

August 22, 1979

City of Elizabeth
City Hall
Elizabeth, N.J.

Attn: Mr. Victor Vinegra

Dear Mr. Vinegra:

On August 14, 1979, Grab samples were taken from two manholes at the Phelps Dodge Copper Products Company, 720 S. Front Street, Elizabeth.

Sampling was done at one-half hour intervals from 8:45 A.M. to 10:45 A.M. The samples were fixed in the field with nitric acid and were stored at 4°C. Sample points were:

No. 1 - Manhole located in the intersection of South Front St., and Bayway Ave.

No. 2 - Manhole located inside of Phelps Dodge's fence on South Front St., adjacent to the truck scale.

Samples were tested for copper using procedures outlined in Standard Methods for the Examination of Water and Wastewater, 14th edition, with the following results in mg/l:

Sample Time	No. 1	No. 2
0845	24.4	51.2
0915	21.2	36.8
0945	26.4	68.4
1015	14.4	22.8
1045	29.6	51.2

DGE000005

continued

-2-

On August 16, 1979, an automatic water sampler was installed in the manhole on Phelps Dodge's property adjacent to the truck scale. Samples were taken for a twenty-four hour period at half-hour intervals. Results of the analyses for copper were as follows:

Sample time	Copper mg/l	Sample time	Copper mg/l
0945	73.6	2145	148.0
1045	165.6	2245	79.6
1145	76.8	2345	83.6
1245	53.2	2445	119.6
1345	56.8	0145	160.8
1445	85.6	0245	91.6
1545	13.2	0345	104.0
1645	82.8	0445	92.4
1745	96.4	0545	57.6
1845	84.0	0645	28.0
1945	94.4	0745	75.6

On August 20, 1979, large amounts of floating oil entered the Joint Meeting Treatment Plant at the influent from the Elizabeth Pumping Station. A Joint Meeting inspection crew traced the source of the oil to the Phelps Dodge Copper Products Co. Since a strike was in progress at Phelps Dodge, no attempt was made to enter the plant. Dr. Fred Bauder attempted to contact Mr. Kurt Behrsin, of Phelps Dodge who was not available at the time.

On August 21, 1979, a second incidence of oil occurred at the treatment plant. The inspection crew entered the Phelps Dodge property at approximately 2:30 P.M. and observed that the floating oil was indeed coming from the factory in such quantity as to cover the waste stream with a thick coating. Mr. Behrsin was contacted and shown the oil. He admitted that the oil was coming from Phelps Dodge. He stated that he would try to find the source of the oil and stop it. Follow-up investigations are scheduled by the Joint Meeting Enforcement group.

These investigations clearly indicate that the Phelps Dodge Copper Products Company continues to be in violation of the City of Elizabeth Ordinance number 1059 with respect to copper concentration in its plant effluent.

continued

-3-

In addition, the above Ordinance states that no floating oil is allowed to be discharged into a city sewer without permission of the City Engineer. Phelps Dodge is likewise in violation of this section of the Ordinance.

These continued violations must be stopped at once so as not to have further detrimental effects on our treatment facility. We would appreciate your cooperation in notifying Phelps Dodge of their continued violations and plans for cessation of same.

We will continue to monitor the effluent at Phelps Dodge and will keep you informed of any further developments. If you have any questions, please do not hesitate to contact us.

Very truly yours,

Michael J. Brinker, Jr.
Executive Director

MJB:sg

cc: George J. Minish, Esq.

JOINT MEETING
MAINTENANCE

IN THE MATTER OF AN OUTLET SEWER
AND TREATMENT PLANT
FOR CERTAIN MUNICIPALITIES
IN ESSEX AND UNION COUNTIES

500 SOUTH FIRST STREET
ELIZABETH, N. J. 07202

January 8, 1980

City of Elizabeth
City Hall
Elizabeth, N.J. 07201

Att: Mr. Victor Vinegra,
City Engineer

Re: Phelps Dodge

Dear Mr. Vinegra:

Enclosed is a copy of a memo from A. Fornwald of our office regarding the above which is self-explanatory. Regarding discharges to the sewer during a "down-time" period around Christmas suggests a leaky system as we have noted before. To this date we have not received any information from Phelps Dodge via your office regarding their efforts to "clean up" any leaks. In addition we have not received as of this date a monthly progress report for January from Phelps Dodge as was promised.

