a sludge from the, which is generated from the pretreatment system. The liquids and sludges from the various processes are pumped to the treatment system, where the liquid is neutralized and the solids are separated by filter presses. The liquids are treated and discharged to the Joliet sanitary district sewer system. The solids fall into a hopper, then dumped into a roll-off box for off-site disposal. Approximately one roll-off box (20 cubic yards) is generated every two weeks.

C.P. Inorganics does accept spent ferric chloride for storage only. The waste is pumped into a rail car for off-site delivery to Ohio for deep well injection. The waste is designated with the following U.S. EPA RCRA hazardous waste code D002.

D. REGULATORY HISTORY

On November 18, 1980, C.P. Inorganics submitted their RCRA Part A permit application U.S. Environmental Protection Agency. The Part B permit application was received by the Illinois Environmental Protection Agency on November 14, 1988, with a revised Part B submitted on June 29, 1990. The Part B permit application identifies the following Hazardous Waste Management Units (HWMUs): container storage area 1 (SWMU No. 1), container storage area 2 (SWMU No. 9) and 13 waste storage tanks (SWMU Nos. 11 and 24 thru 35).

The facility applied for a permit from the Illinois Environmental Protection Agency Division of Land Pollution Control, on June 26, 1979 and March 10, 1980, to develop a waste management facility and was granted a developmental permit on June 11, 1980 (1980-15-DE). The operational permit was granted to C.P. Inorganics on March 17, 1981 under permit number 1980-15-OP. The original operating permit includes a supplemental permit issued on May 7, 1984 (permit number 1984-42-SP) and revised on June 26, 1985, April 4, 1986, May 2, 1986, June 12, 1986, October 15, 1986, July 15, 1988 and February 5, 1990. Besides the permits issued by the Division of Land Pollution Control, the facility has permits from the IEPA Division of Water Pollution Control (DWPC) and the Division of Air Pollution Control (DAPC). The permit from the DWPC (1988-EE-0013) is for their pretreatment system, with the treated effluent discharged to the Joliet sanitary district sewer system (discharge permit J1600). The last permit issued is an air permit (197809AAY) from the DAPC for the following three emission sources:

Steam Boiler	81010003
Dispatch Oven	0530180
Tail Gas Scrubber	87080055.

E. COMPLIANCE HISTORY

C.P. Inorganics, according to Illinois EPA Land Division files, has resolved all previous violations. These past violations include: manifest violation 722.120(a), closure/post closure violation 725.212(a), financial violations 725.242(a), 725.247(c), 725.243(c)(4) and 725.243(c)(3) and other violations 725.155, 725.135, 725.132, 725.176, 725.115(c), 725.116(a), 725.175, 725.271, 725.274, 725.111, 722.112(a), 725.115(a), 722.141(a), 725.115(b). 725.137, 725.273(b), 722.114(c), 725.151(a), 703.152(a), 703.154, 703.155(a), 722.140(b), 725.173 and 725.294.

C.P. Inorganics has violated discharge standards set by the City of Joliet, Public Works and Utilities Department. The violations from 1987 to 1989 include the following parameters: ammonia, zinc, copper, arsenic and nickel.

F. VISUAL SITE INSPECTION

A visual site inspection (VSI) was conducted at the C.P. Inorganics facility in Joliet, Illinois on May 7, 1990. Tom Crause, Mark Schollenberger and Greg Dunn of the Illinois EPA arrived on-site at 11:00 a.m. C.P. Inorganics representatives present during the VSI were Mr. Jerry Cassata (Plant Manager) and Mr. Adam Feldman (C.P. Inorganics' New Jersey office). Two representatives from Eldridge Engineering (Consultant for C.P. Inorganics) were also present, Mr. Jim McSwiggin and Mr. Doug Dorgan.

After arrival on-site, IEPA and C.P. Inorganics representatives met in Mr. Cassata's office to discuss the objectives of the visit. The background information of the site and site history were explained by Mr. Cassata to the IEPA representatives. The VSI objectives were explained, including the list of solid and hazardous waste management units to be inspected. The meeting lasted from 11:00 a.m. to 12:00 p.m.

At 12:00 p.m. the facility tour began with the inspection of the container storage area in the east warehouse and the associated loading/unloading pad. The area used to store drums and gaylords (2.5 cubic yard containers) was observed, with 112 drums and three gaylord boxes on-site during the VSI. The east warehouse also has two final pH tanks used in the pretreatment system. These two tanks were inspected prior to observing the rest of the pretreatment system. Except for the two tanks in the east warehouse, the rest of the pretreatment system is located in the main manufacturing building. The system has a containment system around the tanks to collect any spills and leaks from the tanks. The material is collected in a sump and then pumped back into the tanks for treatment. The concrete appeared in fair condition during the inspection.

The old laboratory that was destroyed in the 1989 fire was the next unit observed. All that was visible of this unit was the concrete floor, which was in good condition. Next to the old lab was the cupric chloride mix tank, I-93. A sump was located next to the tank, but has been allegedly blocked off. The tank is located on a concrete floor with no sole containment system for that tank evident. The building housing this tank (and all of the other process tanks) has containment at the door and garage door entrances only.

The western portion of the manufacturing area was observed next. This part of the building has the copper nickel nitrate, copper sulfate, copper ammonium chloride, and nickel nitrate processes. The containment system for these tanks are located at the entrances/exits to the manufacturing building. Any spills inside the building are collected in sumps and pumped into the pretreatment system. Some of the

tanks were leaking, but the concrete floor appeared in good condition.

The hazardous waste storage tanks were visited next. Eight of the twelve tanks are located within a sheet metal building. These tanks are contained within three foot high concrete walls and reinforced concrete floors. The four outside tanks are also contained within the same type of containment system as the inside tanks. There were no visible cracks in the concrete floors, but some of the concrete inside the building had been eaten away by some type of material.

After the waste storage tanks the sludge storage pad and the outside drum storage area 1 were observed. The sludge is placed inside a Chemical Waste Management dumpster, which is stored outside on a concrete pad. No containment system was observed around the dumpster. The outside drum storage area was used from the late 1970's to the early 1980's for the storage of sludge from the pretreatment system. The drums were placed on a concrete pad with no other containment measures know to exist. This area is now a gravel lot for the storage of metal machinery.

The container storage area, including tank T-3 and the drum washing area were observed next. These areas are all inside the west warehouse, a sheet metal building with concrete floors. The entrances and exits to the building have a one foot high concrete curb to contain any spills. The container storage area is for the storage of drums only, with 495 drums on-site during the VSI. Tank T-3 and the drum washing area are located on the east end of the west warehouse. A three foot high concrete wall surrounds the tank and drum washing station. No visible cracks were observed in the concrete.

The rail car loading/unloading area, located just south of the west warehouse, was the next area observed. The loading/unloading area did not have any containment measures to control leaks or spills from the rail cars. No visible staining of the gravel was observed during the inspection. At the time of the VSI a large amount of water was flowing underneath one of the three tank cars on-site. (The water was apparently from a water main break that had not been fixed by the owner of the industrial park).

The last areas visited were the upstairs and downstairs laboratories. The labs receive the waste in four (4) and eight (8) ounce plastic bottles, and run the necessary test to determine composition. The used material is then placed (still in the plastic bottle) into cardboard boxes until the boxes can be taken to the lab sample storage area. No cracks were observed in ether laboratory floor.

After the visual inspection, the group returned to the office

to discuss the actual site processes. IEPA personnel left the C.P. Inorganics facility at 2:35 p.m.

On May 24, 1990, Ken Corkill and Greg Dunn of the IEPA arrived on-site at 10:00 a.m. to gather additional information on their solid waste management units. Mr. Jerry Cassata and Mr. Thomas Cassata were the C.P. Inorganics' representatives present during the inspection. After acquiring additional information on some of the SWMUs, a brief inspection began. Some additional photographs were taken of tanks and storage areas, prior to inspecting an old drum storage area. This area is located south of Rho Chemical Company, C.P. Inorganics neighbor to the south. This area was used in the late 1970's and early 1980's for drum storage by C.P. Inorganics. The contents of the drums are unknown, however photographs from 1978 show the drums leaking an oily substance onto the ground. Stains were still observed on the ground in this area and approximately ten to fifteen rusted drums were observed. The visual inspection ended at 11:30 a.m. Photographs for the inspections are provided in Attachment C.

G. ENVIRONMENTAL SETTING

The climate of the Joliet area is characterized by relatively warm summers and relatively cold winters. Summers are warm and humid, with temperatures averaging around 85 degrees Fahrenheit. The winters are moderately cold, with temperatures averaging around 35 degrees Fahrenheit. The normal average of monthly temperatures is 50 degrees Fahrenheit.

Annual precipitation (rainfall and melted snowfall) in the Joliet area is 34 inches. The wettest months are May, June and September, with December, January and February the driest months. The highest recorded precipitation in one month was 12.9 inches, while the driest recorded precipitation for one month was 0.10 inch. The wind patterns (wind rose is provided in Figure 3) from the Gulf of Mexico supply a majority of the moisture for this region during the summer months.

The soils at the C.P. Inorganics facility consists of a thin layer of a very dark brown friable silt loam (University of Illinois, 1962) from the surface to 10 inches deep. Below this silt loam (described as the Romeo silt loam) is the Silurian dolomite of the Niagaran and Alexandrian Series. The geology is better represented in a well log from Well Number 2 at the Joliet Correctional Center provided in Table 4 (ISWS Bulletin 60-29, 1983).

The Silurian Dolomite and the St. Peter Sandstone aquifers are the primary suppliers of water in this region. The

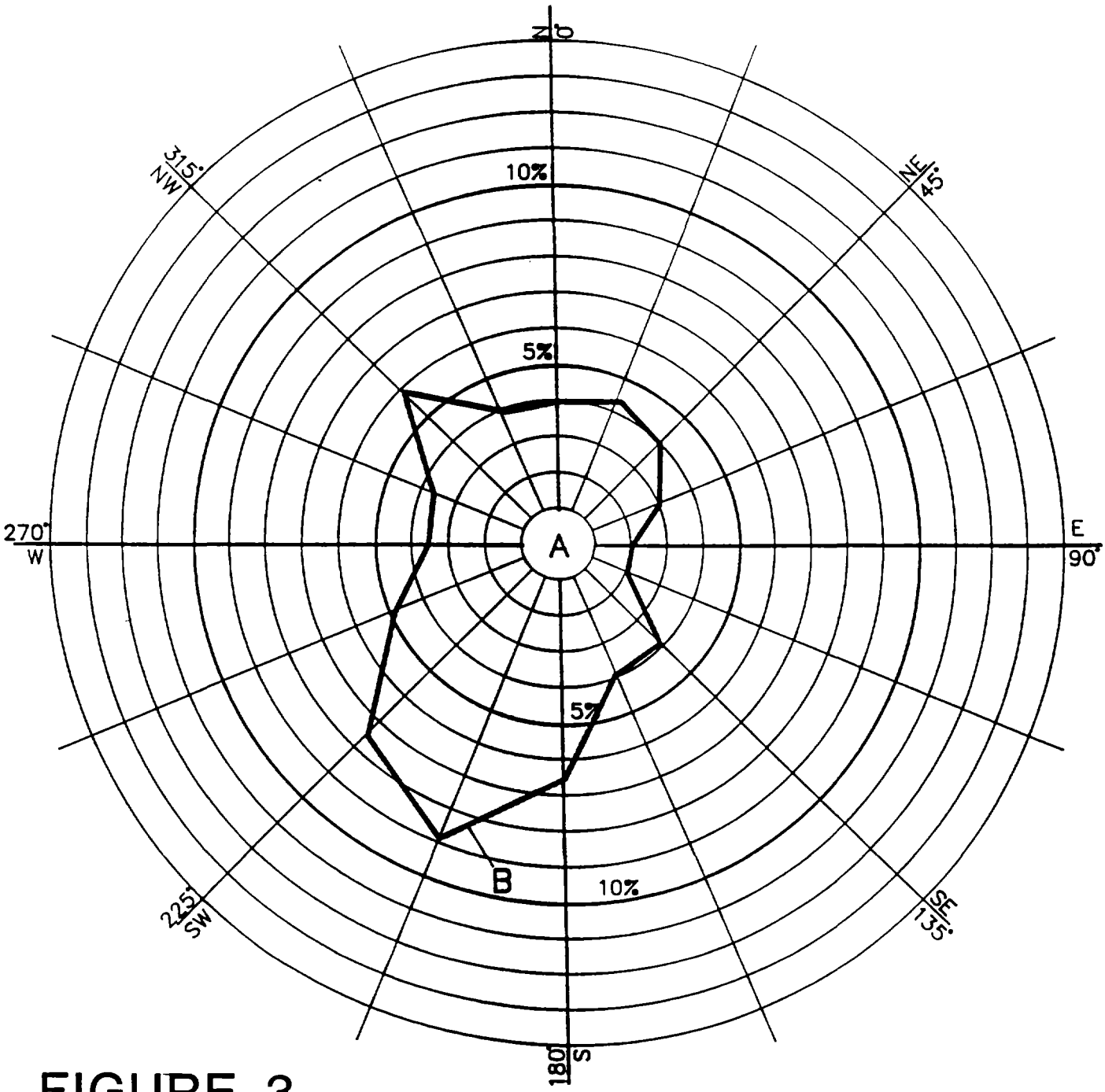


FIGURE 3

KEY

A = CALM (<5 MPH) – 21.8%

B = 5–21 MPH – 71.1%

INFORMATION PLOTTED FROM ANNUAL SURFACE WIND AVERAGES. COMPILED FROM JAN. 1946 TO DEC. 1952

WIND ROSE

JOLIET MUNICIPAL AIRPORT

eldredge engineering associates, inc.
1601 north bond street
naperville, illinois 60540

aquifer of concern at this site is the Silurian Dolomite, which can be encountered at less than one foot below surface. Nineteen public water supply systems (a total of 30 wells serving 19,021 people) use the dolomite as a water source. The closest public well using this aquifer is 1.1 miles northwest of the site and is used by the City of Crest Hill. Illinois State Water Survey well logs indicate 1,337 private users of the dolomite aquifer, serving 4,105 people, with the closest private well approximately 0.35 miles west southwest of the facility. The total population utilizing the Silurian dolomite aquifer as a water source is 23,126 people. A four mile radius map for the C.P. Inorganics site is provided in Attachment D.

Storm water run-off drains into low areas or is discharged to the Joliet storm water sewers. Some run-off may flow east toward the Des Plaines River, which is less than 500 feet from the facility boundary. The river does not have any surface water intakes, but is used for recreation (primarily fishing). A fifteen mile downstream surface water map is provided in Attachment E.

Air releases have occurred at the facility a number of times within the last two years. The air releases have occurred during the loading/unloading of ammonia products or from the ammonia scrubbers. The odors were so strong on August 28, 1989, that Sheffield Steel (C.P. Inorganics' neighbor to the north) had to halt production until the air cleared. However, no known complaints from nearby residents have been documented by any County of State Agencies. The total population within four miles of the C.P. Inorganics facility is 100,658 people (USGS topographic maps).

An explosion and fire occurred at the facility on May 23, 1989 destroying 11 tanks of the nickel sulfate process and the laboratory area. The fire occurred after an employee punctured an acetylene tank with a fork truck. The fire was extinguished by the Joliet Fire Department, with all the fire water contained and pumped into the pretreatment tanks. This area is now used as a storage for tools and some products. Although all residents use groundwater and a potential exists for surface water and air releases, a no further action is recommended by the Pre-Remedial program.

TABLE 4

STRATIGRAPHIC SEQUENCE

System	Group	Formation	Rock Type	Thickness (ft)	Depth (ft)
No record				40	40
Silurian	Niagaran & Alexandrian Series		Dolomite	155	195
Ordivician	Maquoketa	**Fort Atkinson**	Limestone, Dolomite & some shale	35	230
		Scales	Shale	75	305
	Galena and Platteville		Dolomite	330	635
	Ancell	**Glenwood**	Sandstone & Dolomite	40	675
		St. Peter	Sandstone	195	870
			Sandy shale and chert	73	943
Ordivician Cambrian		**Oneota Eminence Potosi**	Dolomite	287	1230
Cambrian		**Franconia**	Sandstone	155	1385
		Ironton-Galesville	Sandstone	150	1535
		Eau Claire	Shale & Sandstone	15	1550

NOTE: This log was taken from the ISWS Bulletin 60-29, page 72. Also, the Niagaran and Alexandrian above are a Series and not a group.

III. DESCRIPTION OF SOLID WASTE MANAGEMENT UNITS

According to the Part B permit application, fifteen Hazardous Waste Management Units (HWMUs) have been identified as the following: container storage area 1, container storage area 2, Tank T-3 and hazardous waste storage tanks D-27 thru D-38. The following Solid Waste Management Units (SWMUs) have been identified from file searches, site representative interviews and the reconnaissance inspection: pretreatment system, old laboratory room, cupric chloride process, laboratory sample storage area, chemical sewer system, sludge storage pad, former drum storage area 1, drum washing area, rail car loading/unloading area, tank truck loading/unloading area, upstairs laboratory, downstairs laboratory, copper sulfate processes, copper nickel nitrate process, copper ammonia chloride process, nickel nitrate process, ferric chloride filter presses, outside drum storage area 2, outside drum storage area 3 and the process sewer system (see attachment A).

Unit No.: SWMU No. 1

Unit Name: Container Storage Area 1 (Photo #1, #3 and #25)

Unit Description: This unit is located inside the east warehouse (see Attachment A) and includes the inside container storage area and the outside truck unloading pad. The container storage area, constructed of reinforced concrete, consists of approximately 2650 square feet of floor space for a maximum total capacity of 400-55 gallon drums. The waste is stored on wooden pallets in 55-gallon drums, 330-gallon plastic containers or in 2.5 cubic yard containers (called gaylord containers). The number of drums stored in this area is dependent on the number and frequency of shipments received by the facility. The drums are stored in the area for ten days to two weeks prior to use in one of the processes. The concrete floor slopes towards a floor drain used to collect any spills or leaks during storage. (The floor drain does not empty into any sumps or pipes, but is used solely for the collection of spills). Cracks in the concrete floor and along the base of the concrete block warehouse walls were visible during the tour of this area. Approximately 112 drums and three 330 gallon containers were on-site at the time of the VSI. The concrete unloading pad (reconstructed in 1990, Photo #25) slopes toward a sump in the southeast corner of the pad. This sump will eventually be connected to the wastewater treatment system. No cracks were visible during the VSI in the unloading pad area, since traffic was not allowed on the pad until after May 10, 1990.

Date of Start-up: Approximately 1978.

Date of Closure: This unit is presently active with no anticipated date of closure.

Waste Managed: Liquid and solid waste containing nickel plating solution, copper nickel nitrate solution, nickel carbonate

cake, ferric sludge, copper chloride etching solution and copper sulfate crystals.

Release Controls: The containers are stored on a concrete floor with a lateral floor drain (capacity of 673 gallons) used to collect any spills. Spills collected in the floor drain will be pumped back into containers until the material can be used in one of the processes. The unloading pad has a sump in the southeast corner to collect any spills or leaks. This sump will eventually discharge into the pretreatment system.