Very truly yours,

Michael J. Brinker, Jr.
Executive Director

MJB:sg

Enc.

cc: George J. Minish, Esq.
Allen S. Fornwald

DGE000007

TO: Michael J. Brinker, Jr.
FROM: Allen S. Fornwald
RE: Phelps Dodge
DATE: January 3, 1980

As part of our continuing effort to monitor Phelps Dodge, automatic water samplers were placed at the Phelps Dodge effluent line adjacent to their truck scale from December 17 to 18, 1979, and from December 26-27, 1979. Twenty-four samples were taken on each occasion. The plant was closed on December 26-27. For the December 17-18 sampling, every other sample was tested for total copper. For the December 26-27 sampling, every fourth sample was tested for total copper.

The results were as follows: Results are in mg/l.

12/17/79		12/26/79	
TIME	COPPER CONC.	TIME	COPPER CONC.
0900	16.0	0900	4.8
1100	14.4	1300	5.6
1300	44.0	1700	27.6
1500	30.4	2100	12.0
1700	28.0	0100	9.6
1900	55.2	0500	13.2
2100	67.2		
2300	22.8		
0100	4.0		
0300	17.6		
0500	6.4		
0700	12.0		
MAX.	67.2		27.6
AVG.	26.5		12.1
MIN.	4.0		4.8

The samples taken on December 26, 1979, were also tested for dissolved copper. The results in mg/l were as follows:

TIME	DISSOLVED COPPER
0900	1.6
1300	4.4
1700	27.6
2100	9.0
0100	5.6
0500	8.2
MAX.	27.6
AVG.	9.4
MIN.	1.6

Phelps Dodge continues to be in violation of the Elizabeth Sewer Ordinance. The data from December 26-27, while the plant was closed, suggest a leaky system. If this is the case, perhaps a large part of Phelps Dodges' problem could be resolved by proper maintenance and good housekeeping. This is not a new suggestion. We have informed Phelps Dodge of this many times over the past years.

We will continue to monitor Phelps Dodges' discharge on a routine basis and will keep you apprised of further developments.

Allen S. Fornwald

ASF:jj

JOINT MEETING

MAINTENANCE

IN THE MATTER OF AN OUTLET SEWER

AND TREATMENT PLANT

FOR CERTAIN MUNICIPALITIES

IN ESSEX AND UNION COUNTIES

500 SOUTH FIRST STREET

ELIZABETH, N. J. 07202

To: Michael J. Brinker, Jr.
From: Allen S. Fornwald
Re: Phelps Dodge
Date: November 4, 1980

Samples of Phelps Dodge effluent were taken from the sampling point adjacent to the truck scale from October 20-21, 1980. A composite sample was tested for heavy metals and several grab samples were tested for copper. The results, in mg/l are as follows:

<u>Sample</u>	<u>Cadmium</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Lead</u>	<u>Zinc</u>
Composite	0.20	2.08	0.92	0.12	0.20	8.0
0.930	--	--	1.12	--	--	--
1330	--	--	1.40	--	--	--
1830	--	--	1.04	--	--	--
2030	--	--	1.80	--	--	--

These results indicate a significant decrease in copper in Phelps Dodges' effluent.

However, the results also show a substantial amount of Zinc in Phelps Dodges' effluent.

We cannot conclude that Phelps Dodge has solved its copper problem based on one sampling, but the results are promising.

We will continue to monitor Phelps Dodge for copper and zinc.

I will keep you informed of the results of our investigation.

DGE000008

JOINT MEETING
MAINTENANCE

IN THE MATTER OF AN OUTLET SEWER
AND TREATMENT PLANT
FOR CERTAIN MUNICIPALITIES
IN ESSEX AND UNION COUNTIES

500 SOUTH FIRST STREET
ELIZABETH, N. J. 07202

March 23, 1981

Phelps Dodge Copper Products Co.
720 South Front Street
Elizabeth, N.J. 07202

Attn: Mr. K.R. Behrsin

Dear Sir:

The following is our laboratory analysis of a composite sample of your plant effluent taken from March 9 to 10, 1981.

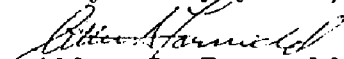
The results are in mg/l unless otherwise noted.

pH 6.30 Standard Units	Total Cadmium 0.04
Temperature 20° C	Total Chromium 0.15
Total Organic Carbon 60	Total Copper 31.70
Biochemical Oxygen Demand 15	Total Nickel 0.08
Total Suspended Solids 130	Total Lead 0.10
	Total Zinc 0.15

Our analysis continued high levels of copper in your effluent.

Please advise us of the current status of your efforts to remove the copper from your effluent.

Very truly yours,


Allen S. Fornwald,
Chief Officer, Industrial
Surveillance & Pretreatment

ASF:jj
cc: Victor Vinegra,
City Eng.

DGE000009



Joint Meeting of Essex & Union Counties

500 South First Street □ Elizabeth, NJ 07202

1-201-353-1313 □ FAX: 1-201-353-7925

October 25, 1988

Phelps Dodge Copper Products Company
P. O. Box 648
Elizabeth, New Jersey 07207

Attention: Mr. Thomas Wilson

Dear Mr. Wilson:

On August 31, 1988 there was a spill of sulfuric acid into the pretreatment system. This was noticed by Phelps Dodge personnel at approximately 7:30 a.m. on September 1, 1988. The discharge at sample location 02 was stopped and Joint Meeting was notified. We happened to have samplers installed at the time that the spill occurred. Individual pH readings of the sample bottles indicated that the spill occurred at approximately 4:45 p.m. on August 31, 1988. Phelps Dodge estimates that approximately 500 gallons of 10% sulfuric acid solution was discharged.

Enclosed please find data tabulations for samples of your plant effluent taken August 31 - September 2, 1988.

The data indicates that your plant effluent was in violation for the following:

Sample Location 01

8/31 - 9/01/88	- Total Copper
9/01 - 2/88	- Total Copper
8/31/88	- Oil and Grease
9/01/88	- Oil and Grease

Sample Location 02

8/31/88 (1145-1615)	- Total Copper
8/31 - 9/1/88	- Total Copper, Total Cadmium
9/01 - 2/88	- Total Copper, Total Cadmium
8/31/88 (1145)	- Oil and Grease
9/01/88 (1137)	- Oil and Grease (No Discharge)
8/31/88 (1145-1415)	- pH
8/31 - 9/01/88 (1645-0715)	- pH
9/1-2/88 (0745-0737)	- pH (No Discharge)
9/2/88 (0737-1017)	- pH

Please be advised that this letter serves as formal notice of the violations that occurred during the hours of discharge.

DGE000016

PHELPS DODGE COPPER PRODUCTS
48-94 BAYWAY AVENUE, ELIZABETH

SAMPLE LOCATION 01

Sample Date	8/31-9/1/88	9/1-2/88
Sample Time	1130-1100	1204-1134
Sample Type	Composite	Composite
pH (S.U.)	6.35	6.55
Temperature (C)	26	27
BOD	23	NA
TSS	78	NA
Total Cadmium	0.093	0.080
Total Chromium	0.098	0.075
Total Copper	7.12*	7.60*
Total Nickel	0.067	0.038
Total Lead	0.056	0.102
Total Zinc	0.444	0.085
Total Silver	0.049	0.014

Asterisk (*) denotes a violation of facility's Permit



PHELPS DODGE COPPER PRODUCTS
48-94 BAYWAY AVENUE, ELIZABETH

SAMPLE LOCATION 02

Sample Date	8/31-9/1/88	8/31/88	8/31-9/1/88	9/1/88	9/1/88	9/1-2/88
Sample Time	1145-1115	1145-1615	1645-1115	1045-1115	1137-1407	1137-1107
Sample Type	Composite	Composite	Composite	Composite	Composite	Composite
pH (S.U.)	-----See Attached Table for pH Data-----					
Total Cadmium	3.37*	0.151	4.40*	8.05*	10.8*	1.65*
Total Chromium	0.174	0.016	0.230	0.417	0.526	0.125
Total Copper	368*	12.6*	485*	911*	1200*	165*
Total Nickel	0.224	0.044	0.196	0.327	0.476	0.214
Total Lead	0.432	0.208	0.557	0.791	1.03	0.936
Total Zinc	0.270	0.058	0.324	0.523	0.643	0.290
Total Silver	0.065	0.015	0.024	0.029	0.054	0.014

NOTE: Asterisk (*) denotes a violation of the facility's Permit.