History of Releases: There have been no documented releases reported nor have any been observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is moderate due to cracks in the floor and at the base of the walls.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.: SWMU Nos. 2

Unit Name: Pretreatment System
(Photo #2, #4, #5, #6 and #23)

Unit Description: This unit is located inside, on the east and south ends of the manufacturing building (see Attachment A). A process flow schematic is provided in Attachment B (see Table 4 for all tanks and other equipment associated with the pretreatment system). The system starts with the higher concentrated ammonia waters pumped into the primary scrubber (G-61). The discharge from this tank is sent to a set of accumulation tanks (F-53 and F-53A). The accumulation tanks transfer the ammonia waters to the stripper via a stripper feed tank (K-117). The stripper feed tank then discharges the waters into the stripper (K-120) at a variable rate to increase or decrease efficiency. The discharge from the stripper (K-120) is directed to a return tank (K-119), where the ammonia concentrations are monitored and adjustments can be made if necessary. If the ammonia concentrations are acceptable, the discharge from the return tank is pumped to the equalization tank (K-102). If the ammonia concentrations do not meet the acceptable limits, the discharge from tank K-119 will be pumped back into the accumulation tanks (F-53 and F-53A). The effluent in tank K-102 is pumped to the first pH reactor (K-108), where sulfuric acid is added from tank K-104 to adjust the pH between 10 and 11. The effluent in tank K-108 is gravity fed to the second pH reactor (K-105). A combination of sulfuric acid (tank K-104) and sodium sulfide (from tank K-112) are added to fine trim the pH to an optimum level for metal precipitation. The contents of tank K-105 are gravity fed to reactor three (tank K-107), where an organic polymer is pumped from tank K-113 to enhance flocculation. Reactor three also receives the overflow from the sludge thickener (K-106), which is used to enhance agglomeration of the

precipitated metal hydroxides and sulfides. The contents of reactor three (K-107) are directed by gravity to the clarifier (K-103), where the solids are permitted to settle out. The clear supernatant is discharged to the final pH reactor (K-109) prior to discharge to the City of Joliet sewer system. The sludge from the clarifier is directed to the sludge thickener (K-106) to thicken the sludges for the filter presses (K-111). The filter press dewaters the sludge and dumps it into a bin for disposal into the special waste dumpster (SWMU #7). The filtrate from the filter press is directed into either the final pH reactor (K-109) or reactor three (K-107) for further clarification. After the filtrate is clarified, it is discharged to the final pH reactor (K-109). The final pH reactor adjusts the pH according to Joliet POTW regulations and then discharges the effluent into the sewer system. The integrity of all the pretreatment units and the underlying concrete pad appeared to be in good condition during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit is presently active with no anticipated date of closure.

Waste Managed: The system manages ammonia containing waters, process wastewater and sludges containing some heavy metals. An analysis of the non-hazardous sludge shipped off-site is provided in Attachment H.

Release Controls: The pretreatment system tanks and associated piping networks are all located within the manufacturing building. The sump located near tank J-97 is pumped back into the pretreatment system for treatment.

History of Releases: There have been no documented releases reported nor have any been observed from this unit.

Conclusions: <u>Soil/Groundwater:</u> The release

potential to the soil/groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

TABLE 5

TANK NO.	CAPACITY (GALLONS)	CONSTRUCTION MATERIAL	TANK USE
F-50	NA	FRP	Pump Pit
F-51	NA	FRP	Final Sump
F-53	12,000	FRP	Accumulation Tank
F-53A	12,000	FRP	Accumulation Tank
G-61	9,000	SS	NH4OH Dump Tank
K-102	12,000	FRP	Equalization Tank
K-103	4,000	FRP	Clarifier
K-104	300	Steel	Acid Storage
K-105	900	FRP	pH Reactor #2
K-106	3,700	FRP	Sludge Thickener
K-107	600	FRP	Flocculation Reactor
K-108	900	FRP	pH Reactor #1
K-109	600	FRP	Final pH Reactor
K-111	NA	Polypropylene	Filter Press
K-112	150	Polyethylene	NASx Make-up and Feed
K-113	55	Polyethylene	Polymer Make-up
K-114	700	FRP	Stripper Clean-out Feed Tank
K-115	700	FRP	Scrubber Recirculation Tank
K-116	128	FRP	Sulfuric Acid Feed Tank
K-117	700	FRP	Stripper Feed Tank
K-118	128	FRP	Sodium Hydroxide Feed Tank
K-119	375	FRP	Stripper Product Tank
K-120	NA	FRP	Stripper

SS-Stainless Steel
FRP-Fiberglass Reinforced Plastic

Unit No.:	SWMU No. 3
Unit Name:	Old Laboratory Room (Photo #7)
Unit Description:	This area was located inside the main manufacturing building, just south of the main office (see Attachment A). The room measured approximately 20 feet long by 10 feet wide and contained equipment used to analyze incoming waste samples. The laboratory was constructed of concrete walls and floors and was destroyed in the 1989 fire at the site. The concrete floor in the old lab area was still present and did not contain any visible cracks. This area was not rebuilt after the fire.
Date of Start-up:	1973.
Date of Closure:	This unit was destroyed by fire in 1989.
Waste Managed:	Liquid and solid wastes from C. P. Inorganics' customers.
Release Controls:	All waste was managed in an enclosed structure with a concrete floor as the secondary containment system.
History of Releases:	There are no documented releases reported or observed from this unit.
Conclusions:	<u>Soil/Groundwater:</u> The release potential to the soil/groundwater is low since unit no longer exists. <u>Surface Water:</u> The release potential to surface water is low since unit no longer exists. <u>Air:</u> The release potential to air is low since unit no longer exists. <u>Subsurface Gas:</u> The potential for the generation of subsurface gas is low since unit no longer exists.

Unit No.: SWMU No. 4

Unit Name: Cupric Chloride Process (Photo #8)

Unit Description: This unit is located inside the central part of the main manufacturing building (see Attachment A). This unit includes one 6,000 gallon rubber lined tank (tank I-93) and associated piping. Spent cupric chloride is pumped from one of the waste storage tanks (SWMU # 25, 26 or 27) into tank I-93. The waste material is added to copper then diluted or concentrated to form a cupric chloride solution. This solution is then loaded (from tank I-93) into drums or tank trucks for delivery to customers. The tank is equipped with an agitator in order to mix the material. The tank did have a sump at one time, but has been blocked off in the last few years. A few small cracks were observed in the concrete near this tank during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit is presently active with no anticipated date of closure.

Waste Managed: The unit manages spent cupric chloride and cupric chloride solution (product).

Release Controls: The material is stored in a tank inside the manufacturing building. The tank is located on a concrete floor with some visible cracks observed during the VSI. A sump is located near the tank but has been blocked off.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is moderate because the sump is underground and the integrity is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is

low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.: SWMU No. 5

Unit Name: Laboratory Sample Storage Area (Photo #14)

Unit Description: This area is located on the concrete containment wall between the eight waste storage tanks, inside the bulk containment storage area (see Attachment A). Approximately six cardboard boxes full of waste samples were in this area at the time of the VSI. The wastes were placed in sandwich bags and four (4) ounce and eight (8) ounce plastic bottles. The samples are stored in this area for less than 90 days, until they can be used in one of the processes. The samples are located within the waste storage tank containment system and any spills will be collected in this system. No spills or leaks from the sample containers were evident at the time of the VSI.

Date of Start-up: 1990.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Liquid and solid waste from C. P. Inorganics' customers.

Release Controls: The containers are stored in an enclosed structure which has secondary containment.

History of Releases: There have been no documented releases reported nor have any been observed.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.:	SWMU No. 6
Unit Name:	Chemical Sewer System
Unit Description:	The old sewers were located throughout the facility and were considered part of a combined sewer system. Prior to the plugging of the system and the installation of fiberglass sumps, spills from the manufacturing area would collect in the sewer system. This system discharged to the Joliet Sanitary District sewer system. The sewer system was plugged in 1987. This system could not be observed during the VSI.
Date of Start-up:	Mid 1970's.
Date of Closure:	The chemical sewers were plugged by C. P. Inorganics in 1987.
Waste Managed:	Spills from the manufacturing areas and sanitary waste.
Release Controls:	No known release controls were associated with this unit.
History of Releases:	There are no documented releases reported or observed from this unit.
Conclusions:	<u>Soil/Groundwater:</u> The release potential to the soil/groundwater is moderate since the integrity of the system is unknown. <u>Surface Water:</u> The release potential to surface water is low due to unit design. <u>Air:</u> The release potential to air is low due to unit design. <u>Subsurface Gas:</u> The potential for the generation of subsurface gas is low due to waste managed.

Unit No.:	SWMU No. 7
Unit Name:	Sludge Storage Pad (Photo #15, #16 and #32)
Unit Description:	This unit is located on the northwest part of the facility, just north of the truck scales (see Attachment A). The sludge, from the wastewater treatment unit (SWMU No. 2), is stored in 20 cubic yard dumpsters owned by Chem Waste Management Company. The dumpsters are placed on a concrete pad that is capable of containing approximately three dumpsters. The dumpsters are removed every two weeks by Chem Waste Management to the CID landfill in Calumet City, IL. Sludge was not observed on the concrete pad and no cracks or stains were evident in this area.
Date of Start-up:	Early 1980's.
Date of Closure:	This unit is currently active with no anticipated date of closure.
Waste Managed:	Non-hazardous sludge from the wastewater treatment unit (SWMU No. 2).
Release Controls:	The dumpster is located on a concrete pad with no other secondary containment measures.
History of Releases:	There have been no documented releases reported nor have any been observed from this unit.
Conclusions:	<u>Soil/Groundwater:</u> The release potential to the soil/groundwater is moderate due to the lack of secondary containment. <u>Surface Water:</u> The release potential to surface water is moderate due to the lack of secondary containment. <u>Air:</u> The release potential to air is low due to the nature of the waste managed. <u>Subsurface Gas:</u> The potential for the generation of subsurface gas is low due to the nature of the waste managed.

Unit No.: SWMU No. 8

Unit Name: Outside Drum Storage Area 1 (Photo #31, #32 and #33)

Unit Description: This unit was located on the west side of the facility, just south of Industry Avenue (see Attachment A). The size of the drum storage area is unknown, but previous inspections indicated as many as 500 drums in this area. The drums stored sludge from the facility's wastewater treatment process until the sludge could be removed to an undetermined off-site location. The storage area consisted of a gravel lot with no known secondary containment system. No drums were in this area during the VSI.

Date of Start-up: Mid 1970's.

Date of Closure: Drums were removed in the early 1980's.

Waste Managed: Sludge from the wastewater treatment system (SWMU #2).

Release Controls: There were no known containment measures implemented at the time of operation.

History of Releases: A 1978 inspection indicated some barrels in this area were leaking onto the ground and mixing with rain water.

Conclusions: Soil/Groundwater: The past release potential to the soil/groundwater was high because material was leaking onto the ground. The present release potential is low since the drums have been removed.

Surface Water: The past release potential to surface water was moderate because drummed material mixed with rain water and could have flowed off-site. The present potential is low since drummed material has been removed.

Air: The past and present release potential to air was low due to the nature of the waste managed.

Subsurface Gas: The past and present release potential for the generation of subsurface gas was low due to the nature of the waste managed.

Unit No.: SWMU No. 9

Unit Name: Container Storage Area 2 (Photo #18)

Unit Description: This unit is located inside the west warehouse (see Attachment A). The container storage area, constructed of reinforced concrete, consists of approximately 2300 square feet of floor space for a maximum capacity of 600-55 gallon drums. The waste is stored on wooden pallets in 55-gallon drums, with the drums stacked two high. The number of drums stored in this area is dependent on the frequency of shipments received by C. P. Inorganics. The drums are stored in this area for ten days to two weeks prior to pumping their contents into tank T-3 (SWMU #11). The concrete floor slopes toward a floor drain that acts as a reservoir for any spills. The drain was full of debris (dirt, sticks, etc.) during the VSI. Approximately 495 drums were in this area at the time of the visit. The loading/unloading area for the container storage area is accessed by a ramp on the west side of the warehouse that slopes down toward the outside. A small one foot high concrete curb exists to stop any spills from flowing down the ramp to the outside. No cracks were observed in the concrete in either the container storage area or ramp.

Date of Start-up: Early 1980's.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Liquid and solid wastes containing ferric chloride, cupric chloride, copper ammonia chloride, spent finishing solution and waste ammonia hydroxide.

Release Controls: The containers are stored on a concrete pad with a lateral floor drain (capacity of 3,763 gallons) used to collect any spills. The spills collected in this area will be pumped back into the containers until the material can be used in one of the

processes.

History of Releases: There have been documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is unknown since the condition of the drain is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.: SWMU No. 10

Unit Name: Drum Washing Area (Photo #19)

Unit Description: This unit is located inside the west warehouse (see Attachment A). The unit consists of three 300-gallon poly tubs used to wash out drums. The first process is to rinse the plastic drum with 2-3 gallons of tap water to remove residuals. The containers are then rinsed with dilute sulfuric acid and final rinsed with tap water. The wash waters and rinsates are collected within the three tubs and transferred to tank T-3. The washed drums are either reused or cut into quarters and placed inside the sludge dumpster (SWMU #7). The drum washing area is located within the containment system for tank T-3. This system includes concrete flooring and three foot high concrete walls. No cracks were observed in this area during the VSI.

Date of Start-up: 1989.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Residue material from the following waste streams: ferric chloride, cupric chloride, copper ammonia chloride, spent finishing solution and waste ammonia hydroxide.

Release Controls: This unit is contained within a containment system with concrete flooring and three foot high concrete walls.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.: SWMU No. 11

Unit Name: Tank T-3 (Photo #20)

Unit Description: This unit is located inside the west warehouse (see Attachment A). This unit includes one 5,000 gallon tank and associated piping. The drummed material in container storage area 2 (SWMU #9) is pumped into tank T-3 for storage until the material can be pumped into one of the waste storage tanks (SWMU 24-35). The tank is located within a containment system of concrete flooring and three foot high concrete walls. No cracks were observed in the concrete during the VSI.

Date of Start-up: 1989.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Liquid and solid wastes containing ferric chloride, cupric chloride, copper ammonia chloride, spent finishing solution and waste ammonia hydroxide.

Release Controls: The tank is sitting on a concrete floor with a three foot high concrete wall surrounding the tank.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.: SWMU No. 12

Unit Name: Rail Car Loading/Unloading Area (Photo #21 and #36)

Unit Description: The unit is located on the southwest part of the facility, south of the west manufacturing building. The loading/unloading area is approximately 22 feet wide by 24 feet long. The unit is located on a gravel area, with no containment measures observed. The waste is stored in 20,000 gallon rail cars (the cars are only filled with 17,000 to 18,000 gallons of material) until the material can be delivered to the appropriate receiving center. The spent ferric chloride is delivered to Chem Waste Management in Vickery, Ohio for disposal. The copper ammonium chloride and cupric chloride are delivered to the Southern California Corp. plant in Garland, Texas for reprocessing into virgin product. During the VSI, running water was observed underneath the three rail cars in this area. According to facility representatives, a water main broke some time ago and has not been replaced by the owner of the Industrial Park.

Date of Start-up: 1973.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Spent ferric chloride, copper ammonium chloride and cupric chloride.

Release Controls: There are no containment measures implemented to contain spills or leaks.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is high since no containment exists to contain spills and leaks.

Surface Water: The release potential to surface water is high since the unit does not have a containment system to stop run-off from spills or leaks.

Air: The release potential to air is moderate during loading/unloading operations.

Subsurface Gas: The potential for the generation of subsurface gas is low due to waste managed.

Unit No.: SWMU No. 13

Unit Name: Tank Truck Loading/Unloading Area (Photo #17 and #22)

Unit Description: This unit is located south of the truck scales, near the hazardous waste storage tanks (SWMU 24-35). The tank truck is parked on a concrete pad measuring 70 feet long by 28 feet wide. The concrete is sloped inward on three sides and has a containment wall on the fourth side to collect any spills. Any spilled material is collected and pumped back into the waste storage tanks. This pad is located outside and is subject to rainwater, which runs into a sump then is pumped into the pretreatment unit (SWMU #2). No cracks were observed in the concrete during the VSI. Underneath this pad is the original unloading pad that was used from 1973 to 1986. The original pad did not have any containment measures to contain spills and leaks during the unloading operations.

Date of Start-up: 1973 and remodeled in 1986.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Spent alkaline etchants, cupric chloride and certain nickel solutions.

Release Controls: The present pad contains a small berm around the pad to collect all spills and leaks. The previous pad did not have any containment measures.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is unknown because the old pad has been covered, there was no containment and the integrity of the old pad is unknown.

Surface Water: The release potential to surface water is unknown because the old pad has been covered, there was no containment and the integrity of the

pad is unknown.

Air: The release potential to air is low due to the current unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to the current unit design.

Unit No.: SWMU Nos. 14 and 15

Unit Name: SWMU #14 - Upstairs Laboratory
SWMU #15 - Downstairs Laboratory
(Photo #24)

Unit Description: These units are located on the north side of the manufacturing building (see Attachment A). The upstairs lab is located on the second floor, directly above the receptionist area. The downstairs lab is located on the ground floor inside the west end of the office area. The floors in both rooms are tiled, with no curbing. The waste is brought into one of the labs for a "finger print" analysis. After analysis, the waste is dumped into (4) four ounce and (8) eight ounce plastic bottles and placed inside a cardboard box. The contents of the box are eventually pumped into one of the processes.

Date of Start-up: Upstairs lab started in 1983, while the downstairs lab started in 1990.

Date of Closure: These units are currently active with no anticipated date of closure.

Waste Managed: Liquid and solid wastes from C. P. Inorganics' customers.

Release Controls: These labs are located inside, on the second and first floors, respectively of the manufacturing building. All wastes are containerized in these rooms.

History of Releases: There are no documented releases reported or observed from these units.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the

generation of subsurface gas is low due to unit design.

Unit No.: SWMU No. 16

Unit Name: Copper Sulfate Process (Photo #11 and #46)

Unit Description: This unit is located in the northwest corner of the main manufacturing building (see Attachment A). This unit consists of two 5,000 gallon above ground tanks (G-58 and G-59) and the associated piping network. Copper crystals, copper hydroxide sludge and other copper liquids are pumped into these tanks from one of the waste storage tanks (SWMU #24-35). Water is added and the pH is adjusted to the specifications needed by the customer. The copper sulfate is then pumped into tank trucks for delivery. The two tanks are constructed of stainless steel with a sump nearby to collect any spills from the loading/unloading operations. These tanks do not have their own containment system, but are included within a containment system serving the manufacturing building as a whole. Some leakage was observed around the tanks during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Copper hydroxide sludge and other copper compounds in liquid form.

Release Controls: A sump (condition unknown) collects any spills from the tanks and pumps the material to the pretreatment system. Doors and passageways have a concrete mound approximately one foot high to stop any leaks from leaving the manufacturing building.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: <u>Soil/Groundwater:</u> The release potential to the soil/groundwater is unknown since the condition of the sump is unknown.

<u>Surface Water:</u> The release potential

to surface water is low due to unit design.

Air: The release potential to air is low due to waste managed.

Subsurface Gas: The potential for the generation of subsurface gas is unknown since the condition of the sump is unknown.

Unit No.: SWMU No. 17

Unit Name: Copper Nickel Nitrate Process (Photo #29)

Unit Description: This unit is located in the west part and the central part of the manufacturing building (see Attachment A). This unit consists of two 4,000 gallon above ground tanks and their associated piping network. Copper nickel nitrate (also called rack stripper) is pumped into two tanks (G-68 and H-78) from one of the waste storage tanks (D-33 {SWMU #30} or D-32 {SWMU #29}). The tanks (G-68 and H-78) are used to manufacture nickel nitrate and copper hydroxide, which are used in other processes at the facility. The two tanks are constructed of stainless steel placed on a concrete floor, with a lateral trench nearby to collect any spills or leaks. These tanks do not have their own containment system, but are included within a containment system serving the entire manufacturing building. Some leakage was observed around the tanks during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Copper nickel nitrate and specific nickel plating solutions.

Release Controls: A lateral trench (unknown condition) collects any spills or leaks, with the material pumped from the trench to the pretreatment system (SWMU #2). Doors and passageways have a concrete mound (in good condition) approximately one foot high to stop any material from leaving the manufacturing building.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: <u>Soil/Groundwater:</u> The release potential to the soil/groundwater is unknown since the condition of the lateral floor trench is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is unknown since the integrity of the lateral floor trench is unknown.

Unit No.: SWMU No. 18

Unit Name: Copper Ammonia Chloride Process (Photo # 44 and #45)

Unit Description: This unit is located in the northern, southern and central part of the manufacturing building (see Attachment A). This unit consists of all piping to and from the tanks and the following tanks: E-42 (5,000 gallon stainless steel tank), E-43 (6,000 gallon fiberglass reinforced tank), G-65 (5,000 gallon titanium tank) and H-73 (2,500 gallon titanium tank). Spent copper ammonium chloride is pumped from one of the seven hazardous waste storage tanks (SWMU #11, 24, 28, 29, 30, 31 and 32). The waste is subjected to high temperature to extract the ammonia gas, which leaves copper oxide (solid form). The ammonia is expelled and reacted with hydrochloric acid or cupric chloride to produce ammonium chloride and ammonium hydroxide. These two by-products are used to produce the two types of etchant sold to customers. These tanks are all located within the manufacturing building, which contains sumps and lateral drains to collect spills. Some leakage was observed from the tanks used in this process.

Date of Start-up: 1973.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Copper ammonium chloride.

Release Controls: A sump or lateral drain (integrity of both are unknown) would collect any spills from the tanks. The material will then be pumped back into the process or pumped to the pretreatment system. Doors and passageways throughout the manufacturing building have a one foot high concrete mound (in good condition) to stop leaks from leaving the building.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is unknown since the integrity of the sump and floor drain is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is unknown since the integrity of the sump and the lateral floor drain is unknown.

Unit No.: SWMU No. 19

Unit Name: Nickel Nitrate Process (Photo #28)

Unit Description: This unit is located in the north central part of the manufacturing building (see Attachment A). This unit consists of two 5,000 gallon above ground tanks (H-74 and H-75) and associated piping. Nickel carbonate, nickel solutions and nickel sludges are pumped into one of these two tanks from one of the waste storage tanks (SWMU # 33). The waste is mixed to be used to produce a nickel nitrate solution. The two tanks are constructed of stainless steel sitting on four two foot high stainless steel legs. Spills and leaks will be collected in a lateral drain that serves this entire area. Some leakage was observed below the tank during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit is currently active with no anticipated date of closure.

Waste Managed: Nickel carbonate waste, nickel plating solutions and nickel sludges.

Release Controls: A lateral floor drain (unknown integrity) collects any spills in the area, with the material pumped either to a storage tank for reuse or the pretreatment system. Doors and passageways have a concrete mound (in good condition) approximately one foot high to stop the migration of material out of the manufacturing building.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is unknown because the integrity of the lateral floor drain is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is unknown because the intergrity of the lateral floor drain is unknown.

Unit No.: SWMU No. 20

Unit Name: Ferric Chloride Filter Presses (Photo #30)

Unit Description: This unit is located in the east part of the west manufacturing building (see Attachment A). The filter presses were used to filter out the solid material from a water and ferric chloride mixture. The filter cake was stabilized with lime and placed in the special waste dumpster with the metal hydroxide sludge. The waste was then hauled to a landfill able to accept the special waste. The filter presses were located within a two foot high concrete containment wall. No spills or leaks were observed during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit is currently inactive and has been since 1986.

Waste Managed: A non-hazardous sludge from the filter press.

Release Controls: The filter presses were surrounded by a two foot high concrete wall, with the integrity of the underlying unknown.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is unknown since the integrity of the underlying concrete is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is unknown since the integrity of the underlying concrete is unknown.

Unit No.: SWMU No. 21

Unit Name: Outside Drum Storage Area 2 (Photo #34 and #35)

Unit Description: This unit was located on the west side of the facility, in the area now occupied by the west warehouse and the west manufacturing building (see Attachment A). This area was used for the storage of sludge generated from the pretreatment unit (SWMU #2). Photographs from 1978 indicate as many as 350 drums could have been stored in this area. No spills were observed in the photographs and could not be observed during the VSI because of the buildings.

Date of Start-up: 1973.

Date of Closure: This unit was closed in the late 1970's or early 1980's, when all the drums were reportedly removed.

Waste Managed: Sludge from the pretreatment system (SWMU #2).

Release Controls: The drums were stored on a concrete floor, with no other containment measures taken to prevent spills from reaching the ground.

History of Releases: There are no documented releases reported or observed from this unit.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is moderate since no secondary containment existed.

Surface Water: The release potential to surface water is moderate since no secondary containment existed.

Air: The release potential to air is low due to waste managed.

Subsurface Gas: The potential for the generation of subsurface gas is low due to waste managed.

Unit No.: SWMU No. 22

Unit Name: Outside Drum Storage Area 3 (Photo #38, #39, #40, #41, #42 and #43)

Unit Description: This unit was located on property south of C. P. Inorganics, but was used by the company for drum storage (see Attachment A). The drums were placed on a concrete slab and directly on the soil. Photographs taken in 1978 show drums leaking onto the ground and mixing with water. The drums were removed sometime in the late 1970's or early 1980's. Cracks were observed on the concrete slab along with staining during the VSI.

Date of Start-up: 1973.

Date of Closure: This unit was closed in the late 1970's or early 1980's, when the drums were removed from this area.

Waste Managed: The type of waste stored in this area is unknown.

Release Controls: Besides the concrete pad, no other release controls were associated with this unit.

History of Releases: Photographs from 1978 show contents of drums on the ground. Past spills were evident on the concrete during the VSI.

Conclusions: Soil/Groundwater: The past release potential to the soil/groundwater was high since waste was observed on the ground during a 1978 inspection. The present release potential to soil/groundwater is low since the drums were removed from this area.

Surface Water: The past release potential to surface water was high since waste was observed on the ground during a 1978 inspection. The present release to surface water is low since the drums were removed from this area.

Air: The past release potential to air is unknown since waste type is unknown. The present release potential to air is

low since the waste has been removed from this area.

Subsurface Gas: The past potential for the generation of subsurface gas is unknown since waste type is unknown. The present release for the generation of subsurface gas is low since the waste has been removed.

Unit No.: SWMU No. 23

Unit Name: Process Sewer System (Photo #26 and #27)

Unit Description: The discharge pipe from C. P. Inorganics is located on the southeast side of the facility (see Attachment A). The effluent from the plant is monitored by the City of Joliet and by C. P. Inorganics for a certain set of parameters. Every effluent sample has consistently been high in ammonia for at least the last three years. During the VSI no odors were detected in this area.

Date of Start-up: 1973.

Date of Closure: The sanitary sewer is currently used by the facility to discharge wastewater.

Waste Managed: Treated wastewater.

Release Controls: No release controls exist except for the monitoring of the effluent by the facility and the City of Joliet.

History of Releases: Numerous violations have been documented by the City of Joliet at the point of discharge by C. P. Inorganics.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is high because the integrity of the sewer is unknown.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

Unit No.: SWMU Nos. 24-35

Unit Name: Hazardous Waste Storage Tanks (Photo #12 and #13)

Unit Description: The hazardous waste storage tanks are located on the west side of the manufacturing building (see Attachment A). Eight (8) of the waste storage tanks are located inside a metal frame building, while the other four (4) are outside. The capacities, construction material and waste managed are in Table 6. All twelve of the waste storage tanks are constructed of fiberglass reinforced plastic with a derakane or biphenol A furmanate inner liner and a isophalic outer liner. The tanks are used to store waste that are used in the on-site processes. No cracks were observed in the concrete during the VSI, but some of the concrete within the containment wall was eaten away approximately one inch.

Date of Start-up: The tanks have different start-up dates from 1984 to 1986.

Date of Closure: The hazardous waste storage tanks are currently active with no anticipated date for closure.

Waste Managed: Cupric chloride, copper ammonium chloride, nickel plating solution and copper nickel nitrate.

Release Controls: Tanks D-31 thru D-38 are enclosed within a sheet metal type building, while tanks C-27 thru C-30 are located outside. All the tanks are located within a three foot high concrete containment wall with an eight inch reinforced concrete floor. Any spills will be removed from the containment areas by a portable vacuum pump and pumped back into the appropriate storage tanks.

History of Releases: There are no documented releases associated from this unit. Observations during the VSI document that spills from the tanks have eaten away portions of the concrete floor.

Conclusions: Soil/Groundwater: The release potential to the soil/groundwater is low due to unit design.

Surface Water: The release potential to surface water is low due to unit design.

Air: The release potential to air is low due to unit design.

Subsurface Gas: The potential for the generation of subsurface gas is low due to unit design.

TABLE 6

SWMU No.	TANK NO.	CAPACITY (GALLONS)	CONSTRUCTION MATERIAL	WASTE MANAGED
24	D-27	12,000	FRP	Copper Ammonium Chloride
25	D-28	12,000	FRP	Cupric Chloride
26	D-29	12,000	FRP	Cupric Chloride
27	D-30	12,000	FRP	Cupric Chloride
28	D-31	12,000	FRP	Copper Ammonium Chloride
29	D-32	12,000	FRP	Copper Ammonium Chloride
30	D-33	12,000	FRP	Copper Ammonium Chloride
31	D-34	12,000	FRP	Copper Ammonium Chloride
32	D-35	12,000	FRP	Copper Ammonium Chloride
33	D-36	12,000	FRP	Nickel Plating Solution
34	D-37	12,000	FRP	Copper Nickel Nitrate
35	D-38	12,000	FRP	Copper Nickel Nitrate

FRP-Fiberglass Reinforced Plastic

TABLE 7

SWMU NO.	UNIT NAME	SUGGESTED FURTHER ACTION	RELEASE
1	Container Storage Area 1	Sample soils underneath cracks for heavy metals, volatiles and semi-volatiles.	Unknown
2	Pretreatment System	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
3	Old Laboratory Room	No further action is suggested at this time because waste handling appeared to adequate.	Unknown
4	Cupric Chloride Process	The integrity of the sump is unknown and should be verified. If integrity has been breached sample soils for constituents managed in areas flowing to the sump.	Unknown
5	Laboratory Sample Storage Area	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
6	Chemical Sewer System	The entire chemical sewer system should be tested to verify the integrity of the system. If integrity has been breached, sample soils for constituents managed at site that flowed to sewer.	Unknown
7	Sludge Storage Pad	Soil samples should be taken around the edge of the concrete pad and analyzed for constituents found in the stored material.	Unknown
8	Former Drum Storage Area 1	Sample soils for heavy metals, semi-volatiles and volatiles to verify adequate waste handling practices.	Unknown
9	Container Storage Area 2	The integrity of the sump needs to be verified. If integrity has been breached, sample soils for constituents managed in areas flowing to the sump.	Unknown
10	Drum Washing Area	No further action is suggested at this time because waste handling appears to be adequate.	Unknown

TABLE 7 (cont.)

SWMU NO.	UNIT NAME	SUGGESTED FURTHER ACTION	RELEASE
11	Tank T-3	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
12	Rail Car Loading Unloading Area	Sample soils for constituents managed in this area.	Unknown
13	Tank Truck Loading Unloading Area	Sample soils underneath and around the old pad for constituents managed in this area.	Unknown
14	Upstairs Laboratory	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
15	Downstairs Laboratory	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
16	Copper Sulfate Process	The integrity of the sump should be checked. If integrity has been breached sample soils for constituents managed in area.	Unknown
17	Copper Nickel Nitrate Process	The integrity of the floor trench should be checked. If integrity has been breached sample soils for constituents managed in area.	Unknown
18	Copper Ammonia Chloride Process	The integrity of the floor drain and sump should be checked. If integrity has been breached sample soils for constituents managed in area.	Unknown
19	Nickel Nitrate Process	The integrity of the floor drain should be checked. If integrity has been breached sample soils for constituents managed in the area.	Unknown
20	Ferric Chloride Filter Presses	The integrity of the underlying concrete should be checked. If integrity has been breached sample soils for constituents managed in area.	Unknown
21	Outside Drum Storage Area 2	Sample soils for constituents managed in this area.	Unknown

TABLE 7 (cont.)

SWMU NO.	UNIT NAME	SUGGESTED FURTHER ACTION	RELEASE
22	Outside Drum Storage Area 3	Sample soils for constituents managed in this area.	Unknown
23	Process Sewer System	The integrity of the system needs to be verified. If integrity has been breached, sample soils for constituents managed in this area.	Unknown
24	Tank D-27	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
25	Tank D-28	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
26	Tank D-29	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
27	Tank D-30	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
28	Tank D-31	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
29	Tank D-32	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
30	Tank D-33	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
31	Tank D-34	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
32	Tank D-35	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
33	Tank D-36	No further action is suggested at this time because waste handling appears to be adequate.	Unknown

TABLE 7 (cont.)

SWMU NO.	UNIT NAME	SUGGESTED FURTHER ACTION	RELEASE
34	Tank D-37	No further action is suggested at this time because waste handling appears to be adequate.	Unknown
35	Tank D-38	No further action is suggested at this time because waste handling appears to be adequate.	Unknown

V. REFERENCES

C.P. Inorganics, November 8, 1988 revised June 29, 1990, Part B Permit Application.

Illinois EPA Division of Air Pollution Control files for the C.P. Inorganics facility.

Illinois EPA Division of Land Pollution Control files for the C.P. Inorganics facility.

Illinois EPA Division of Water Pollution Control files for the C.P. Inorganics facility.

Illinois State Geological Survey, 1975, Handbook of Illinois Stratigraphy, Bulletin 95, 261 pages.

Illinois State Water Survey, 1983, Public Groundwater Supplies in Will County, Bulletin 60-29, 127 pages.

Illinois State Water Survey, well logs from a three mile radius surrounding the C.P. Inorganics facility.

Joliet Department of Public Works and Utilities, discharge violations from the C.P. Inorganics facility.

TSR Engineering Company, September 4, 1987, Preliminary Engineering Study for C.P. Inorganics.

TSR Engineering Company, December 16, 1987, Final Engineering Design for C.P. Inorganics.

University of Illinois, 1962, Will County Soils, Report 80, 108 pages.

U.S. Geological Survey, 1973 Channahon, Illinois 7.5 Minute Quadrangle.

U.S. Geological Survey, 1973 Elwood, Illinois 7.5 Minute Quadrangle.

U.S. Geological Survey, 1973 Joliet, Illinois 7.5 Minute Quadrangle.

U.S. Geological Survey, 1980 Plainfield, Illinois 7.5 Minute Quadrangle.

ATTACHMENT A

SWMU Location Map

ATTACHMENT B

Pretreatment Flow Schematic

ATTACHMENT C

VSI Photograph Locations

ATTACHMENT D

Site 4-Mile Radius Map

ATTACHMENT E

15-Mile Surface Water Map

ATTACHMENT F

Preliminary Assessment Form 2070-12

EPA L1970250002

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: IL | 02 SITE NUMBER: D062480850

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
C.P. Inorganics	10 Industry Avenue				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Joliet	IL	60435	Will	197	IL-17
09 COORDINATES LATITUDE	LONGITUDE				
41 33 00.0	088 04 5.0				

Joliet, Illinois Quad (530)

10 DIRECTIONS TO SITE (Starting from nearest public road)
Take Interstate 80 to Chicago Street (Route 53) Follow Chicago Street north Approximately 3.5 miles to Industry Avenue. East on Industry Avenue to the site

III. RESPONSIBLE PARTIES

01 OWNER (if known)	02 STREET (Business, mailing, residential)		
Philipp Brothers Chemicals, Inc.	One Parker Place		
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Ft. Lee	NJ	07024	(201) 944-6020
07 OPERATOR (if known and different from owner)	08 STREET (Business, mailing, residential)		
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
			( )

13 TYPE OF OWNERSHIP (Check one)
■ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
■ A. RCRA 3001 DATE RECEIVED: 11/18/80 (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / / (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
■ YES DATE 06/06/90 (MONTH DAY YEAR)
☐ NO
08/08/78

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ■ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
■ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
1973 / (BEGINNING YEAR / ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Inorganic Chemicals (Corrosive, Toxic)
Heavy metals (Corrosive, Toxic)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Groundwater (Population, Environment)
Surface water (Population, Environment)
Vapor Release (Population)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ■ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)			03 TELEPHONE NUMBER
Mr. Jerzy Cassata	C.P. Inorganics			(815) 727-1074
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Gregory W. Dunn	IEPA	Pre-Remedial	(217) 782-6761	07/31/90 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D 062480850

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- A SOLID
- ■ B POWDER, FINES
- ■ C SLUDGE
- E SLURRY
- ■ F LIQUID
- G GAS
- D OTHER _____ (Specify)

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS 0
- CUBIC YARDS 20
- NO OF DRUMS 1829

03 WASTE CHARACTERISTICS (Check all that apply)

- ■ A TOXIC
- ■ B CORROSIVE
- C RADIOACTIVE
- D PERSISTENT
- ■ E SOLUBLE
- F INFECTIOUS
- G FLAMMABLE
- H IGNITABLE
- I HIGHLY VOLATILE
- J EXPLOSIVE
- K REACTIVE
- L INCOMPATIBLE
- M NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	20	CY	Sludge from Pretreatment System
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	Unknown	Drums	Copper and Nickel Solutions on-site
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	Unknown	D2	Sludges; Liquids containing Heavy Metals

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

Visual Site Inspection May 7 and May 24, 1990.
Part B Permit Application and Revisions
Illinois EPA Land Pollution Control Files

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
IL	D062480850

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ■ A GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE ____) ■ POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED 114,432 — 04 NARRATIVE DESCRIPTION

Two aquifers (Silurian dolomite and St. Peter Sandstone) supply the majority of people within three miles. Only 1 to 2 feet of a silty loam separate the bedrock (dolomite) from the surface.

01 ■ B SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED UNKNOWN — 04 NARRATIVE DESCRIPTION

Surface water run-off from the site flows into a ditch, then into the Des Plaines River. The River is used for fishing. No surface water intakes are known to exist within three miles downstream of the site.

01 ■ C CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE ____) ☐ POTENTIAL ■ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 100,658 — 04 NARRATIVE DESCRIPTION

On August 28, 1989, Sheffield Steel (across the street from C.P. Inorganics) had to halt production because Ammonia odors, allegedly from C.P. Inorganics, were too strong to continue work.

01 ■ D FIRE/EXPLOSIVE CONDITIONS — 02 ■ OBSERVED (DATE 05-23-89) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 57,908 — 04 NARRATIVE DESCRIPTION

A fire and explosion occurred on this date when an employee punctured an acetylene tank with a fork lift. The fire destroyed 11 tanks at the nickel sulfate process and the lab area. No injuries were reported.

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE ____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____ — 04 NARRATIVE DESCRIPTION

None documented or observed

01 ■ F CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE ____) ■ POTENTIAL ALLEGED
03 AREA POTENTIALLY AFFECTED: UNKNOWN (Acres) — 04 NARRATIVE DESCRIPTION

Past disposal practices included the storage of drums outside on a concrete floor or bare soil. Pictures from a 1978 inspection revealed leaking drums. The USI conducted May 24, 1990 observed staining on the concrete.

01 ■ G DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE ____) ■ POTENTIAL ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 23,126 — 04 NARRATIVE DESCRIPTION

See "A" above. The aquifer of concern is the Silurian dolomite serving 23,126 people. The closest well using this aquifer is 0.35 miles west southwest of the facility.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE ____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: ____ — 04 NARRATIVE DESCRIPTION

None documented or observed.

01 ■ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE ____) ■ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 114,432 — 04 NARRATIVE DESCRIPTION

Numerous complaints from Sheffield Steel have been the result of excessive ammonia odors. See "C" above.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	D 062 480850

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
None documented or observed

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☒ OBSERVED (DATE: 1978) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 114,432 — 04 NARRATIVE DESCRIPTION
An inspection conducted in 1978 observed a number of drums leaking their contents. The VSI observed no drums, but some staining was evident.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☒ OBSERVED (DATE: 1989) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION City of Joliet, Department of Public Works and Utilities has cited C.P. Inorganics for excessive concentrations of ammonia over set standards. Other parameters exceeded include: zinc, copper, arsenic, and nickel.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
None documented or observed

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: 114,432

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
Visual Site Inspections May 7 and May 24, 1990
Illinois EPA Land Division Files
Illinois EPA Air Division Files
City of Joliet Public Works and Utilities Department.

SUPPORTING

DOCUMENTS

REFERENCE SHEET

1. Analytical results from effluent samples taken by the Public Works and Utilities Department of Joliet.
2. Illinois EPA Operating permit for C.P. Inorganics.
3. Illinois EPA Water Pollution Control permit for C.P. Inorganics.

ILLINOIS EPA

Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

REFERENCE 1

DIV

217-782-6760

Refer to: Will County - Joliet/C. P. Inorganics, Inc.
Permit No. 1980-15-DE

June 11, 1980

C. P. Inorganics, Inc.
Thomas A. Cassata, President
P. O. Box 195
Orland Park, Illinois 60462

Land-Ex Corporation
Thomas A. Cassata, President
P. O. Box 195
Orland Park, Illinois 60462

Gentlemen:

Permit is hereby granted to Land-Ex Corporation and Thomas A. Cassata, President, owner, and C. P. Inorganics, Inc., Thomas A. Cassata, President, operator, to develop a waste management facility on Industry Avenue, Joliet, Illinois in the Northeast ¼ of the Northeast ¼ of the Northeast ¼ of Section 4 and the Northwest ¼ of the Northwest ¼ of the Northwest ¼ of Section 3, Township 35 North, Range 10 East, Third P.M., to store and process special wastes for recovery, all in accordance with the application and plans prepared by Robert Hamilton, P.E. and Thomas A. Cassata: said application consisting of twenty-two pages and one quadrangle map all dated June 26, 1979 and received September 24, 1979, and four pages and one plan sheet all dated March 10, 1980 and received March 13, 1980.