HELPS DODGE COPPER PRODUCTS
48-94 BAYWAY AVENUE, ELIZABETH

SAMPLE LOCATION 02

DATE	TIME	pH	DATE	TIME	pH
8/31/88	1145	10.00	9/1/88	1137	2.20*
8/31/88	1145-1215	9.46*	9/1/88	1137-1207	2.0*
8/31/88	1245-1315	9.64*	9/1/88	1237-1307	1.9*
8/31/88	1345-1415	9.70*	9/1/88	1337-1407	2.1*
8/31/88	1445-1515	8.73	9/1/88	1437-1507	12.0*
8/31/88	1545-1615	6.26	9/1/88	1537-1607	12.5*
8/31/88	1645-1715	3.08*	9/1/88	1637-1707	12.6*
8/31/88	1745-1815	2.81*	9/1/88	1737-1807	12.7*
8/31/88	1845-1915	2.71*	9/1/88	1837-1907	12.5*
8/31/88	1945-2015	2.63*	9/1/88	1937-2007	12.6*
8/31/88	2045-2115	2.59*	9/1/88	2037-2107	12.6*
8/31/88	2145-2215	2.54*	9/1/88	2137-2207	12.6*
8/31/88	2245-2315	2.50*	9/1/88	2237-2307	12.7*
8/31-9/1/88	2340-0015	2.46*	9/1-2/88	2337-0007	12.6*
9/1/88	0045-0115	2.41*	9/2/88	0037-0137	12.7*
9/1/88	0145-0215	2.37*	9/2/88	0137-0237	12.7*
9/1/88	0245-0315	2.33*	9/2/88	0237-0337	12.7*
9/1/88	0345-0415	2.28*	9/2/88	0337-0437	12.7*
9/1/88	0445-0515	2.24*	9/2/88	0437-0537	12.7*
9/1/88	0545-0615	2.21*	9/2/88	0537-0637	12.7*
9/1/88	0645-0715	2.17*	9/2/88	0637-0737	12.7*
9/1/88	0745-0815	2.15*	9/2/88	0737-0837	12.7*
9/1/88	0845-0915	2.11*	9/2/88	0837-0937	12.7*
9/1/88	0945-1015	2.10*	9/2/88	0937-1007	12.7*
9/1/88	1045-1115	2.06*	9/1/88	1137-1407	1.93*
8/31-9/1/88	1145-1115	2.19*	9/1-2/88	1137-1007	12.58*
			9/2/88	1017	12.0*

No Discharge

No Discharge

Asterisk (*) denotes a violation of the facility's Permit



PHELPS DODGE MAGNET WIRE COMPANY
48-94 Bayway Ave., Elizabeth

COMPLIANCE SCHEDULE #3

Completion Date	Task Description	Report Due
12/12/88	Seal sewers. F1, F2, F3, F4, E5, E4, E3, E2, A1, B1, 200 Accumulator, K3, Extrusion Holes, N, L	12/26/88 ✓
1/3/89	a) Cease overflow to sewer from Oakite rinse tank-evaporate (no discharge) b) Housekeeping around machines, equipment, Hoffman, 13 Die Vaughn, etc. (no residue to sewer)	1/17/89 ✓
1/20/89	Installation of filter press to be completed and in full operation	2/3/89 ✓ 2/2
1/30/89	Construction steam cleaning area	2/13/89 ✓ 2/17
2/13/89	Installation of new pumps and heat exchanger for pickle tanks <i>Delayed</i>	2/27/89 4/21/89
2/15/89	Cleaning of the entire sewer system to be completed	3/1/89 ✓ 2/23
3/1/89	Compliance with Joint Meeting Regulations and the Categorical Standards for 40 CFR Part 468	3/15/89 ✓ 3/2
****	Final Compliance Report	5/30/89