This permit is subject to the standard conditions set forth on page three attached hereto and incorporated herein by reference, and further subject to the following special conditions:

1. This facility shall be constructed in accordance with Chapters 2, 7, and 9 of the Illinois Pollution Control Board Rules and Regulations.

2. The despatch oven shall be developed and operated in accordance with the permit (ID #197809AAY) issued by the Agency's Division of Air Pollution Control; said permit expires March 24, 1985.

3. The issuance of this permit does not release the permittee from obtaining other necessary permits from any Division of this Agency.

4. Any special or hazardous wastes generated at this facility for land disposal shall be disposed at an IEPA permitted landfill site utilizing the Agency's supplemental permit system and manifest system.

5. All storage of special waste shall be accomplished in closed containers (tanks, drums, or other containers).

You may now make application for an operating permit by writing a brief letter requesting same.

Very truly yours,

Thomas E. Cavanagh, Jr., Manager
Residuals Management Section
Division of Land/Noise Pollution Control

TEC:SAS:vlt

Enclosure
cc: Permit Section, DAPC
Robert E. Hamilton, P.E.
Northern Region Office

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/782-6762

Refer to: 1970250002 -- Will County
Joliet/C. P. Inorganics, Inc.
Permit No. 1980-15-OP
Supplemental Permit No. 1984-42-SP
Log No.: 1988-204 (1986-138 1986-050; 1986-019; 1986-041; 1985-107; 689 and 666)
Expiration Date: May 7, 1989

May 7, 1984
Revised July 15, 1988

C. P. Inorganics, Inc.
Thomas A. Cassata, President
Post Office Box 195
Orland Park, Illinois 60462

Gentlemen:

Supplemental Permit 1984-42-SP is hereby issued to the above named waste management facility to allow acceptance for storage and recovery only, the following aqueous waste streams from any IEPA registered generator on a generic basis:

1. Spent hazardous ammoniacal copper solution that contains ammonia, chloride and copper (see attached waste stream permit 000059).

2. Spent hazardous copper chloride (see attached waste stream permit 000065).

3. Spent copper sulfate, a non-hazardous waste that contains sulfates, sulfuric acid and copper (see attached waste stream permit 000066).

4. Spent nickel waste, a non-hazardous waste that contains carbonates, boric and sulfamic acid, chlorides, sulfamates and nickel (see attached waste stream permit 000067).

5. Spent hazardous nickel and copper solution that contains nickel and copper nitrates and nitric acid (see attached waste stream permit 000068).

6. Spent ferric chloride that contain copper chloride and hydrochloric acid (see attached waste stream permit 000078).

7. Spent hazardous finishing solution from printed circuit board manufacturing (see attached waste stream permit 000099).

8. Copper metal from copper recovery units in the printed circuit board industry (see attached waste stream permit 000104).

Final plans, specifications, application and supporting documents as submitted and approved shall constitute part of this permit and are identified on the records of the Illinois Environmental Protection Agency, Division of Land Pollution Control by the permit number(s) and log number(s) designated in the

heading above. This supplemental permit is subject to the standard conditions attached and is further subject to the following special conditions:

1. All wastes shall be transported from each generator to this treatment facility under a properly completed manifest.

2. All wastes accepted under this generic waste stream permit shall be appropriately treated (chemical precipitation, filtration, crystalization and evaporation) and wastewater effluents discharged (under necessary permits) to the sanitary sewer and residuals transported to a permitted disposal site utilizing the Agency supplemental waste stream permit and manifest system.

3. Ferric chloride shall be accepted at this site for storage only.

4. An analysis of each waste stream accepted from each generator shall be maintained on file at your premises for review by the Agency.

5. This facility shall report to the Agency, on a quarterly basis, the total quantity from each generator of each of the generic wastes shown in the attachment to this permit that were received for storage and treatment. Quarterly reports should be sent to:

   Compliance Monitoring Section
   Division of Land Pollution Control
   Illinois Environmental Protection Agency
   2200 Churchill Road
   Sprngfield, Illinois 62706

This schedule for submission of these waste receipt reports shall be within 30 days of the end of each quarter (i.e., reports due by 30th day of January, April, July and October).

Except as modified above, this site shall be operated in accordance with the terms and conditions of Permit No. 1980-15-OP.

Very truly yours,

Lawrence W. Eastep, P.E., Manager
Permit Section
Division of Land Pollution Control

LWE:MAS:dls/2023j, 79-80

Attachments

cc: File
    Region
    Compliance Monitoring Section

Illinois Environmental Protection Agency • P.O. Box 19276, Springfield, IL 62794-9276

GENERIC WASTE STREAM PERMIT ATTACHMENT

ITE CODE: 1970250002

GENERIC W/S PERMIT NUMBER: 000059

ITE NAME: C P INORGANICS

SUP/OP PERMIT NUMBER: 1984021SP

ATE RECEIVED: 02/09/84

APPROVAL DATE: 02/23/84
EXPIRATION DATE: 05/07/89

ENERIC WASTE CODE: 0035

ENERIC WASTE NAME: COPPER METAL RECOVERY FROM PLATING AND ETCHING SOLUTION

ASTE CLASSIFICATION: HAZARDOUS NOT SUBJECT TO FEE

REPA HAZARDOUS WASTE NUMBER(S): D002

REATMENT CODE(S): T23,T40,T52,T57

LASH POINT (MIN): 140F PH (MIN): 2.1 PH (MAX): 12.4

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0001	WATER	0070 % VOL
0032	COPPER	0010 % VOL
0129	AMMONIA	0015 % VOL
0130	CHLORIDE	0015 % VOL
0131	TOTAL SOLIDS	0040 % VOL

ISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

REATMENT METHOD: METALS RECOVERY

KL

GENERIC WASTE STREAM PERMIT ATTACHMENT

SITE CODE: 1970250002

GENERIC W/S PERMIT NUMBER: 000065

SITE NAME: C P INORGANICS

SUP/OP PERMIT NUMBER: 19840428P

DATE RECEIVED: 03/13/84

APPROVAL DATE: 05/07/84
EXPIRATION DATE: 05/07/89

GENERIC WASTE CODE: 0035

GENERIC WASTE NAME: COPPER METAL RECOVERY FROM PLATING AND ETCHING SOLUTION

WASTE CLASSIFICATION: HAZARDOUS NOT SUBJECT TO FEE

USEPA HAZARDOUS WASTE NUMBER(S): D002

TREATMENT CODE(S): T23,T40,T52,T57

FLASH POINT (MIN): N/A F PH (MIN): N/A PH (MAX): 2.0

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0032	COPPER	0010 % VOL
0130	CHLORIDE	0010 % VOL
0131	TOTAL SOLIDS	0020 % VOL
0001	WATER	0085 % VOL

DISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

TREATMENT METHOD: METALS RECOVERY

MKL

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GENERIC WASTE STREAM PERMIT ATTACHMENT

ITE CODE: 1970250002

GENERIC W/S PERMIT NUMBER: 000066

ITE NAME: C P INORGANICS

SUP/OP PERMIT NUMBER: 19840429P

ATE RECEIVED: 03/13/84

APPROVAL DATE: 05/07/84
EXPIRATION DATE: 05/07/89

ENERIC WASTE CODE: 0035

ENERIC WASTE NAME: COPPER METAL RECOVERY FROM PLATING AND ETCHING SOLUTION

WASTE CLASSIFICATION: NON-HAZARDOUS NOT SUBJECT TO FEE

EPA NON-HAZARD WASTE NUMBER(S): 0005

TREATMENT CODE(S): T23,T40,T52,T57

FLASH POINT (MIN): N/A F PH (MIN): 2.1 PH (MAX): 12.4

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0032	COPPER	0025 % VOL
0040	SULFURIC ACID	0005 % VOL
0150	SULFATES	0070 % VOL
0131	TOTAL SOLIDS	0095 % VOL
0001	WATER	0010 % VOL

DISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

TREATMENT METHOD: METALS RECOVERY

MKL

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GENERIC WASTE STREAM PERMIT ATTACHMENT

ITE CODE: 1970250002 GENERIC W/S PERMIT NUMBER: 000067

ITE NAME: C P INORGANICS SUP/OP PERMIT NUMBER: 19840428P

ATE RECEIVED: 03/13/94 APPROVAL DATE: 05/07/84
EXPIRATION DATE: 05/07/89

ENERIC WASTE CODE: 0040

ENERIC WASTE NAME: NICKEL METAL RECOVERY FROM PLATING AND ETCHING SOLUTION

ASTE CLASSIFICATION: NON-HAZARDOUS NOT SUBJECT TO FEE

EPA NON-HAZARD WASTE NUMBER(S): 0005

REATMENT CODE(S): T23,T40,T52,T57

LASH POINT (MIN): N/A F PH (MIN): 2.1 PH (MAX): 12.4

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0033	NICKEL	0010 % VOL
0149	CARBONATES	0010 % VOL
0131	TOTAL SOLIDS	0065 % VOL
0001	WATER	0085 % VOL
0146	BORIC ACID	0005 % VOL
0150	SULFATES	0035 % VOL
0130	CHLORIDE	0025 % VOL
0148	SULFAMIC ACID	0005 % VOL
0147	NICKEL SULFAMATE	0030 % VOL

DISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

TREATMENT METHOD: METALS RECOVERY

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GENERIC WASTE STREAM PERMIT ATTACHMENT

SITE CODE: 1970250002

GENERIC W/S PERMIT NUMBER: 000068

SITE NAME: C P INORGANICS

SUP/OP. PERMIT NUMBER: 1984042SP

DATE RECEIVED: 03/13/84

APPROVAL DATE: 05/07/84
EXPIRATION DATE: 05/07/89

GENERIC WASTE CODE: 0072

GENERIC WASTE NAME: WASTE THAT IS HAZ. DUE TO CORROSIVITY ONLY

WASTE CLASSIFICATION: HAZARDOUS NOT SUBJECT TO FEE

USEPA HAZARDOUS WASTE NUMBER(S): D002.

TREATMENT CODE(S): T23,T40,T52,T57

FLASH POINT (MIN): N/A. F1 PH (MIN): 1.0 PH (MAX): 2.0

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0067	NITRATES	0035 % VOL
0033	NICKEL	0035 % VOL
0032	COPPER	0025 % VOL
0041	NITRIC ACID	0010 % VOL
0131	TOTAL SOLIDS	0060 % VOL
0001	WATER	0045 % VOL
0040	SULFURIC ACID	0010 % VOL

DISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

TREATMENT METHOD: METALS RECOVERY

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GENERIC WASTE STREAM PERMIT ATTACHMENT

SITE CODE: 1970250002

GENERIC W/S PERMIT NUMBER: 000078

SITE NAME: C P INORGANICS

SUP/OP PERMIT NUMBER: 19840423P

DATE RECEIVED: 06/04/85

APPROVAL DATE: 06/14/85
EXPIRATION DATE: 05/07/89

GENERIC WASTE CODE: 0016

GENERIC WASTE NAME: SPENT FERRIC CHLORIDE

WASTE CLASSIFICATION: HAZARDOUS NOT SUBJECT TO FEE

USEPA HAZARDOUS WASTE NUMBER(S): D002

TREATMENT CODE(S): S02

FLASH POINT (MIN): N/A F PH (MIN): N/A PH (MAX): 2.0

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0001	WATER	0050 % WT
0046	FERRIC CHLORIDE	0050 % WT
0047	COPPER CHLORIDE	0010 % WT
0039	HYDROCHLORIC ACID	0001 % WT
0032	COPPER	0009 % WT
0035	ZINC	0003 % WT
0030	LEAD	0010 PPM
0031	CHROMIUM	0002 % WT
0048	IRON	0013 % WT

DISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

TREATMENT METHOD: METALS RECOVERY

MKL

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GENERIC WASTE STREAM PERMIT ATTACHMENT

SITE CODE: 1970250002

GENERIC W/S PERMIT NUMBER: 000099

SITE NAME: C P INORGANICS

SUP/OP PERMIT NUMBER: 19840429P

DATE RECEIVED: 08/08/86

APPROVAL DATE: 09/30/86
EXPIRATION DATE: 05/07/89

GENERIC WASTE CODE: 0056

GENERIC WASTE NAME: SPENT FINISHING SOLUTION FROM PRINTED CIRCUIT BOARDS

WASTE CLASSIFICATION: HAZARDOUS NOT SUBJECT TO FEE

USEPA HAZARDOUS WASTE NUMBER(S): D003

TREATMENT CODE(S): T23,T40,T52,T57

F OH POINT (MIN): N/A F PH (MIN): N/A PH (MAX): N/A

---------- MAJOR WASTE COMPONENTS ----------

CODE	NAME	MAX LIMITS
0001	WATER	0083 % VOL
0171	AMMONIUM CHLORIDE	0013 % VOL
0172	UREA	0003 % VOL
0032	COPPER	0140 PPM
0030	LEAD	0500 PPM
0173	TIN	0600 PPM
0131	TOTAL SOLIDS	0017 % VOL

DISPOSAL METHOD: RECYCLE, REUSE, OR RECLAMATION

TREATMENT METHOD: METALS RECOVERY

HKL

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER: C P INORGANICS
PERMIT NUMBER: J1600

QUARTER SAMPLED: 1
YEAR SAMPLED: 1989

1ST MONTH SAMPLED: DECEMBER

SAMPLE TYPE	TAKEN BY	DATE	REQUIRED PERMIT PARAMETERS BOD5	S. SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	INDUSTRY	DECEMBER 1	96	18	9.70	1416	0.38	1	1	0.2
COMPOSITE	INDUSTRY	DECEMBER 9	88	5	9.60	1002	0.48	0.3	1.4	0.14
COMPOSITE	INDUSTRY	DECEMBER 16	52	4	9.20	697	0.75	0.4	2	0.7
COMPOSITE	INDUSTRY	DECEMBER 20	47	3	9.50	458	1	0.4	1.6	0.23
COMPOSITE	INDUSTRY	DECEMBER 29	46	6	9.60	15.5	0.35	0.5	2.4	0.15
MONTHLY	AVERAGES		66	7	9.52	717.70	0.59	0.52	1.68	0.28
MONTHLY	HIGH:		96	18	9.70	1416.00	1.00	1.00	2.40	0.70
MONTHLY	LOW:		46	3	9.20	15.50	0.35	0.30	1.08	0.14
PERMIT	LIMITS:				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	5	5	0	3	2

2ND MONTH SAMPLED: JANUARY

SAMPLE TYPE	TAKEN BY	DATE	REQUIRED PERMIT PARAMETERS BOD5	S. SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	INDUSTRY	JANUARY 4	96	25	9.40	21.6	0.31	0.5	3.9	0.34
COMPOSITE	INDUSTRY	JANUARY 11	81	30	9.00	14.9	0.43	1.9	2.7	0.9
COMPOSITE	INDUSTRY	JANUARY 19	25	5	9.10	254	0.16	0.7	1.9	0.25
COMPOSITE	INDUSTRY	JANUARY 26	34	9	9.20	223	1.2	1.6	3.8	1
MONTHLY	AVERAGES		59	17	9.18	128.38	0.53	1.18	3.08	0.62
MONTHLY	HIGH:		96	30	9.40	254.00	1.20	1.90	3.90	1.00
MONTHLY	LOW		25	5	9.00	14.90	0.16	0.50	1.90	0.25
PERMIT	LIMITS:				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	4	3	2	4	4

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER: C.P INORGANICS
PERMIT NUMBER: 31600

QUARTER SAMPLED: 1
YEAR SAMPLED: 1989

3RD MONTH SAMPLED: FEBRUARY

SAMPLE TYPE	TAKEN BY	DATE	REQUIRED PERMIT PARAMETERS BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	FEBRUARY 15	30	208	9.24	25	0.32	0.26	0.27	0.49
COMPOSITE	CITY	FEBRUARY 16	25	90	9.02	62	0.29	0.53	0.44	
COMPOSITE	INDUSTRY	FEBRUARY 1	42	8	9.40	146	1.1	1.2	1.7	0.7
COMPOSITE	INDUSTRY	FEBRUARY 9	55	42	8.90	119	0.74	1.5	2	0.23
COMPOSITE	INDUSTRY	FEBRUARY 16	35	21	9.10	25.4	6.2	1.2	1.2	0.94
COMPOSITE	INDUSTRY	FEBRUARY 22	113	14	9.40	252	0.98	1	0.6	2.2
MONTHLY	AVERAGES:		50	64	9.18	104.90	1.61	0.95	1.04	0.91
MONTHLY	HIGH:		113	208	9.40	252.00	6.20	1.50	2.00	2.20
MONTHLY	LOW:		25	8	8.90	25.00	0.29	0.26	0.27	0.23
PERMIT	LIMITS:				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	6	6	3	2	5

QUARTERLY SUMMARY

QUARTERLY	AVERAGES:		50	64	9.18	104.90	1.61	0.95	1.04	0.91
QUARTERLY	HIGH:		113	208	9.40	252.00	6.20	1.50	2.00	2.20
QUARTERLY	LOW:		25	8	8.90	25.00	0.29	0.26	0.27	0.23
PERMIT	LIMITS:				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	15	14	5	9	11

COMMENTS AND ON QUARTER RECOMENDED ACTION: MANY VIOLATIONS: COMPLIANCE MEETING

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER C P. INORGANICS
PERMIT NUMBER J1600

QUARTER SAMPLED 2
YEAR SAMPLED 1989

1ST MONTH SAMPLED MARCH

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	MARCH 15	90	48	9.13					
COMPOSITE	CITY	MARCH 16	70	31	9.09					
COMPOSITE	INDUSTRY	MARCH 3	94	2	9.00	99	1.5	1 1	1 4	0.66
COMPOSITE	INDUSTRY	MARCH 9	7	72	9.30	80	2 85	1 3	0.8	0.42
COMPOSITE	INDUSTRY	MARCH 16	65	15	9.30	404	0 6	2 2	1	0.23
COMPOSITE	INDUSTRY	MARCH 23	64	15	9.10	186	1 04	1 2	3	0.89
COMPOSITE	INDUSTRY	MARCH 29	7	6	8 46	244	0 51	1 4	2	0.22
MONTHLY	AVERAGES		57	27	9.07	202.60	1 30	1 44	1.64	0.48
MONTHLY	HIGH		94	72	9.30	404.00	2 85	2.20	3.00	0.89
MONTHLY	LOW		7	2	8.60	80.00	0.51	1.10	0.80	0.22
PERMIT	LIMITS				6-10	10.00	0.20	1.00	1 50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	5	5	5	2	5

2ND MONTH SAMPLED APRIL

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	APRIL 4	80	130	7.94	27	0 094	0.73	1 7	0.5
COMPOSITE	CITY	APRIL 5	105	106	8.50	22	0.5	0 7	0.36	0 12
COMPOSITE	INDUSTRY	APRIL 6	179	24	7.90	192	0 47	1 1	1.4	0.53
COMPOSITE	INDUSTRY	APRIL 14	130	195	8.40	96	0 98	1 9	0.8	0.9
COMPOSITE	INDUSTRY	APRIL 20	38	124	8 40	109	0 57	0.5	0.6	0 2
COMPOSITE	INDUSTRY	APRIL 28	36	10	8 20	104	0	0.3	0.6	0 05
MONTHLY	AVERAGES		95	98	8.24	91 67	0.44	0 87	0.91	0.38
MONTHLY	HIGH		179	195	8 50	192.00	0.98	1.90	1.70	0.90
MONTHLY	LOW		36	10	7.90	22.00	0 06	0.30	0.36	0 05
PERMIT	LIMITS				6-10	10 00	0 20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	6	4	2	1	3

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER: C.P. INORGANICS
PERMIT NUMBER: J1600

QUARTER SAMPLED: 2
YEAR SAMPLED: 1989

3RD MONTH SAMPLED: MAY

SAMPLE TYPE	TAKEN BY	DATE	REQUIRED PERMIT PARAMETERS BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	INDUSTRY	MAY 3	127	84	8.60	45	0.47	0.32	1.7	0.08
COMPOSITE	INDUSTRY	MAY 12	31	8	8.20	37	0.36	0.23	6.4	0.14
COMPOSITE	INDUSTRY	MAY 17	44	24	8.60	89	0.41	0.3	2.1	0.15
MONTHLY	AVERAGES:		67	39	8.47	57.00	0.41	0.28	3.40	0.12
MONTHLY	HIGH:		127	84	8.60	89.00	0.47	0.32	6.40	0.15
MONTHLY	LOW:		31	8	8.20	37.00	0.36	0.23	1.70	0.08
PERMIT	LIMITS:				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	3	3	0	3	0

QUARTERLY SUMMARY

QUARTERLY	AVERAGES:		73	55	8.59	117.09	0.72	0.87	1.98	0.33
QUARTERLY	HIGH:		179	195	9.30	404.00	2.85	2.20	6.40	0.90
QUARTERLY	LOW		7	2	7.90	22.00	0.00	0.23	0.34	0.05
PERMIT	LIMITS:				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	14	12	7	6	0

COMMENTS AND RECOMENDED ON QUARTER: 49 VIOLATIONS
ACTION: COMPLIANCE MEETING aug 8st @10:00 am

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER C P. INORGANICS
PERMIT NUMBER 31690

QUARTER SAMPLED 3
YEAR SAMPLED 1989

1ST MONTH SAMPLED JUNE

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S. SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	JUNE 27	10	136	8 03	73	0.52	0 24	5.9	2.2
COMPOSITE	CITY	JUNE 28	120	99	8 71		0 077	0 72	0.33	0 72
COMPOSITE	INDUSTRY	JUNE 21	219	40	9 00	23 2	1 09	0.39	2 6	0.2
COMPOSITE	INDUSTRY	JUNE 23	20	10	8 20	24 3	0 61	0 38	2	0.08
COMPOSITE	INDUSTRY	JUNE 27	61	16	5 06	73.4	0 54	0 31	11	3 9
MONTHLY	AVERAGES		86	60	8.39	48 48	0 57	0 41	4.37	1 42
MONTHLY	HIGH		219	136	9 00	73.40	1 09	0 72	11.00	3.90
MONTHLY	LOW		10	10	8.00	23 20	0.10	0 24	0 33	0 08
PERMIT	LIMITS				6-10	10 00	0.20	1 00	1 50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	4	4	0	4	3

2ND MONTH SAMPLED JULY

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S. SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	INDUSTRY	JULY 6	13	25	8 40	47 1	0 42	0 9	1	1 2
COMPOSITE	INDUSTRY	JULY 12	32	10	9 10	104	0 38	0 32	1 7	0 1
COMPOSITE	INDUSTRY	JULY 21	58	32	8.30	92	1.5	1 2	4 5	0 22
COMPOSITE	INDUSTRY	JULY 25	163	28	8 10	69	2	0.72	3 8	0 38
MONTHLY	AVERAGES		67	24	8 48	79 03	1 08	0 79	2.75	0.48
MONTHLY	HIGH		163	32	9 10	104 00	2 00	1 20	4 50	1 20
MONTHLY	LOW		13	10	8 10	47 10	0.38	0 32	1.00	0.10
PERMIT	LIMITS				6-10	10 00	0 20	1 00	1 50	0 20
TIMES	LIMIT	EXCEEDED	0	0	0	4	4	1	3	3

11-29
10:00

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER: C P INORGANICS
PERMIT NUMBER J1400

QUARTER SAMPLED 3
YEAR SAMPLED 1989

3RD MONTH SAMPLED AUGUST

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	AUGUST 10	33	118	8.07	85	0 023	0 26	0.43	0.12
COMPOSITE	CITY	AUGUST 11	33	117	8 56	140	0.025	0.72	0 6	0 37
COMPOSITE	INDUSTRY	AUGUST 1	33	46	8 40	42 1	2 3	0 4	0.45	0 23
COMPOSITE	INDUSTRY	AUGUST 9	18	13	8.20	80 9	0.72	0 1	0 6	0 3
COMPOSITE	INDUSTRY	AUGUST 21	59	30	7.70	169	0 75	0 4	0 24	0 2
COMPOSITE	INDUSTRY	AUGUST 22	47	2	6 70	89 9	3.97	0.26	0 15	0 24
COMPOSITE	INDUSTRY	AUGUST 29	33	16	7.60	92 8	0 31	0 24	0 3	0 09
MONTHLY	AVERAGES:		40	49	7 89	99 96	0.73	0 38	0 40	0 22
MONTHLY	HIGH.		59	118	8 56	169 00	2 30	0 72	0 60	0.37
MONTHLY	LOW.		30	3	6 70	42 10	0 02	0 24	0 15	0.09
PERMIT	LIMITS				6-10	10 00	0 20	1 00	1 50	0 20
TIMES	LIMIT	EXCEEDED	0	3	0	7	5	0	0	4

QUARTERLY SUMMARY

QUARTERLY	AVERAGES		64	44	8 25	75 43	0 79	0 53	2 50	0 71
QUARTERLY	HIGH		219	136	9.10	169 00	2 30	1 20	11 00	3 90
QUARTERLY	LOW		10	3	6 70	23 20	0 02	0 24	0 15	0 08
PERMIT	LIMITS				6-10	10 00	0 20	1 00	1 50	0 20
TIMES	LIMIT	EXCEEDED	0	0	0	15	13	1	7	10

COMMENTS AND RECOMENDED ON QUARTER ACTION: 15 AMMONIA. 13 ARSENIC. 1 COPPER. 10 ZINC. 7 NICKEL VIOLATIONS
SHOW CAUSE MEETING

Cont. Meeting.

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER C P INORGANICS
PERMIT NUMBER J1600

QUARTER SAMPLED 4
YEAR SAMPLED 1989

1ST MONTH SAMPLED SEPTEMBER

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	SEPTEMBER 21	220	172	8.91	56	0.11	1.1	3.9	1.3
COMPOSITE	CITY	SEPTEMBER 22	50	97	8.42	32	0.45	0.08	0.21	0.09
COMPOSITE	INDUSTRY	SEPTEMBER 6	40	6	7.28	73	0.5	0.28	0.4	0.12
COMPOSITE	INDUSTRY	SEPTEMBER 14	58	17	7.30	87	0.51	3	0.5	0.43
COMPOSITE	INDUSTRY	SEPTEMBER 19	72	13	7.08	46.6	1.58	0.5	1.1	0.14
COMPOSITE	INDUSTRY	SEPTEMBER 28	60	9	7.80	85.9	0.92	0.41	0.7	0.08
MONTHLY	AVERAGES		83	52	7.77	63.75	0.68	0.90	1.17	0.36
MONTHLY	HIGH		220	172	8.91	87.00	1.58	3.00	3.90	1.30
MONTHLY	LOW		40	6	7.08	32.00	0.11	0.08	0.21	0.08
PERMIT	LIMITS				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	6	5	2	1	2

2ND MONTH SAMPLED OCTOBER

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	INDUSTRY	OCTOBER 5	44	22	7.80	42.9	0.87	0.46	0.4	0.05
COMPOSITE	INDUSTRY	OCTOBER 13	55	7	7.60	68.3	0.5	0.3	1.5	0.24
COMPOSITE	INDUSTRY	OCTOBER 19	144	5	8.10	98.7	0.59	0.18	0.54	0.09
COMPOSITE	INDUSTRY	OCTOBER 27	28	15	7.50	.25	0.73	0.04	0.7	0.15
COMPOSITE	INDUSTRY	OCTOBER 31	72	9	7.70	97.4	0.54	0.72	0.8	0.3
MONTHLY	AVERAGES		69	12	7.74	56.44	0.65	0.38	0.79	0.17
MONTHLY	HIGH		144	22	8.10	125.00	0.87	0.92	1.50	0.30
MONTHLY	LOW		28	5	7.50	42.80	0.50	0.04	0.40	0.05
PERMIT	LIMITS				6-10	10.00	0.20	1.00	1.50	0.20
TIMES	LIMIT	EXCEEDED	0	0	0	5	5	0	0	2

Conf Meeting
2-22-90
10:00 am

RECEIVED

90

IEPA/DLPC

QUARTERLY COMPLIANCE SUMMARY

NAME OF INDUSTRIAL USER: C P INORGANICS
PERMIT NUMBER: J1600

QUARTER SAMPLED: 4
YEAR SAMPLED: 1989

3RD MONTH SAMPLED: NOVEMBER

REQUIRED PERMIT PARAMETERS

SAMPLE TYPE	TAKEN BY	DATE	BOD5	S. SOLIDS	PH	AMMONIA	ARSENIC	COPPER	NICKEL	ZINC
COMPOSITE	CITY	NOVEMBER 16	55	46	8 55		0 43	0 5	0 3	0 14
COMPOSITE	CITY	NOVEMBER 17	80	47	8 37	610	0.06	0 13	0 18	0 17
COMPOSITE	INDUSTRY	NOVEMBER 9	111	14	7 30	55 8	0 39	0 41	1 1	0 15
COMPOSITE	INDUSTRY	NOVEMBER 14	90	130	7 80	200	0 019	0 09	0 35	0 02
COMPOSITE	INDUSTRY	NOVEMBER 20	61	57	7 20	130	0 07	0 33	0 49	0 04
COMPOSITE	INDUSTRY	NOVEMBER 29	18	130	7 50	41	0 075	0 14	0 29	0 04
MONTHLY	AVERAGES		68	71	7 89	211 56	0 17	0 27	0 45	0 09
MONTHLY	HIGH		111	130	8 55	610 00	0 43	0 50	1 10	0 17
MONTHLY	LOW		18	14	7 20	55 80	0 02	0 09	0 15	0 02
PERMIT	LIMITS				6-10	10 00	0 20	1 00	1 50	0 20
TIMES	LIMIT	EXCEEDED	0	0	0	5	2	0	0	0

QUARTERLY SUMMARY

QUARTERLY	AVERAGES		73	45	7 77	120 58	0 50	0 51	0 80	0 21
QUARTERLY	HIGH		220	172	8 71	610 00	1 58	3 00	3 90	1 30
QUARTERLY	LOW		18	5	7 06	32 00	0 02	0 04	0 18	0 02
PERMIT	LIMITS				6-10	10 00	0 20	1 00	1 50	0 20
TIMES	LIMIT	EXCEEDED	0	0	0	14	12	2	1	4

COMMENTS AND RECOMENDED ACTION ON QUARTER: 14 AMMONIA, 12 ARSENIC, 2 COPPER, 1 NICKEL AND 4 ZINC VIOLATIONS MEETING

MONTHLY INDUSTRIAL SELF-MONITORING REPORT

NAME OF INDUSTRY CP INORGANICS DATE 12/18/88
ADDRESS 10 INDUSTRY AVE.
CITY/STATE/ZIP JOLIET, IL 60435
PERMIT # J1600
REPORT FOR THE MONTH OF SEPTEMBER 1988

EFFLUENT CHARACTERISTICS		FLOW	NICKEL		NITROGEN AMMONIA		ZINC	
SAMPLE TYPE	PERMIT COND.	METER	GRAB	COMP	GRAB		GRAB	COMP
	MONITORED	METER	24 HR	COMP	GRAB		24 HR	COMP
FREQUENCY	PERMIT COND.	MONTHLY	1/WEEK		1/WEEK		1/WEEK	
	MONITORED	MONTHLY	1/WEEK		1/WEEK		1/WEEK	
EFFLUENT LIMITATIONS	MONTH AVG.							
	DAILY MAX		1.5mgl		10ppm		0.2mg/l	
DATE / UNITS		MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY
1 SEPTEMBER		0.1028	2.6	2.2	490	420	0.30	0.26
2								
3								
4								
5								
6								
7								
8 SEPTEMBER		0.1028	1.0	0.9	1445	1239	0.25	0.21
9								
10								
11								
12								
13								
14 SEPTEMBER		0.1028	1.0	0.9	1492	1279	0.45	0.39
15								
16								
17								
18								
20								
21								
22 SEPTEMBER		0.1028	4.0	3.4	2419	2073	1.10	0.94
23								
24								
25								
26								
27								
28 SEPTEMBER		0.1028	7.5	6.4	1492	1279	0.50	0.42
29								
30								
31								
MONTHLY AVERAGE		0.1028	3.2	2.8	1468	1258	0.52	0.44
HIGHEST VALUE OF MONTH		0.1028	7.5	6.4	2419	2073	1.10	0.94
LOWEST VALUE OF MONTH		0.1028	1.0	0.9	490	420	0.25	0.21
# OF TIMES MAX. EFFLUENT LIMITATIONS EXCEEDED			3		5		5	

SIGNATURE OF CERTIFIED OPERATOR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

MONTHLY INDUSTRIAL SELF-MONITORING REPORT

NAME OF INDUSTRY CP INORGANICS DATE 12/10/88
ADDRESS 10 INDUSTRY AVE.
CITY/STATE/ZIP JOLIET, IL 60435
PERMIT # J1600
REPORT FOR THE MONTH OF SEPTEMBER 1988

EFFLUENT CHARACTERISTICS		FLOW	pH	BOD		TOTAL SUS SOLIDS		ARSENIC		COPPER	
SAMPLE TYPE	PERMIT COND. MONITORED	METER METER	GRAB COMP 24 HR COMP	GRAB 24 HR	COMP COMP	GRAB 24 HR	COMP COMP	GRAB 24 HR	COMP COMP	GRAB 24 HR	COMP COMP
FREQUENCY	PERMIT COND. MONITORED	MONTHLY MONTHLY	1/WEEK 1/WEEK	1/WEEK 1/WEEK		1/WEEK 1/WEEK		1/WEEK 1/WEEK		1/WEEK 1/WEEK	
EFFLUENT LIMITATIONS	MONTH AVG. DAILY MAX		6.0-10.0					0.2mg/l		1.0mg/l	
DATE / UNITS		MGD	HI/LOW	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY
1 SEPTEMBER		0.1028	9.6	162	139	2	2	0.29	0.25	1.0	0.90
2											
3											
4											
5											
6											
7											
8 SEPTEMBER		0.1028	9.2	105	90	9	8	0.59	0.51	0.7	0.6
9											
10											
11											
12											
13											
14 SEPTEMBER		0.1028	9.5	39	33	2	2	0.56	0.48	0.6	0.5
15											
16											
17											
18											
19											
20											
21											
22 SEPTEMBER		0.1028	9.7	161	138	15	13	0.34	0.29	1.3	1.1
23											
24											
25											
26											
27											
28 SEPTEMBER		0.1028	9.6	24	21	5	4	0.58	0.50	3.5	3.0
29											
30											
31											
MONTHLY AVERAGE		0.1028	9.5	98	84	7	6	0.47	0.41	1.4	1.2
HIGHEST VALUE OF MONTH		0.1028	9.7	162	139	15	13	0.59	0.48	3.5	3.0
LOWEST VALUE OF MONTH		0.1028	9.2	24	21	2	2	0.29	0.6	0.5	<0.08
# OF TIMES MAX. EFFLUENT LIMITATIONS EXCEEDED								5		2	

SIGNATURE OF CERTIFIED OPERATOR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

MONTHLY INDUSTRIAL SELF-MONITORING REPORT

NAME OF INDUSTRY CP INORGANICS DATE 12/18/88
ADDRESS 10 INDUSTRY AVE.
CITY/STATE/ZIP JOLIET, IL 60435
PERMIT # J1600
REPORT FOR THE MONTH OF OCTOBER 1988

EFFLUENT CHARACTERISTICS		FLOW	NICKEL		NITROGEN AMMONIA		ZINC	
SAMPLE TYPE	PERMIT COND. MONITORED	METER METER	GRAB 24 HR	COMP COMP	GRAB GRAB		GRAB 24 HR	COMP COMP
FREQUENCY	PERMIT COND. MONITORED	MONTHLY MONTHLY	1/WEEK 1/WEEK		1/WEEK 1/WEEK		1/WEEK 1/WEEK	
EFFLUENT LIMITATIONS	MONTH AVG. DAILY MAX		1.5mg/l		10ppm		0.2mg/l	
DATE / UNITS		MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY
1								
2								
3								
4								
5								
6 OCTOBER		0.0851	2.8	2.0	983	698	0.09	0.06
7								
8								
9								
10								
11 OCTOBER		0.0851	1.6	1.1	690	490	0.20	0.14
12								
13								
14								
15								
16								
17								
18								
19 OCTOBER		0.0851	2.5	1.8	1833	1301	0.20	0.14
20								
21								
22								
23								
24								
25								
26								
27 OCTOBER		0.0851	4.5	3.2	1125	799	0.30	0.21
28								
29								
30								
31								
MONTHLY AVERAGE		0.0851	2.9	2.0	1158	822	0.20	0.14
HIGHEST VALUE OF MONTH		0.0851	4.5	3.2	1833	1301	0.30	0.21
LOWEST VALUE OF MONTH		0.0851	1.6	1.1	690	490	0.09	0.06
# OF TIMES MAX. EFFLUENT LIMITATIONS EXCEEDED			4		4		1	

SIGNATURE OF CERTIFIED OPERATOR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

MONTHLY INDUSTRIAL SELF-MONITORING REPORT

NAME OF INDUSTRY CP INORGANICS DATE 12/10/88
ADDRESS 10 INDUSTRY AVE.
CITY/STATE/ZIP JOLIET, IL 60435
PERMIT # J1600
REPORT FOR THE MONTH OF OCTOBER 1988

EFFLUENT CHARACTERISTICS		FLOW	pH	BOD		TOTAL SUS SOLIDS		ARSENIC		COPPER	
SAMPLE TYPE	PERMIT COND.	METER	GRAB COMP	GRAB	COMP	GRAB	COMP	GRAB	COMP	GRAB	COMP
	MONITORED	METER	24 HR COMP	24 HR	COMP	24 HR	COMP	24 HR	COMP	24 HR	COMP
FREQUENCY	PERMIT COND.	MONTHLY	1/WEEK	1/WEEK		1/WEEK		1/WEEK		1/WEEK	
	MONITORED	MONTHLY	1/WEEK	1/WEEK		1/WEEK		1/WEEK		1/WEEK	
EFFLUENT LIMITATIONS	MONTH AVG. DAILY MAX		6.0-10.0					0.2mg/l		1.0mg/l	
DATE / UNITS		MGD	HI/LOW	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY
1											
2											
3											
4											
5											
6 OCTOBER		0.0851	8.9	245	174	13	9	0.33	0.23	0.70	0.50
7											
8											
9											
10											
11 OCTOBER		0.0851	9.8	144	102	3	2	0.35	0.25	0.60	0.42
12											
13											
14											
15											
16											
17											
18											
19 OCTOBER		0.0851	8.8	35	25	12	9	0.41	0.29	0.70	0.50
20											
21											
22											
23											
24											
25											
26											
27 OCTOBER		0.0851	9.6	648	460	10	7	0.35	0.25	1.20	0.85
28											
29											
30											
31											
MONTHLY AVERAGE		0.0851	9.3	268	190	10	7	0.36	0.26	0.80	0.57
HIGHEST VALUE OF MONTH		0.0851	9.8	648	460	13	9	0.41	0.29	1.20	0.85
LOWEST VALUE OF MONTH		0.0851	8.8	35	25	3	2	0.33	0.23	0.60	0.42
# OF TIMES MAX. EFFLUENT LIMITATIONS EXCEEDED								4		1	

SIGNATURE OF CERTIFIED OPERATOR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

MONTHLY INDUSTRIAL SELF-MONITORING REPORT

NAME OF INDUSTRY CP INORGANICS DATE 12/18/88
ADDRESS 10 INDUSTRY AVE.
CITY/STATE/ZIP JOLIET, IL 60435
PERMIT # J1600
REPORT FOR THE MONTH OF NOVEMBER 1988