Joint Meeting of Essex & Union Counties
500 South First Street • Elizabeth • NJ 07202
1-201-353-1313 • FAX: 1-201-353-7925

July 23, 1990

Phelps Dodge Magnet Wire
48-94 Bayway Avenue
Elizabeth, New Jersey 07207

Attention: Mr. Thomas Wilson

Re: Notice of Violation

Dear Mr. Wilson:

The following is a tabulation of the laboratory data for samples taken at sample points 01 and 02 on June 14-15, 1990. The results are expressed as milligrams per liter unless otherwise noted. Asterisk (*) denotes a violation of the Non-Domestic Wastewater Discharge Permit (Permit).

Sample Location	01	01	02	02	02
Sample Date	6/14-15/90	6/14/90	6/14-15/90	6/14/90	6/15/90
Sample Time	0940-0910	0940	0950-0920	0950	0832
Sample Type	Comp	Grab	Comp	Grab	Grab
pH (S.U.)	NA	6.60	NA	11.80 *	11.40 *
Temperature (°C)	NA	25	NA	27	NA
Total Cadmium	0.022	NA	0.051	NA	NA
Total Chromium	0.011	NA	0.063	NA	NA
Total Copper	0.582	NA	3.19 *	NA	NA
Total Nickel	0.036	NA	0.049	NA	NA
Total Lead	0.125	NA	0.218	NA	NA
Total Zinc	0.168	NA	0.049	NA	NA
Total Silver	0.004	NA	0.026	NA	NA
Oil/Grease	NA	35 *	NA	31 *	NA

Please note that your facility was in violation of the Permit for the following:

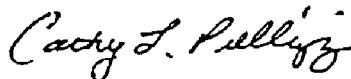
Location 02
Copper 6/14-15/90
pH 6/14/90
pH 6/14/90
Oil/Grease 6/14/90
Oil/Grease 6/15/90

Please be advised that this letter serves as formal notice of the above violations.

Please notify this office, in writing, no later than August 1, 1990 of the status of the pretreatment system.

If you have any questions or require any further information regarding this matter, please do not hesitate to contact us.

Sincerely,



Cathy L. Pullizzi
Coordinator
Industrial Pretreatment

CLP:hl

cc: Marc Anthony Vaida, Esq.
E. Marticorena, Elizabeth Engineer
J. Regenthal, Phelps Dodge
J. Saleh, Phelps Dodge

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Joint Meeting of Essex & Union Counties
500 South First Street - Elizabeth - NJ 07202
1-201-353-1313 - FAX: 1-201-353-7925

MEMORANDUM

TO: Phelps Dodge File
FROM: Cathy L. Pullizzi *CJP*
SUBJ: 1990 Phelps Dodge Violations - Sample Location 01
DATE: January 7, 1991

The following is a tabulation of the violations occurring at sample location 01 @ Phelps Dodge during 1990.

VIOLATIONS

Copper Violations

<u>Sample Date</u>	<u>Copper (mg/l)</u>	<u>TRC</u>
3/14-15/90	1.75	Yes
9/4-5/90	1.58	Yes
9/5-6/90	1.32	Yes
9/6-7/90	1.65	Yes
11/15-16/90	1.87	Yes
12/5-6/90	1.43	Yes
12/19-20/90	2.26	Yes

Phelps Dodge was in violation of the Permit 33.3% of the time during 1990.

Significant Non-Compliance - Phelps Dodge meets the criteria for SNC due to the TRC violations (during a 6-month period 33% or more of the samples exceed the daily maximum limit by more than the TRC). During the time span of July - December 1990, 16 samples were taken. Phelps Dodge was in violation of the TRC on 6 occasions.

Oil/Grease Violations

<u>Sample Date</u>	<u>Oil/Grease (mg/l)</u>	<u>TRC</u>
10/29/90	170	Yes
10/30/90	150	Yes

Phelps Dodge was in violation of the Permit 11.8% of the time during 1990.