EFFLUENT CHARACTERISTICS		FLOW	NICKEL		NITROGEN AMMONIA		ZINC	
SAMPLE TYPE	PERMIT COND.	METER	GRAB	COMP	GRAB		GRAB	COMP
	MONITORED	METER	24 HR	COMP	GRAB		24 HR	COMP
FREQUENCY	PERMIT COND.	MONTHLY	1/WEEK		1/WEEK		1/WEEK	
	MONITORED	MONTHLY	1/WEEK		1/WEEK		1/WEEK	
EFFLUENT LIMITATIONS	MONTH AVG.							
	DAILY MAX		1.5mg/l		10ppm		0.2mg/l	
DATE / UNITS		MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY
1								
2 NOVEMBER		0.1017	2.5	2.1	832	705	0.60	0.51
3								
4								
5								
6								
7								
8								
9								
10 NOVEMBER		0.1017	4.2	3.6	1811	1535	0.24	0.20
11								
12								
13								
14								
15								
16								
17 NOVEMBER		0.1017	6.5	5.5	1430	1212	0.90	0.76
18								
19								
20								
21								
22 NOVEMBER		0.1017	6.0	5.1	1933	1638	0.81	0.69
23								
24								
25								
26								
27								
28								
29								
30								
31								
MONTHLY AVERAGE		0.1017	4.8	4.1	1502	1273	0.64	0.54
HIGHEST VALUE OF MONTH		0.1017	6.5	5.5	1933	1638	0.90	0.76
LOWEST VALUE OF MONTH		0.1017	2.5	2.1	832	705	0.24	0.02
# OF TIMES MAX. EFFLUENT LIMITATIONS EXCEEDED			4		4		4	

SIGNATURE OF CERTIFIED OPERATOR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

MONTHLY INDUSTRIAL SELF-MONITORING REPORT

NAME OF INDUSTRY CP INORGANICS DATE 12/18/88
ADDRESS 10 INDUSTRY AVE.
CITY/STATE/ZIP JOLIET, IL 60435
PERMIT # J1600
REPORT FOR THE MONTH OF NOVEMBER 1988

EFFLUENT CHARACTERISTICS		FLOW	pH	BOD		TOTAL SUS SOLIDS		ARSENIC		COPPER	
SAMPLE TYPE	PERMIT COND.	METER	GRAB COMP	GRAB	COMP	GRAB	COMP	GRAB	COMP	GRAB	COMP
	MONITORED	METER	24 HR COMP	24 HR	COMP	24 HR	COMP	24 HR	COMP	24 HR	COMP
FREQUENCY	PERMIT COND.	MONTHLY	1/WEEK	1/WEEK		1/WEEK		1/WEEK		1/WEEK	
	MONITORED	MONTHLY	1/WEEK	1/WEEK		1/WEEK		1/WEEK		1/WEEK	
EFFLUENT LIMITATIONS	MONTH AVG.										
	DAILY MAX		6.0-10.0					0.2mg/l		1.0mg/l	

DATE / UNITS	MGD	HI/LOW	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY
1										
2 NOVEMBER	0.1017	9.4	172	146	5	4	0.11	0.09	0.70	0.6
3										
4										
5										
6										
7										
8										
9										
10 NOVEMBER	0.1017	9.5	173	147	10	8	0.28	0.23	1.5	1.3
11										
12										
13										
14										
15										
16										
17 NOVEMBER	0.1017	9.5	207	175	17	14	0.30	0.25	1.1	0.9
18										
19										
20										
21										
22 NOVEMBER	0.1017	9.4	33	28	12	10	0.17	0.14	0.7	0.6
23										
24										
25										
26										
27										
28										
29										
30										
31										
MONTHLY AVERAGE	0.1017	9.5	146	124	11	9	0.22	0.18	1.0	0.9
HIGHEST VALUE OF MONTH	0.1017	9.5	207	175	17	14	0.30	0.25	1.5	1.3
LOWEST VALUE OF MONTH	0.1017	9.4	33	28	5	4	0.11	0.09	0.7	0.6
# OF TIMES MAX. EFFLUENT LIMITATIONS EXCEEDED							2		2	

SIGNATURE OF CERTIFIED OPERATOR

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

IWD

REFERENCE 3

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 0013-88 PERMIT NO.: 1988-EE-0013

FINAL PLANS, SPECIFICATIONS, APPLICATION AND SUPPORTING DOCUMENTS DATE ISSUED: April 1, 1988
PREPARED BY: Peter L. Veit of TSR Engineering Company

SUBJECT: C.P. INORGANICS, INC. - Pretreatment of Inorganic Chemical Bearing Waste - Tributary to the City of Joliet Eastside Sewage Treatment Plant

PERMITTEE TO CONSTRUCT, OWN AND OPERATE
C.P. Inorganics, Inc.
10 Industry Avenue
Joliet, IL 60435

Permit is hereby granted to the above designated permittee(s) to construct and/or operate water pollution control facilities described as follows:

Metal bearing wastes will be treated by a 12,000 gallon equalization tank, two 900 gallon neutralization tanks, a 600 gallon flocculation tank, a 4000 gallon clarifier with an effective surface area of 720 sq. ft., a 3,700 gallon sludge thickener tank, a 25 cu. ft. filter press, a 600 gallon final pH adjust tank. Ammonia bearing wastes will be treated by primary and secondary stripper with column diameter of 4 feet and a packing depth 18 feet, a primary scrubber with a column diameter of 2 feet and a packing depth of 20 feet, a secondary scrubber with a column diameter of 4 feet and a packing depth of 12 feet, a 600 cfm blower for the primary stripper and a 10,000 cfm blower for the secondary stripper and all necessary piping, pumps, and appurtenances to treat by continuous flow an average of 100,000 gpd and a maximum of 140,000 gpd of ammonia and metal bearing wastes, tributary to the City of Joliet Eastside Sewage Treatment Plant.

This Operating Permit expires on April 2, 1989.

This Permit is issued subject to the following Special Condition(s). If such Special Condition(s) require(s) additional or revised facilities, satisfactory engineering plan documents must be submitted to this Agency for review and approval for issuance of a Supplemental Permit.

(continued on page 2)

THE STANDARD CONDITIONS OF ISSUANCE INDICATED ON THE REVERSE SIDE MUST BE COMPLIED WITH IN FULL. READ ALL CONDITIONS CAREFULLY.

TGM:RP:ct/885j,22-23
cc: EPA - Region II
TSR Engineering Co.
Record
Binds
Permits
City of Joliet

DIVISION OF WATER POLLUTION CONTROL

Thomas G. McSwiggin, P.E.
Manager, Permit Section

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL PERMIT

LOG NUMBERS: 0013-88 PERMIT NO.: 1988-EE-0013

FINAL PLANS, SPECIFICATIONS, APPLICATION AND SUPPORTING DOCUMENTS DATE ISSUED: April 1, 1988
PREPARED BY: Peter L. Veit of TSR Engineering Company

SUBJECT: C.P. INORGANICS, INC. - Pretreatment of Inorganic Chemical Bearing Waste - Tributary to the City of Joliet Eastside Sewage Treatment Plant

SPECIAL CONDITION 1:

a. Accumulation of hazardous waste at this facility (if generated) shall be carried out in accordance with 35 Ill. Adm. Code, Chapter 1, Subtitle G, Part 722: Standards Applicable to Generators of Hazardous Waste.

b. Transport of all special waste to a permitted treatment, storage or disposal site shall be carried out in accordance with Title 35 Ill. Adm. Code, Chapter 1, Subtitle G, Part 809: Special Waste Hauling.

SPECIAL CONDITION 2: The operation of the pretreatment facilities must be under the direct and active field supervision of a certified industrial treatment plant operator in accordance with the State of Illinois Rules and Regulations, Title 35, Subtitle C, Chapter 1, Part 312.

SPECIAL CONDITION 3: The issuance of this permit does not relieve the permittee of the responsibility of complying with 35 Ill. Adm. Code, Part 307 and/or the General Pretreatment Regulations (40 CFR 403) and any guidelines developed pursuant to Section 301, 306, or 307 of the Federal Clean Water Act of 1977.

SPECIAL CONDITION 4: The issuance of this permit does not relieve the permittee of the responsibility of complying with any limitations and provisions imposed by City of Joliet.

SPECIAL CONDITION 5: The permittee shall sample the influent and effluent of the primary and secondary ammonia strippers for flow, temperature, pH, ammonia and total copper on a daily basis during the 2 month initial start up and shakedown period, and monthly thereafter. In addition to the testing requirements for the strippers, the primary scrubber waste shall be sampled and analyzed for ammonium chloride and the secondary scrubber water for ammonium sulfate. The testing of the scrubber water shall be performed at the same frequency as the strippers. The permittee shall maintain records of the results of the testing and submit the results with the renewal application for this permit.

SPECIAL CONDITION 6: There shall be no arrangement or cross connection by which an unsafe substance may enter the potable portion of a public water supply. The permittee shall comply with Illinois Pollution Control Board regulations 35 Ill. Adm. Code, Subtitle F: Public Water Supplies, Section 607.104 and Illinois Environmental Protection Agency Technical Policy Statements 35 Ill. Adm. Code, Subtitle F, Chapter II, Sections 653.801 through 653.805.

GB: 5436A

0013-88

For IEPA Use:
Log Number:
Date Received:

RECEIVED
JAN 04 1988
Environmental Protection Agency
WPC — Permit Log In

Illinois Environmental Protection Agency
Division of Water Pollution Control
Permit Section
Springfield, Illinois 62706
Application For Permit Or Construction Approval

WPC-PS-1

1. **Name and Location:**

Name of project: C.P. Inorganics - Ammonia Stripping and Metal Precipitation

Municipality or Township: Joliet County: _____

2. **Brief Description of Project:** Addition of secondary ammonia stripping to existing copper-nickel precipitation system for ammonia & heavy metal removal.

3. **Documents Being Submitted:** If the project involves any of the items listed below, submit the corresponding schedule, and check the appropriate spaces.

Project

Private Sewer Connection	A		Spray Irrigation	H	
Public Sewer Extension	B		Septic Tanks	I	
Sewer Extension Construct Only	C		Industrial Treatment or Pretreatment	J	X
Sewage Treatment Works	D		Cyanide Acceptance	L	
Excess Flow Treatment	E		Updating Cyanide Acceptance Form	M	
Lift Station/Force Main	F		Waste Characteristics	N	X
Sludge Disposal	G	X	Erosion Control	P	
			Trust Disclosure	T	

4. **Land Trust:** Is the project identified in item number 1 herein, for which a permit is requested, to be constructed on land which is the subject of a trust? ☐ Yes ☐ No

If yes, Schedule T (Trust Disclosure) must be completed and item number 7.1.1 must be signed by a beneficiary, trustee or trust officer.

Plans: Title Final Engineering - Ammonium Stripping System Number of Pages: 17 sheets

Specifications: Title Engineering Report - Ammonium Stripping Number of Books/Pages: 1 book, 107 pages

Other Documents (Please Specify) _____

5. **This is an Application for (Check Appropriate Line):**

X A. Joint Construction And Operating Permit
_____ B. Authorization To Construct (See Instructions) NPDES Permit No. IL00_____ Issue Date _____
_____ C. Construct Only Permit (Does Not Include Operations)
_____ D. Operate Only Permit (Does Not Include Construction)

6. **Certifications and Approval:**

6.1 **Certificate by Design Engineer**
I hereby certify that I am familiar with the information contained in this application, including the attached schedules indicated above, and that to the best of my knowledge and belief such information is true, complete and accurate. The plans and specifications (specifications other than Standard Specifications or local specifications on file with this Agency) as described above were prepared by me or under my direction.

Engineer Glenn Bilek (Name) 62-35583 (Registration Number) _____ (Seal)

Firm: TSR Engineering Company

Address: 2600 Lexington Street, Broadview, Illinois 60153

Phone Number: 312. 345-8877

Signature X [signature] for information contact Peter L. Veit

7. **Certifications and Approvals for Permits:**

7.1 **Certificate by Applicant(s)**
I/We hereby certify that I/we have read and thoroughly understand the conditions and requirements of this Application, and am/are authorized to sign this application in accordance with the Rules and Regulations of the Illinois Pollution Control Board.
I/We hereby agree to conform with the Standard Conditions and with any other Special Conditions made part of this Permit.

7.1.1 Name Of Applicant For Permit Or Authorization To Construct C.P. Inorganics, Inc.

Street	City	State	Zip Code
10 Industry Avenue, Joliet		Illinois	60435

Signature X [signature]

Title Vice President Organization _____

The IEPA is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

7.1.2 Name Of Applicant For Permit To Own and Operate C.P. Inorganics, Inc.

10 Industry Avenue | Joliet | Illinois | 60435
Street | City | State | Zip Code

Signature X [signature]

Title President

7.2 **Attested (Units of Government)**

Signature X ..... Date _____ Title _____
(City Clerk, Village Clerk, Sanitary District Clerk, Etc.)

7.3 Applications from non-governmental applicants which are not signed by the owner, must be signed by a principal executive officer of at least the level of vice president, or his duly authorized representative.

7.4 **Certificate By Intermediate Sewer Owner**

I hereby certify that (Please check one):

X 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or

_____ 2. The Illinois Pollution Control Board, in PCB _____ dated _____, granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.

Name and location of sewer system to which this project will be tributary:
Bluff St. Interceptor

Sewer System Owner City of Joliet

150 W. Jefferson | Joliet | IL | 60431
Street | City | State | Zip Code

Signature X [signature] Date 12-22-87 Title Director

7.4.1 **Additional Certificate By Intermediate Sewer Owner**

I hereby certify that (Please check one):

_____ 1. The sewers to which this project will be tributary have adequate reserve capacity to transport the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or

_____ 2. The Illinois Pollution Control Board, in PCB _____ dated _____, granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.

Name and location of sewer system to which this project will be tributary: _____

Sewer System Owner _____

Street | City | State | Zip Code

Signature X ..... Date _____ Title _____

7.5 **Certificate By Waste Treatment Works Owner**

I hereby certify that (Please check one):

X 1. The waste treatment plant to which this project will be tributary has adequate reserve capacity to treat the wastewater that will be added by this project without causing a violation of the Environmental Protection Act or Subtitle C, Chapter I, or

_____ 2. The Illinois Pollution Control Board, in PCB _____ dated _____, granted a variance from Subtitle C, Chapter I to allow construction and operation of the facilities that are the subject of this application.

I also certify that the industrial waste discharges described in the application is capable of being treated by the treatment works, and such waste discharges will be in compliance with all currently applicable local, state or federal pretreatment requirements.

Name and location of waste treatment works to which this project will be tributary: Eastside Sewage Treatment Plant

Treatment Works Owner City of Joliet

152 W. Jefferson St. | Joliet | IL | 60431
Street | City | State | Zip Code

Signature X [signature] Date 12-22-87 Title Director of Public Works & Utilities

FOR IEPA USE:
LOG # 0013-88
DATE RECEIVED:

RECEIVED

JAN 0 1 1988

Environmental Protection Agency
WPC — Permit Log In

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
PERMIT SECTION
Springfield, Illinois 62706

SCHEDULE J INDUSTRIAL TREATMENT WORKS CONSTRUCTION OR PRETREATMENT WORKS

1. NAME AND LOCATION:

1.1 Name of project C.P. Inorganics - Ammonia Stripping & Metal Precipitation

1.2 Plant Location 10 Industry Ave., Joliet, Illinois

1.2.1 Plant located on a recognized street in the city of Joliet
Quarter Section / Section / Township / Range / P.M.
which is shown on all local maps.

1.2.2 Latitude ____ ____ ° ____ ____ ' ____ ____ "North

Longitude ____ ____ ° ____ ____ ' ____ ____ "West

1.2.3 Name of USGS Quadrangle Map (7.5 or 15 Minutes) ____

2. NARRATIVE DESCRIPTION AND SCHEMATIC WASTE FLOW DIAGRAM: (see instructions)

Ammonium containing waste stream will be air stripped both to meet ammonia limits and to break copper-ammonium complex, waste will then be mixed with other heavy metal streams to precipitate, flocculate, and clarify (see dwgs

2.1 PRINCIPAL PRODUCTS: Copper Oxide, Proprietary etchants, Nickel Sulfate

2.2 PRINCIPAL RAW MATERIALS: Ferric Chloride, spent etchants, Caustic Soda, Anhydrous Ammonia, Sulfuric Acid, Hydrochloric Acid, Phosphoric Acid, Ammonium Hydroxide

3. DESCRIPTION OF TREATMENT FACILITIES:

3.1 Submit a flow diagram through all treatment units showing size, volumes, detention times, organic loadings, surface settling rate, weir overflow rate, and other pertinent design data. Include hydraulic profiles and description of monitoring systems.

3.2 Waste Treatment Works is: Batch ____, Continuous X; No. of Batches/day ____, No. of Shifts/day 3

3.3 Submit plans and specifications for proposed construction.

3.4 Discharge is: Existing X; Will begin on ____.

4. DIRECT DISCHARGE IS TO: Receiving Stream ____ Municipal Sanitary Sewer X, Municipal storm or municipal combined sewer ____. If receiving stream or storm sewer indicated complete the following:

Name of receiving stream ____; tributary to ____;

tributary to ____; tributary to ____.

5. Is the treatment works subject to flooding? If so, what is the maximum flood elevation of record (in reference to the treatment works datum) and what provisions have been made to eliminate the flooding hazard? No

6. APPROXIMATE TIME SCHEDULE: Estimated construction schedule:

Start of Construction January 1988; Date of Completion May 1988

Operation Schedule Currently operating; Date Operation Begins ____

100% design load to be reached by year 1989.

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center

IL 532-0018
WPC 158

090-001

7. DESIGN LOADINGS

7.1 Design population equivalent (one population equivalent is 100 gallons of wastewater per day, containing 0.1

and 0.20 pounds of suspended solids;

BOD NA ; Suspended Solids _____ ; Flow _____

7.2 Design Average Flow Rate 0.1

7.3 Design Maximum Flow Rate 0.14

7.4 Design Minimum Flow Rate 0.0 - 0.05

7.5 Minimum 7-day, 10-year low flow NA cfs _____ MGD.

Minimum 7-day, 10-year flow obtained from NA

7.6 Dilution Ratio NA ; _____.

8. FLOW TO TREATMENT WORKS (if existing):

8.1 Flow (last 12 months)

8.1.1 Average Flow 0.1 MGD

8.1.2 Maximum Flow 0.14 MGD

8.2 Equipment used in determing above flows incoming water meter represent 99% of water used

9. Has a preliminary engineering report for this project been submitted to this Agency for Approval?

YES ___ NO X. If so, when was it submitted and approved. Date Submitted _____

Certification# _____

Dated _____

10. List Permits previously issued for the facility: C.P. Inorganics sludge disposal permit #IEPA-1970250002.

11. Describe provisions for operation during contingencies such as power failures, flooding, peak loads, equipment failure, maintenance shut-downs and other emergencies. The continuous waste treatment system draws from a series of equalization tanks by pump. In case of power failure there will be no flow. pH controllers are equipped with alarms. Plant has 24 hour maintenance on all components. Secondary stripper has provision for total reprocessing if product is out of spec. Company has full process control laboratory on premises.

12. Complete and submit Schedule G if sludge disposal will be required by this facility.

13. WASTE CHARACTERISTICS: Schedule N must be submitted.

14. TREATMENT WORKS OPERATOR CERTIFICATION: List names and certification numbers of certified operators:

Operators will take certification examination in Maywood during the construction phase.