Accidental Discharge

On May 26, 1990, Phelps Dodge discharged approximately 700 gallons of 10% sulfuric acid. The discharge occurred when equipment failure caused a process tank in the pickling operation to overflow. The spill was reported (verbally & in writing) in the required time period. The JM Influent pH meter alarms did not go off (set to alarm @ 5.0 and 9.0). No treatment plant upsets were noted.

DGE000022

Phelps Dodge (1/7/91 memo)

Late Report Violations

One report was submitted late (due 8/1/90 and received 8/2/90).

Failure to Submit Report Violations

Three reports have not been received to date. These are as follows:

<u>JM Letter</u>	<u>Report/Response Due</u>
11/2/90	11/16/90
11/6/90	11/19/90
12/3/90	12/15/90

Significant Non-Compliance

The failure to provide reports within 30 days from the due date is considered to be SNC.

SUMMARY

Although Phelps Dodge did accomplish the recycling of their process wastewater and thereby achieve zero-discharge at sample location 02, they continue to remain in violation of the Joint Meeting Limitations for copper at sample location 01, and occasionally violate for oil/grease at point 01. In addition, Phelps Dodge has not submitted three reports.

Phelps Dodge has achieved Significant Non-Compliance status as a result of copper violations and failure to submit reports.

It is extremely important that the copper be reduced to acceptable limits. The JM sludge cannot be classified as Class B due to the copper concentration and the petroleum hydrocarbon concentration in the sludge.

RECOMMENDATION

It is recommended that enforcement action be initiated against Phelps Dodge.



JOINT MEETING
500 South First Street
Elizabeth, NJ 07202

201-353-1313

FAX 201-353-7925

Date: 1/7/90
To: Ray Papperman
From: Cathy Pullizzi

This transmission consists of 3 pages, this
being page no. 1

Comments:

Ray - here's a synopsis of Phelps Dodge -
I recommend that we take action.
What do you think?

Cathy

BT

UNCLAS

Phelps Dodge

TO MEP

POLREP ONE AND FINAL. MINOR HYDROLIC FLUIDX PHELPS LODGE COPPER
PRODUCT CO. ELIZABETH N.J. COPPER N.Y. REPORT NUMBER 601-75.

1. SITUATION

A. 180900Z AUG 75 RECEIVED REPORT OF AN OIL SPILL AT THE PHELPS
DODGE COPPER PRODUCTS CO. IN ELIZABETH N.J. FROM A MR. LE GODAIS
THE PLANT ENGINEER.

B. AMOUNT 50 GALLONS OF HYDROLIC FLUID

C. CAUSE OVERFLOW IN OIL WATER SEPERATOR SYSTEM DUE TO AN
UNUSUALLY LARGE AMOUNT OF WATER ENTERING THE SYSTEM CAUSING THE
OIL AT THE TOP TO OVERFLOW AND ENTERED A STORM DRAIN WHICH ENTER THE
ARTHUR KILL

PAGE TWO RUEDEEA0004 UNCLAS

2. ACTION TAKEN

A. 181050Z AUG 75 P53 KAPKA AND RD3 JOHNSON ON SCENE

B. HAZMATS OBSERVED 20-30 GALLONS OF OIL IN WATER CONTAINED BY
BOOM. APPROXIMATELY 5 GALLONS OF OIL WAS OBSERVED OUTSIDE OF
BOOM TRAILING DOWN THE ARTHUR KILL WITH THE OIL GOING TIDE.

C. COASTAL SERVICES CLEAN UP COMPANY WAS ON SCENE CONDUCTING
CLEANUP

D. HAZMATS THEN MET WITH MR LE GODAIS APLANT ENGINEER WHO
STATED THAT AT APPROXIMATELY 0830Z AN UNUSUAL AMOUNT OF WATER ENTERED
THE OIL WATER SEPERATOR SYSTEM CAUSING THE OIL AT THE TOP TO RISE
RAPIDLY AND OVERFLOW INTO A STORM DRAIN. THE WATER LEVEL WAS
QUICKLY LOWERED AT THE OVERFLOW STOPPED. THEN COASTAL SERVICES
WAS CALLED IN.