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

FOR IEPA USE:
LOG # 0013-88
DATE RECEIVED:
RECEIVED
JAN 04 1988
Environmental Protection Agency
WPC — Permit Log In

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
PERMIT SECTION
Springfield, Illinois 62706

SCHEDULE N WASTE CHARACTERISTICS

1. Name of Project C.P. Inorganics - Ammonia Stripping & Metal Precipitation

2. FLOW DATA

	EXISTING	PROPOSED-DESIGN
2.1 Average Flow (gpd)	100,000	100,000
2.2 Maximum Daily Flow (gpd)	140,000	140,000

2.3 TEMPERATURE

Time of year	Ave. Intake Temp. F	Avg. Effluent Temp. F	Max. Intake Temp. F	Max. Effluent Temp. F	Max. Temp. Outside Mixing Zone F
SUMMER	NA	70	NA	95	NA
WINTER	NA	70	NA	95	NA

2.4 Minimum 7-day, 10-year flow: NA cfs NA MGD.

2.5 Dilution Ratio: NA ;

2.6 Stream flow rate at time of sampling NA cfs MGD.

3. CHEMICAL CONSTITUENT Existing Permitted Conditions ___; Existing conditions ___; Proposed Permitted Conditions X.

Type of sample: ___grab (time of collection ___); ___composite (Number of samples per day ___)

(see instructions for analyses required)

Constituent	RAW WASTE (mg/l)	TREATED EFFLUENT Avg. (mg/l)	Max.	UPSTREAM DOWNSTREAM SAMPLES (mg/l)	(mg/l)
Ammonia Nitrogen (asN)	1500	10	20	NA	
Arsenic (total)	0-10	0.2	0.5	"	
Barium	NA			"	
Boron	NA			"	
BOD_5	NA			"	
Cadmium	NA			"	
Carbon Chloroform Extract	NA			"	
Chloride	1000 ±	no change		"	
Chromium (total hexavalent)	NA			"	
Chromium (total tribalent)	NA			"	
Copper	500	1.0	2.0	"	
Cyanide (total)	NA			"	
Cyanide (readily released @150°F & pH 4.5)	NA			"	
Dissolved Oxygen	NA				
Fecal Coliform	NA				

IL 532-0019
WPC 159

ATTACHMENT G

Area Well Logs

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

Non-Responsive

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Non-Responsive

Non-Responsive

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 616, STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. ____ in. Depth 100 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. ~~Drive~~ Pipe Diam. 5 in. Depth 60 ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 20 Ft. Seepage Tile Field 80
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 60 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes yes No ____
4. Date well completed Sept — 69
5. Permanent Pump Installed? Yes yes No ____
   Manufacturer Gould Pump Co. Type Submer.
   Capacity 10 gpm. Depth of setting 50 ft.
6. Well Top Sealed? Yes yes No ____
7. Pitless Adaptor Installed? Yes yes No ____
8. Well Disinfected? Yes yes No ____
9. Water Sample Submitted? Yes ____ No no

REMARKS:

New Hartel

IDPH 4.065
10/68

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive

10. Property own[redacted] l No. 6
    Address [redacted] Ill.
    Driller L. E. Delaney License No. 173
11. Permit No. 8716 Date Sept — 69
12. Water from Limestone Formation Rock 13. County Will
    at depth 58 to 100 ft.
    Sec. 4 Twp. 35 N Rge. 10 E Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT

70 N 1170 W SE/C NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Galv. 14 lb.	above ground	60

16. Size Hole below casing: ____ in.
17. Static level 20 ft. below casing top which is 1 ft. above ground level. Pumping level 20 ft. when pumping at 20 gpm for 2 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
yellow Clay	13	13
Blue Clay	30	43
Blue Clay & Sand.	12	55
Blu. Clay, sand, gravel.	7	55
Limestone (Rock.)	42	100
(Clear Limestone.		
Flow, very good.)		

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Leonard E. Delaney DATE Sept 30, 1969

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. 5 in. Depth 100 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled ____. Finished in Drift ____. In Rock ____.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cuttings		

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field 75
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 50 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes X No ____
4. Date well completed 8-21-76
5. Permanent Pump Installed? Yes X Date 8-22-76 No ____
   Manufacturer Brunes Type Subm Location Well
   Capacity 10 gpm. Depth of Setting 54 Ft.
6. Well Top Sealed? Yes X No ____ Type ____
7. Pitless Adapter Installed? Yes X No ____
   Manufacturer Williams Model Number ____
   How attached to casing? Belted
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes X No ____
10. Pressure Tank Size 42 gal. Type galv
    Location Basement
11. Water Sample Submitted? Yes ____ No X

REMARKS:
Owner instructed to do so.

10. Property owner Non-Responsive
    Address Non-Responsive
    Driller Rock Well Drilling License No. 102-29
11. Permit No. 21041 Date 8-17-76
12. Water from Rock Formation 13. County Will
    at depth 25 to 100 ft. Sec. 4
    14. Screen: Diam. ____ in. Twp. 35N
    Length: ____ ft. Slot ____ Rge. 10E
    Elev. ____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	comp Sch 40	0	40

SHOW LOCATION IN SECTION PLAT
NE SW NE
to rock

16. Size Hole below casing: 25 in.
17. Static level ____ ft. below casing top which is 1 ft. above ground level. Pumping level 54 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Overburden	0	40
Rock formation	40	100

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Kneisin DATE 8-23-76

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

FILL IN ALL PERTINENT INFO. ATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. 5 in. Depth 183 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. ____ in. Depth ____ ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cuttings		

2. Distance to Nearest:
   Building ____ Ft. Seepage Tile Field 75
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 50 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes X No ____
4. Date well completed Nov 25-74
5. Permanent Pump Installed? Yes X Date ____ No ____
   Manufacturer Barnes Type Jump Location well
   Capacity 20 gpm. Depth of Setting 105 Ft.
6. Well Top Sealed? Yes X No ____ Type ____
7. Pitless Adapter Installed? Yes Y No ____
   Manufacturer Mettingor Model Number ____
   How attached to casing? Bolted
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes X No ____
10. Pressure Tank Size 42 gal. Type Gal.
    Location Basement
11. Water Sample Submitted? Yes ____ No X

REMARKS:

Owner Instructed to do so.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive

10. Property owner [redacted] Well No. ____
    Address Non-Responsive [redacted]
    Driller O & R Well Drilling License No. 102-39
11. Permit No. 34833 Date Nov-15-74
12. Water from Limestone Formation 13. County Wells
    at depth 65 to 183 ft.
    Sec. ____
    Twp. 35N
    Rge. 10E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Steel 15 lbs	0	42

SHOW LOCATION IN SECTION PLAT
Lot 9 Brua Heights Brua Subd. Nuiese

16. Size Hole below casing: 5 in.
17. Static level 65 ft. below casing top which is 2 ft. above ground level. Pumping level 105 ft. when pumping at 20 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Veg Garden	0	65
Rock Formation	65	183

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Paul Knueini DATE Nov-27-74

IDPH 4.065
1/74 – KNB-1
(69571—12'75M Sets—6-74) 5

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INS' 'ICTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, BUREAU OF ENVIRONMENTAL HEALTH, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62701. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. 5 in. Depth 175 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. 5 in. Depth 40 ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cement	4'	40

2. Distance to Nearest:
   Building 90 Ft. Seepage Tile Field 25
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 50 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No ____
4. Date well completed 9/6/74
5. Permanent Pump Installed? Yes X No ____
   Manufacturer Berns Type Submersible
   Capacity 10 gpm. Depth of setting 190 ft.
6. Well Top Sealed? Yes X No ____ Williams Vermin Proof
7. Pitless Adaptor Installed? Yes X No ____ Williams attached to casing by compression gasket connection
8. Well Disinfected? Yes X No ____
9. Water Sample Submitted? Yes ____ No X

REMARKS:

IDPH 4.065
10-72
KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive
Non-Responsive

10. Property o[redacted] ell No. 1
    Address [redacted]. Joliet
    Driller Charles Hyde License No. 283
11. Permit No. 324.37 Date 9/11/74
12. Water from Limestone Formation 13. County Will
    at depth 40 to 175 ft.
    Sec. 9.58
    Twp. 35N
    Rge. 10E
    Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

SHOW LOCATION IN SECTION PLAT
NENESW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15/lbs.	0'	40'

16. Size Hole below casing: 5 in.
17. Static level 45 ft. below casing top which is +1 ft. above ground level. Pumping level 45 ft. when pumping at 18 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	5'	5'
Limestone	170'	175

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Hyde DATE 10/16/74
Lockport Well & Pump

Copy – Dept. of Public Health
Copy – Well Contractor
Copy – Well Owner

INSTRUCTIONS TO DRILL

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

Type of Well

a. Dug____. Bored____. Hole Diam.____in. Depth____ft.
Curb material _____. Buried Slab: Yes____No____
b. Driven _____. Drive Pipe Diam.____in. Depth____ft.
c. Drilled X. Finished in Drift _____. In Rock _____.
Tubular _____. Gravel Packed _____.
d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cuttings	0	54

Distance to Nearest:
Building 25 Ft. Seepage Tile Field 75
Cess Pool _____ Sewer (non Cast iron) _____
Privy _____ Sewer (Cast iron) _____
Septic Tank _____ Barnyard _____
Leaching Pit _____ Manure Pile _____
Well furnishes water for human consumption? Yes X No____
Date well completed 7-2-87
Permanent Pump Installed? Yes X Date _____ No____
Manufacturer _____ Type _____ Location Well
Capacity 10 gpm. Depth of Setting 400' Ft.
Well Top Sealed? Yes X No____ Type Williams
Pitless Adapter Installed? Yes X No____
Manufacturer Bater Model Number _____
How attached to casing? Locknut
Well Disinfected? Yes X No____
Pump and Equipment Disinfected? Yes X No____
Pressure Tank Size____gal. Type _____
Location _____
Water Sample Submitted? Yes____ No X
MARKS:

Owner instructed to take sample.
Cr # 29708

GEOLOGICAL AND WATER SURVEYS WELL RECORD

Non-Responsive

10. Property owner [redacted] Well No. _____
Address Non-Responsive
Driller Ronald Rob License No. 102-000445
11. Permit No. 133043 Date 6-30-87
12. Water from Limestone Formation 13. County Will
at depth ____ to ____ ft.
14. Screen: Diam.____in.
Length:____ft. Slot _____
Sec. 5 SW
Twp. 35N
Rge. 10E
Elev. _____

X			

SHOW LOCATION IN SECTION PLAT
SW SW SW

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	Black Steel	0	54

16. Size Hole below casing: 5 in.
17. Static level 80 ft. below casing top which is 1 ft. above ground level. Pumping level 400 ft. when pumping at 10 gpm for 4 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Clay	54	54
Limestone	116	170
Shale & Lime	30	200
Lime	105	305
Black Shale	110	415
Lime	295	710

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Ron Rob (for) DATE 8/14/87

PH 4.065
4 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUEST. AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 5 in. Depth 145 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 5 in. Depth 42 ft.
   c. Drilled X. Finished in Drift _____. In Rock X.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
Cement	-5	42

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Well furnishes water for human consumption? Yes X No____
4. Date well completed Sept. 14, 1987
5. Permanent Pump Installed? Yes____ Date _____ No X
   Manufacturer _____ Type _____ Location _____
   Capacity_____ gpm. Depth of Setting _____ Ft.
6. Well Top Sealed? Yes X No____ Type Vermin-Proof (Wms.)
7. Pitless Adapter Installed? Yes____ No____
   Manufacturer _____ Model Number _____
   How attached to casing? _____
8. Well Disinfected? Yes X No____
9. Pump and Equipment Disinfected? Yes____ No____
10. Pressure Tank Size_____ gal. Type _____
    Location _____
11. Water Sample Submitted? Yes____ No X

REMARKS:

Co #29933

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller Charles Fykes License No. 102-23
11. Permit No. 135046 Date Sept. 4, 1987
12. Water from Limestone (Formation) 13. County Will
    at depth 42 to 145 ft. Sec. 27.4
    14. Screen: Diam. _____ in. Twp. 36N
    Length: _____ ft. Slot _____ Rge. 10E
    Elev. _____

			X

SHOW LOCATION IN SECTION PLAT
Lot #9
NE NE NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5	A-53 15 lbs.	0	42

16. Size Hole below casing: 5 in.
17. Static level 6 ft. below casing top which is +1 ft. above ground level. Pumping level 60 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	1'	1'
Limestone	144'	145'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE July 13, 1988

IDPH 4.065
1/74 – KNB-1

White Copy – Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUEST AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. 5 in. Depth 150 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe Diam. 5 in. Depth 40 ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)
cemented	-5'	40

2. Distance to Nearest:
   Building 25 Ft. Seepage Tile Field 75'
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast Iron) ____
   Septic Tank 50' Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes X No ____
4. Date well completed 8-14-85
5. Permanent Pump Installed? Yes X Date 8-24-85 No ____
   Manufacturer Webtrol Type Subm. Location Well
   Capacity 10 gpm. Depth of Setting 60 Ft.
6. Well Top Sealed? Yes X No ____ Type Vermin-Proof (Wms.)
7. Pitless Adapter Installed? Yes X No ____
   Manufacturer Williams Model Number 501TC
   How attached to casing? Compression Gasket Connection
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes X No ____
10. Pressure Tank Size 42 gal. Type #202 Well-X-Trol
    Location basement
11. Water Sample Submitted? Yes ____ No X

REMARKS:

Inv. # 2859

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] Well No. 1
    Address [redacted]
    Driller Charles Fykes License No. 23
11. Permit No. 119544 Date 8-9-85
12. Water from Limestone (Formation) 13. County Will
    at depth 6 to 150 ft. Sec. 27.ul
    14. Screen: Diam. ____ in. Twp. 36N
    Length: ____ ft. Slot ____ Rge. 10E
    Elev. ____

			X

SHOW LOCATION IN SECTION PLAT
NE NE NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15 lbs.	0	40

16. Size Hole below casing: 5 in.
17. Static level 10 ft. below casing top which is +1 ft. above ground level. Pumping level 30 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	6'	6'
Limestone	144'	150'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE Aug. 29, 1985

SEP 1985 Engineering and Conservation

IDPH 4.065
1/74 – KNB-1

White Copy
Ill. Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, CONSUMER HEALTH PROTECTION, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62761. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug ____. Bored ____. Hole Diam. 5 in. Depth 155 ft.
   Curb material ____. Buried Slab: Yes ____ No ____
   b. Driven ____. Drive Pipe diam 5 in. Depth 40 ft.
   c. Drilled X. Finished in Drift ____. In Rock X.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 25 Ft. Seepage Tile Field 75'
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) ____
   Septic Tank 50' Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Well furnishes water for human consumption? Yes X No ____
4. Date well completed 8-9-85
5. Permanent Pump Installed? Yes ____ Date ____ No X
   Manufacturer ____ Type ____ Location ____
   Capacity ____ gpm. Depth of Setting ____ ft.
6. Well Top Sealed? Yes X No ____ Type Vermin-Proof (Wms.)
7. Pitless Adapter Installed? Yes ____ No ____
   Manufacturer ____ Model Number ____
   How attached to casing? ____
8. Well Disinfected? Yes X No ____
9. Pump and Equipment Disinfected? Yes ____ No ____
10. Pressure Tank Size ____ gal. Type ____
    Location ____
11. Water Sample Submitted? Yes ____ No X

REMARKS:

Amount $850.

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner Non-Responsive Well No. 1
    Address Non-Responsive
    Driller Charles Fykes License No. 23
11. Permit No. 119545 Date 8-9-85
12. Water from Limestone (Formation) 13. County Will
    at depth 5 to 155 ft. Sec. 27 NW Twp. 36N Rge. 10E Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

			X

SHOW LOCATION IN SECTION PLAT
NE NE NE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	A-53 15 lbs.	0	40

16. Size Hole below casing: 5 in.
17. Static level 15 ft. below casing top which is +1 ft. above ground level. Pumping level 85 ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Top Soil	5'	5'
Limestone	150'	155'

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE Aug. 14, 1985

IDPH 4.065
1/74 - KNB-1

Wh[illegible] Copy – Il[illegible] Dept. of Public Health
Yellow Copy – Well Contractor
Blue Copy – Well Owner

INSTRUCTIONS TO DRILLERS

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, BUREAU OF ENVIRONMENTAL HEALTH, 535 WEST JEFFERSON, SPRINGFIELD, ILLINOIS, 62701. DO NOT DETACH GEOLOGICAL/WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 6 in. Depth 905 ft.
   Curb material _____. Buried Slab: Yes____ No____
   b. Driven _____. Drive Pipe Diam. 6 in. Depth 314 ft.
   c. Drilled X. Finished in Drift _____. In Rock X.
   Tubular _____. Gravel Packed _____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 30 Ft. Seepage Tile Field 75'
   Cess Pool _____ Sewer (non Cast iron) _____
   Privy _____ Sewer (Cast iron) _____
   Septic Tank 50' Barnyard _____
   Leaching Pit _____ Manure Pile _____
3. Is water from this well to be used for human consumption?
   Yes X No _____
4. Date well completed 2-10-79
5. Permanent Pump Installed? Yes X No _____
   Manufacturer Sta-Rite Type Submersible
   Capacity 25 gpm. Depth of setting 735 ft.
6. Well Top Sealed? Yes X No _____
7. Pitless Adaptor Installed? Yes X No _____
8. Well Disinfected? Yes X No _____
9. Water Sample Submitted? Yes _____ No X

REMARKS:

IDPH 4.065
10-72
KNB-1

GEOLOGICAL AND WATER SURVEYS WELL RECORD

10. Property owner [redacted] 1
    Address [redacted]
    Driller Charles Fykes License No. 23
11. Permit No. 83432 Date 2-2-79
12. Water from St. Peter Sand (Formation) 13. County Will
    at depth 640 to 905 ft.
    Sec. 28
    Twp. 36N
    Rge. 10E
    Elev. _____
14. Screen: Diam. _____ in.
    Length: _____ ft. Slot _____

			X

SHOW LOCATION IN SECTION PLAT
SE SE SE

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
6	A-53 19.45 lbs	0	314

16. Size Hole below casing: 6 in.
17. Static level 635 ft. below casing top which is +1 ft. above ground level. Pumping level 665 ft. when pumping at 25 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
Gravel	7	7
Limestone	53	60
Shale	10	70
Gravel	40	110
Shale	110	313
Limestone	327	640
St. Peter Sand	265	905

(CONTINUE ON SEPARATE SHEET IF NECESSARY)

SIGNED Charles Fykes DATE Nov. 13, 1979

Ill. Dep[illegible] Public Health
Yellow C[illegible] Well Contractor
Blue Copy - [illegible]ell Owner

FILL IN ALL PERTINENT INFORMATION REQUESTED AND MAIL ORIGINAL TO STATE DEPARTMENT OF PUBLIC HEALTH, ROOM 6. STATE OFFICE BUILDING, SPRINGFIELD, ILLINOIS, 62706. DO NOT DETACH GEOLOGICAL / WATER SURVEYS SECTION. BE SURE TO PROVIDE PROPER WELL LOCATION.

1/67

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
WELL CONSTRUCTION REPORT

1. Type of Well
   a. Dug____. Bored____. Hole Diam. 5 in. Depth 135 ft.
   Curb material _____. Buried Slab: Yes____ No____.
   b. Driven ____. Drive Pipe Diam. 5 in. Depth 40 ft.
   c. Drilled ✓. Finished in Drift ____. In Rock ✓.
   Tubular ____. Gravel Packed ____.
   d. Grout:

(KIND)	FROM (Ft.)	TO (Ft.)

2. Distance to Nearest:
   Building 15 Ft. Seepage Tile Field 75
   Cess Pool ____ Sewer (non Cast iron) ____
   Privy ____ Sewer (Cast iron) 40
   Septic Tank 50 Barnyard ____
   Leaching Pit ____ Manure Pile ____
3. Is water from this well to be used for human consumption?
   Yes X No____
4. Date well completed 10-7-67
5. Permanent Pump Installed? Yes ✓ No____
   Manufacture: Goulds Type Sump
   Capacity 10 gpm. Depth of setting 34 ft.
6. Well Top Sealed? Yes X No____
7. Pitless Adaptor Installed? Yes X No____
8. Well Disinfected? Yes X No____
9. Water Sample Submitted? Yes ____ No X

REMARKS:

GEOLOGICAL WATER SURVEYS WATER WELL RECORD

10. Dept. Mines and Minerals permit No. 31-27 Year 67
11. Property owner [redacted] Well No. ____
    Address [redacted]
    Driller CHARLES EYKES License No. 180
12. Water from LIMESTONE (Formation) 13. County WILL
    at depth 40 to 135 ft. Sec. 32 Twp. 31 N Rng. 10 E Elev. ____
14. Screen: Diam. ____ in.
    Length: ____ ft. Slot ____

X			

15. Casing and Liner Pipe

Diam. (in.)	Kind and Weight	From (Ft.)	To (Ft.)
5"	YOUNGSTOWN 15 lb.	0'	40'

SHOW LOCATION IN SECTION PLAT
Permit: NW, NW, NW

16. Size Hole below casing: 5" in.
17. Static level 40 ft. below casing top which is 1 ft. above ground level. Pumping level ____ ft. when pumping at 10 gpm for 1 hours.