E. 1145Z HAZMATS DEPARTED SCENE

DGE000030

SPCC NUMBER* 44957
LOCATOR CODE* PHELPG7202
LOCATOR ZIP* 07202
FACILITY NAME* PHELPS DODGE COPPER PRODUCTS
FACILITY TYPE* NTR
OWNER-OPERATOR NAME* PHELPS DODGE COPPER PRODUCTS
OWNER-OPERATOR TELEPHONE* 201-351-3200
REGION* 2
STATE* NJ
START UP DATE* 01/10/1974
PREPARATION DEADLINE* 07/12/1974
IMPLEMENTATION DEADLINE* 01/10/1975

MAILING FACILITY* PHELPS DODGE COPPER PRODUCTS
MAILING ADDRESS LINE ONE* 720 S FRONT STREET
MAILING ADDRESS LINE TWO* ELIZABETH, NJ 07202

SPILL ID* 00612
SPILL DATE* 08/18/1975
SPILL TIME* 0800
REPORTING DATE* 08/18/1975
REPORTING TIME* 0900
REPORTED BY* LE GOAIS
TELEPHONE* 201-351-3200
GENERAL WATER BODY* COASTAL
SPECIFIC WATER BODY* PORT
WATER BODY NAME* ARTHUR KILL
MATERIAL CODE* 1199
AMOUNT REACHING* 50
AMOUNT UNIT* GALS
SOURCE DESCRIPTION* CUN
SOURCE CATEGORY* 2302
CAUSE DESCRIPTION* TANK OVERFLOW
CAUSE CODE* 3304

SPILL REGION* 2

SPIII COMMENTS* PHELPS DODGE COPPER PRODUCTS ELIZABETH, NJ. 07202

07202

PRINCETON AQUA SCIENCE
780 JERSEY AVENUE • NEW BRUNSWICK, NEW JERSEY 08902 • TELEPHONE (201) 840-8800

April 2, 1979

Mr. John Conniff
Phelps Dodge Copper Products Company
Bayway and South Front Streets
Elizabeth, New Jersey 07207

Re: Industrial Waste Samples, P.O. BP49987

Dear Mr. Conniff:

Your samples received on March 9, 1979 have been analyzed. The results are on the enclosed table.

All determinations were done in accordance with Standard Methods, 14th Edition (1975). If there are any questions, please feel free to contact me.

An invoice is enclosed for the analytical work.

Very truly yours,

PRINCETON AQUA SCIENCE

Edna A. Alinea
Edna A. Alinea
Laboratory Manager

EAA:dls
Enclosure

PAS #5101

DGE000032

WATER ANALYSIS DATA SHEET

Company Phelps Dodge Copper Products Company Job # 5101
 Address Bayway and South Front Street Date April 2, 1979
 City Elizabeth State NJ Zip 07207 Auth. P.O. # BP 49987
 To Attn. of: Mr. John Conniff Invoice 4790
 Sample _____

REPORT OF ANALYSIS

	Main Sewer Water 3/8/79	Secondary Sewer Water 3/8/79
	Milligrams/liter	
pH	9.2	7.0
Turbidity, NTU	58	180
Total Solids	1102	236
Total Volatile Solids	168	78
Total Mineral Solids	934	158
Suspended Solids	228	110
Suspended Volatile Solids	106	74
Suspended Mineral Solids	122	36
Oil & Grease - Floatable	69	82
- Emulsified	90	100
Chlorides	25	32
COD	371	260
BOD	99	29
Cadmium	0.014	0.020
Chromium, Trivalent	<0.05	<0.05
Chromium, Hexavalent	<0.01	<0.01
Lead	<0.03	0.068
Mercury	0.002	<0.001
Copper	24.8	0.24
Vanadium	<0.05	<0.05
Nickel	<0.025	0.063
Zinc	0.65	0.15
Cyanide	<0.0025	0.0025
Arsenic	<0.01	<0.01
Phenols	0.006	0.004
Chlorinated Hydrocarbons	<0.02	<0.02

Edna A. Alinea, Laboratory Manager

PRINCETON AQUA SCIENCE

780 JERSEY AVENUE • NEW BRUNSWICK, NEW JERSEY 08902 • TELEPHONE (201) 843-8800

PHELPS DODGE COPPER PRODUCTS CO.