18. FORMATIONS PASSED THROUGH	THICKNESS	DEPTH OF BOTTOM
TOP SOIL	3'	3'
RED CLAY	25	28'
GRAVEL	2'	30'
GRAY CLAY	10'	40'
LIMESTONE	30'	70'
SHALE	3'	73'
LIMESTONE	62	135'
(CONTINUE ON SEPARATE SHEET IF NECESSARY)		

SIGNED Charles Eykes DATE 10-13-67

ATTACHMENT H

Sludge Analysis

TC #6765

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

REFERENCE # L-2036

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
SPECIAL WASTE STREAM APPLICATION

(FOR AGENCY USE L P S W C WASTE STREAM NUMBER ~~831159~~ 831423 TRANS CODE ___ DATE ENTERED __/__/__)
(AUTHORIZATION)

CARD TYPE

This application is a: (check one) X New Application ___ Renewal _____ Waste Stream Number

This application is for waste: (check one) ___ storage X disposal ___ treatment

APPLICANT (SITE)

SITE ADDRESS	APPLICANT ADDRESS
Name: CID Corp. II	Name: Chemical Waste Mgt.
Address: P.O. Box 1306	Address: 150 W. 137th St.
Cook / Calumet City / IL / 60409 (county) (community) (state) (zip)	Cook / Riverdale / IL / 60627 (county) (community) (state) (zip)

90 67 1 2T IEPA SITE CODE 0 3 1 6 0 0 3 0

USEPA SITE CODE I L D 0 1 0 2 8 4 2 4 8

DISPOSAL METHOD 0 1 TREATMENT METHOD ___ STORAGE METHOD ___

Site Contact Name Tom Tomaszewski Telephone (312) 891 - 1500

The undersigned hereby makes application for a supplemental permit for the storage, treatment or disposal of this waste stream and certifies that the information referenced herein is true, correct and current.

Signature Deborah L Menuys (Owner/Authorized Agent) Signature Deborah L Menuys (Operator/Authorized Agent)

DATE 08/19/83

FOR AGENCY USE STATUS ___ START DATE __/__/__ EXPIRATION DATE __/__/__

WASTE GENERATOR INFORMATION

16 67

PLANT ADDRESS	MAILING ADDRESS
Name: CP Inorganics	Name: SAME
Address: Industry Avenue	Address:
Will / JOLIET / IL / 60435 (county) (community) (state) (zip)	/ / / (county) (community) (state) (zip)

Generator IEPA Code: 1 9 7 0 4 5 0 0 3 6 G

Generator USEPA Code: _____

Generator Contact Name: Jerome W. Cassata

Telephone (815) 727 - 1074

Notification Sent Per I.E.P.A. Act [illegible] (c)

RECEIVED AUG 26 1983 ~~AUG 24 1983~~ EPA - D.L.P.C. ~~STATE OF ILLINOIS~~

20 67 Process/Operation Name: Nickel Salts Refining

Process Description:

Generic Waste Name: Metal Hydroxide Waste

IL 532-0474
ADM 1067 (Rev. 2/82)

#0075 CWMI
(RVD- A82633)

8426400016 20

(FOR AGENCY USE L P S W C WASTE STREAM NUMBER (AUTHORIZATION) ____ TRANS CODE ____ DATE ENTERED __/__/__)

CARD TYPE

WASTE CHARACTERISTICS

This waste is: (check one) ___ Hazardous X Non-Hazardous as defined by U.S.E.P.A. in the Resource Conservation and Recovery Act, and regulations adopted thereunder, and the Illinois Pollution Control Board in Title 35 - Subtitle G, Part 721.

40/67 USEPA Hazardous Waste Number(s) ____, ____, ____, ____, ____, ____

Total Annual Waste Volume 120 — Volume Units 1 — Waste Phase 1

Transport Frequency 5 — Waste Class (Agency Use) ____

1 = CUBIC YARDS
2 = GALLONS

1 = SOLID
2 = SEMI-SOLID
3 = LIQUID
4 = GAS
5 = POWDERS

1 = ONE TIME
2 = DAILY
3 = WEEKLY
4 = BI-WEEKLY
5 = MONTHLY
6 = BI-MONTHLY
7 = QUARTERLY
8 = SEMI-ANNUALLY

60/67

COMPONENT NAME	PERCENT	COMPONENT NAME	PERCENT
1 Water	58.8	2 Inorganic Salts	21.3
3 Copper	19.4	4 Lead	0.2
5 Zinc	0.2	6 Nickel	0.1

50/67 Flash Point 212 °F — Percent Acidity ____ — Percent Alkalinity ____ — pH 6.2 (10% Solution) — Total Solids 41.19

Solid Waste: Fire Hazard ___ Corrosive ___ Reactive ___ Ash Content 41.19%

70/67

		TOTAL (ppm)			REACTIVE (ppm)
Sulfide	13		Sulfide		2.0
Cyanide	01	10.0	Cyanide		
Phenol	14	5.0			

METAL	KEY	EP TOXICITY (ppm)	METAL	KEY	EP TOXICITY (ppm)
Ag	03	0.1	Hg	04	
As	05				
Ba	07	0.1	Pb	08	0.3
Cd	09	0.1	Se	10	
Cr	11				
ENDRIN	15		LINDANE	16	
METHOXYCHLOR	17		TOXAPHENE	18	
2, 4 - D	19		2, 4, 5 - TP	20	

80/67 Laboratory Name: Chemical Waste Mgt

Certification Number: ____ Reviewed by: (Agency Use) ____/____

Physical Appearance: Dark Green slightly moist, non-flowable sludge, no odor.

ADM-1067 (Rev. 3/82)

8426400162 1

6765 PROFILE: RVDA82633 07/12/83
C P INORGANICS
JOLIET, IL
SOURCE: SAL SITE: ESL
METAL HYDROXIDES

~~831159~~
831423

SPECIAL WASTE ANALYSIS REPORT

LABORATORY: Chemical Waste Management Technical Center

PROFILE SHEET RECEIVED ON: 7/12/83 REPRESENTATIVE SAMPLE RECEIVED ON: 7/12/83

CERTIFICATE OF REP. SAMPLE RECEIVED: 7/12/83 SAMPLE TAKEN: 6/22/83

PROPOSED TREATMENT/DISPOSAL FACILITY: ESL

THE ANALYSES BELOW REPORTED WERE SELECTED BY ME, BASED UPON THE GENERATOR'S REPRESENTATIONS IN THE PROFILE SHEET AND ANY APPLICABLE WASTE ANALYSIS PLAN ESTABLISHED BY THE PROPOSED FACILITY FOR WASTE OF THIS TYPE. ANALYSES REQUIRED BY A WASTE ANALYSIS PLAN ARE INDICATED BY AN ASTERISK (*).

DATE OF ANALYSIS: 8/16/83 LAB MANAGER: Deborah L Kenyon

Test	As Received	EPT Leachate	Analyst Initials	Test	As Received	Leachate	Analyst Initials
Specific Gravity							
pH 10% SOLUTION	6.2						
Acidity, % as							
Alkalinity, % as				Phenols, mg/l	<5.0		
C O D, mg/l				Cyanides, as CN, Total, mg/l	<10.0		
B O D₅, mg/l				Cyanides, as CN, Free, mg/l			
Total Solids @ 105°C	41.19%						
Total Dissolved Solids, mg/l				Nitrogen, Ammonia, as N, mg/l			
Total Suspended Solids, mg/l				Nitrogen, Organic, as N, mg/l			
Residue on Evaporation @ 180°C				Total Kjeldahl Nitrogen, as N, mg/l			
Flash Point, F°	>212			Total Alkalinity (P), as $CaCO_3$, mg/l			
Ash Content, on Ignition	41.19%			Total Alkalinity (M), as $CaCO_3$, mg/l			
Heating Value, BTU/lb				Total Hardness, as $CaCO_3$, mg/l			
"Acid Scrub," gNaOH/g				Calcium Hardness, as $CaCO_3$, mg/l			
				Magnesium Hardness, as $CaCO_3$, mg/l			
Arsenic, as AS, mg/l	1.40						
Barium, as Ba, mg/l	4.24						
Boron, as Bi, mg/l				Oil and Grease, mg/l			
Cadmium, as Cd, mg/l	5.52	0.04					
Chromium, Total as Cr, mg/l	226.	0.02					
Hexavalent Chromium @ Cr, mg/l				Aldrin, mg/l			
Copper, as Cu, mg/l	196000	38.7		Chlordane, mg/l			
Iron, Total as Fe, mg/l				DDT's, mg/l			
Iron, dissolved, as Fe, mg/l				Dieldrin, mg/l			
Lead, as Pb, mg/l	1800.	0.27		Endrin, mg/l			
Manganese, as Mn, mg/l				Heptachlor, mg/l			
Magnesium, as Mg, mg/l				Lindane, mg/l			
Mercury, as Hg, mg/l	<0.005			Methoxychlor, mg/l			
Nickel, as Ni, mg/l	880.	14.8		Toxaphene, mg/l			
Selenium, as Se, mg/l	0.32			Parathion, mg/l			
Silver, as Ag, mg/l	104.	0.02		2, 4, D, mg/l			
Zinc, as Zn, mg/l	2440.	18.9		2, 4, 5, TP (Silvex), mg/l			
				PCB's, mg/l			
Bicarbonates, as HCO_3, mg/l							
Carbonates, as CO_3, mg/l							
Chlorides, as Cl, mg/l							
Fluorides, as F, mg/l							
Nitrate, as NO_3, mg/l							
Nitrite, as NO_2, mg/l							
Phosphate, as P, mg/l							
Sulfate, as SO_4, mg/l							
Sulfides, as S, mg/l Dissolved	<2.0						

RECEIVED
AUG 24 1983
EPA - DLPC
STATE OF ILLINOIS

DARK green SLIGHTY moist non-flowable

FORM WMI-52 (Rev. 11-5-80)
©1980 WASTE MANAGEMENT, INC.

This report has been prepared for the exclusive use and benef of Chemical Waste Management ... No representatio concerning sample validity or analytical ...

8 4 2 6 4 0 0 1 6 2 2

QC #21556-3

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

REFERENCE # L-1059

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
SPECIAL WASTE STREAM APPLICATION

(FOR AGENCY USE L P S W C WASTE STREAM NUMBER 860720 TRANS CODE ___ DATE ENTERED __/__/__)

CARD TYPE

This application is a: (check one) X New Application ___ Renewal _____ Waste Stream Number

This application is for waste: (check one) ___ storage X disposal ___ treatment

APPLICANT (SITE)

SITE ADDRESS	APPLICANT ADDRESS
Name: CID Corp. #2	Name: CID Processing Center
Address: P.O. Box 1306	Address: P.O. Box 1296
Cook / Calumet City / IL / 60409 (county) (community) (state) (zip)	Cook / Calumet City / IL / 60409 (county) (community) (state) (zip)

90 67 1 21 IEPA SITE CODE 0 3 1 6 0 0 0 0 3 0

USEPA SITE CODE _____

DISPOSAL METHOD 0 1

TREATMENT METHOD

STORAGE METHOD

Site Contact Name Thomas N. Tomaszewski Telephone (312) 891-1500

The undersigned hereby makes application for a supplemental permit for the storage, treatment or disposal of this waste stream and certifies that the information referenced herein is true, correct and current.

Signature Deborah L. Hennings (Owner/Authorized Agent) Signature Deborah L. Hennings (Operator/Authorized Agent)

DATE 06/26/85

FOR AGENCY USE STATUS ___ START DATE __/__/__ EXPIRATION DATE __/__/__

WASTE GENERATOR INFORMATION

16 67

PLANT ADDRESS	MAILING ADDRESS
Name: C P Inorganics	Name: SAME
Address: Industry Ave.	Address:
Will / Joliet / IL / 60435 (county) (community) (state) (zip)	/ / / / (county) (community) (state) (zip)

Generator IEPA Code: 1 9 7 0 2 5 0 0 0 2

Generator USEPA Code: I L D 0 6 2 4 8 0 8 5 0

Generator Contact Name: Nazmey Boutros

Telephone (815) 727 1074

20 67 Process/Operation Name: Nickle Salts refining

Process Description: FROM THE REFINING OF NICKEL SALTS

Generic Waste Name: Metal Hydroxides

IL 532-0474
ADM 1087 (Rev. 7/84)

CWM Alsip
(RVD- A 82633)

JUN 24 1986

(FOR AGENCY USE L P S W C WASTE STREAM NUMBER (AUTHORIZATION) _____ TRANS CODE ___ DATE ENTERED __/__/__)

CARD TYPE

WASTE CHARACTERISTICS

This waste is: (check one) ___ Hazardous X Non-Hazardous as defined by U.S.E.P.A. in the Resource Conservation and Recovery Act, and regulations adopted thereunder, and the Illinois Pollution Control Board in Title 35 - Subtitle G, Part 721.

40/67 USEPA Hazardous Waste Number(s) _____

Total Annual Waste Volume 200 Volume Units 1 Waste Phase 1

Transport Frequency 5 Waste Class (Agency Use) ___

1 = CUBIC YARDS
2 = GALLONS

1 = SOLID
2 = SEMI-SOLID
3 = LIQUID
4 = GAS
5 = POWDERS

1 = ONE TIME
2 = DAILY
3 = WEEKLY
4 = BI-WEEKLY
5 = MONTHLY
6 = BI-MONTHLY
7 = QUARTERLY
8 = SEMI-ANNUALLY

60/67

	COMPONENT NAME	PERCENT		COMPONENT NAME	PERCENT
1	WATER	46.9	2	INORGANIC SALTS	31.0
3	COPPER	12.4	4	CALCIUM HYDROXIDE	8.2
5	AMMONIUM HYDROXIDE	0.8	6	NICKEL + ZINC	0.7

50/67 Flash Point 212 °F Percent Acidity ___ Percent Alkalinity 9.0 pH 12.0 (10% solution) Total Solids 52.44

Solid Waste: Fire Hazard ___ Corrosive ___ Reactive ___ Ash Content 62.26%

70/67

		TOTAL (ppm)			REACTIVE (ppm)
Sulfide	13		Sulfide		2.0
Cyanide	01	10.0	Cyanide		
Phenol	14	10.0			

METAL	KEY	EP TOXICITY (ppm)	METAL	KEY	EP TOXICITY (ppm)
Ag	03	0.1	Hg	04	
As	05	4.6*			
Ba	07		Pb	08	0.2
Cd	09	0.1	Se	10	
Cr	11	0.1			
ENDRIN	15		LINDANE	16	
METHOXYCHLOR	17		TOXAPHENE	18	
2, 4 - D	19		2, 4, 5 - TP	20	

80/67 Laboratory Name: CID Processing Center

Certification Number: _____ Reviewed by: (Agency Use) __/__

Physical Appearance: GREEN MOIST CHUNKY SOLID, STRONG AMMONIA ODOR.

ADM 1087 (Rev. 7/84)

* Not tested, the results reported are the maximum possible EP-toxicity values by calculation.

860720

SPECIAL WASTE ANALYSIS REPORT

This Report is intended for the sole use and benefit of Waste Management and its companies. No representation concerning significance of the reported data is made to any other person or entity.

WASTE PROFILE SHEET CODE: RVD A 8 2 6 3 3 (FROM SAMPLE CONTAINER)

LABORATORY NAME: CID PROCESSING CENTER
LABORATORY PHONE: (312) 891-1500
DATE SAMPLE TAKEN:
DATE SAMPLE RECEIVED AT LAB: 6/16/86
LAB SAMPLE NUMBER ASSIGNED: 11556-3

GENERATOR: C P Inorganics
CITY & STATE: Industry Ave., Joliet, Il. 60435
WASTE NAME: Metal Hydroxide
PROPOSED SITE: CID #2

CERTIFICATION OF REP. SAMPLE OBTAINED? ☐ YES ☒ NO

CERTIFICATION: Except as explicitly noted, all analytical data reported below were obtained under my direction and supervision, using sample preparation and analytical methods and analytical equipment specified or approved in the most recent "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW 846, USEPA Office of Solid Waste. This laboratory follows a quality assurance control program, including a sample chain of custody procedures.

DATE OF REPORT: 6/25/86
SIGNATURE: Deborah L Menigoz
LAB MANAGER NAME: Deborah L. Menigoz

TEST	TOTAL AS RECEIVED	TEST	TOTAL AS RECEIVED	TEST	TOTAL AS RECEIVED	EP TOXICITY	*CALCULATED MAXIMUM EP TOXICITY
SPECIFIC GRAVITY		PHENOLS, mg/l	<10.0	ARSENIC, As As, mg/l	50.4		
pH (AS RECEIVED)		OIL & GREASE, mg/l		BARIUM, as Ba, mg/l	34.1		
pH (10% SOLUTION)	12.0	PCB's, mg/l		CADMIUM, as Cd, mg/l	0.39	0.01	
pH (10% SOLUTION WITH $CHCL_3$ EXTRACTION)		TOTAL ORGANIC CARBON (TOC), mg/l		CHROMIUM, TOTAL as Cr, mg/l	84.9	0.05	
		TOTAL ORGANIC HALOGEN (TOX), mg/l		HEXAVALENT CHROMIUM, as (Cr^{+6}) mg/l			
		C-56, mg/l		COPPER, as Cu, mg/l	124000	227.	
ACIDITY, % as		TDI, mg/l		IRON, as Fe, mg/l			
ALKALINITY, % as $Ca(OH)_2$	8.2%	BTU/lb.		LEAD, as Pb, mg/l	255.	0.16	
" NH_4OH	0.8%	CHLORINE, mg/l		MERCURY, as Hg, mg/l	0.044		
TOTAL SOLIDS @ 105°C, %	52.44	SULFUR, mg/l		NICKEL, as Ni, mg/l	5000	9.52	
TOTAL DISSOLVED SOLIDS, mg/l		WATER CONTENT, %		SELENIUM, as Se, mg/l	0.39		
TOTAL SUSPENDED SOLIDS, %		ORGANIC SOLVENTS, %		SILVER, as Ag, mg/l	5.04	0.04	
ASH CONTENT @ 550°C, %	52.26			ZINC, as Zn, mg/l	2210	42.0	
FLASH POINT (C.C.) °F							
FLASH POINT (O.C.) °F							
FLASH POINT (O.C.) °F SOLID	>212°						
				ENDRIN, mg/l			
NITROGEN AMMONIA, as N, mg/l				LINDANE, mg/l			
TOTAL KJELDAHL NITROGEN, as N, mg/l				METHOXYCHLOR, mg/l			
CHLORIDES, as Cl, mg/l		PAINT FILTER (FREE LIQUIDS) %	PASS	TOXAPHENE, mg/l			
FLUORIDES, as F, mg/l		PENETROMETER, TONS/SQ. FT.		2, 4-D, mg/l			
NITRATE, as N, mg/l		BOD, mg/l		2, 4, 5-TP (SILVEX), mg/l			
PHOSPHATE, as P, mg/l		COD, mg/l					
TOTAL PHOSPHORUS, as P, mg/l							
SULFATE, as SO_4, mg/l							
FERROUS IRON, (Fe^{+2}), mg/l							
SULFIDES (TOTAL), mg/l							
SULFIDES (DISSOLVED), mg/l	<2.0						
CYANIDES (TOTAL), mg/l	<10.0						
CYANIDES (FREE) AT pH < 1.0 AND BOILING FOR 1 HR							
CYANIDES (FREE) AT pH < 1.0 AND 150° FOR ½ HR, mg/l							

☐ COMPATIBLE WITH DEWATERING PLANT
☐ COMPATIBLE WITH ACID PLANT (PUG MILL)
☐ COMPATIBLE WITH NON HAZARDOUS SOLIDIFICATION
☐ INCOMPATIBLE WITH TREATMENT PLANT
REASON:

PHYSICAL APPEARANCE: Green moist chunky solid, strong ammonia odor.

WATER MIX:

JUN 27 1986

TYPE OF DIGESTION FOR TOTAL HEAVY METALS ANALYSIS: ☒ GROSS ☐ ASH ☐ BOMB

*NOT TESTED — THE RESULTS REPORTED ARE THE MAXIMUM POSSIBLE EP TOXICITY VALUES BY CALCULATION.