Analysis of Samples Received 3/16/77

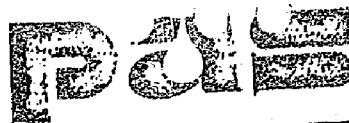
*Parameter	Sample Number	
	#1 (Main)	#2 Secondary
pH (units)	9.6	6.8
Turbidity (J.T.U.)	130	240
Total Solids	997	291
Total Volatile Solids	113	168
Total Mineral	884	123
Suspended Solids	155	119
Suspended Volatile	108	111
Suspended Mineral	47	8
Oil & Grease		
Floatable Oils	22.3	49
Emulsified Oils	66.6	67
Chlorides	30	20
Chemical Oxygen Demand	344	8240
Biochemical Oxygen Demand	93	1700
Cadium	0.04	0.07
Chromium (Trivalent)	0.0	0.11
Chromium (Hexavalent)	0.0	0.04
Lead	0.4	0.4
Mercury	0.0136	0.0063
Copper	13.9	0.97
Vanadium	0.0	0.0
Nickel	0.2	0.11
Zinc	.53	.48
Cyanide	0.0	0.0
Arsenic	**0.001	0.012
Chlorinated Hydrocarbons	**0.001	0.001
Phenols	**0.002	0.003

*All results expressed as mg/l except where noted.

**Less Than

We certify this to be the true results from the analysis of the above samples delivered to our laboratory on March 16, 1977. Analysis performed in accordance with Standard Methods, 14th Edition (1975).

Bernard J. Obersky
 Bernard Obersky
 Laboratory Supervisor
 Princeton Aqua Science



PRINCETON AQUA SCIENCE

769 Jersey Avenue • P.O. Box 151 • New Brunswick, New Jersey 08902 • Telephones (201) 840-8800

March 17, 1982

Mr. K.R. Behrsin
Phelps Dodge Copper Products, Co.
P.O. Box 648
Elizabeth, New Jersey 07207

Dear Mr. Behrsin:

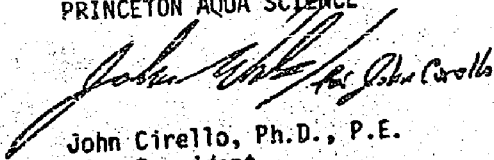
Analysis of the wastewater samples from the main and secondary sewers collected March 2, 1982 has been completed. The results are presented in the attached table. An invoice for the analysis will follow.

The determinations were performed in accordance with Standard Methods 15th Edition (1980).

If you have any questions please feel free to contact me.

Very truly yours,

PRINCETON AQUA SCIENCE


John Cirello, Ph.D., P.E.
Vice President

JC/mjs
Enclosure

#5101

DGE000034

Consulting Environmental Scientists & Engineers

Company Phelps Dodge Job #: 5101
 Address P.O. Box 648 Date: 3/18/82
 City Elizabeth State NJ Zip 07207 Auth.: BP 62328
 To Attn. of: Mr. K.R. Behrsin Lot #: 1069
 Invoice #:
 Sample Date: 3/2/82

REPORT OF ANALYSIS

	Main Sewer (mg/l)	Secondary Sewer (mg/l)
pH (unit)	6.7	6.1
Turbidity	150	853
Total Solids	260	1,800
Total Volatile Solids	118	1,300
Total Mineral Solids	152	467
Total Suspended Solids	32	660
Total Suspended Volatile Solids	16	410
Total Suspended Mineral Solids	16	250
Oil and Grease (Floatable)	*	7,150
Oil and Grease (Emulsified)	73.4	9,290
Chlorides	38.5	21.0
COD	256	2,720
BOD	22	186
Cadmium	0.008	0.462
Chromium (Trivalent)	<0.017	<0.017
Chromium (Hexavalent)	<0.017	0.214
Lead	0.040	0.289
Mercury	<0.001	<0.002
Copper	0.403	20.0
Vanadium	<0.150	<0.150
Nickel	<0.012	0.182

Company Phelps Dodge Job #: 5101
 Address P.O. Box 648 Date: 3/18/82
 City Elizabeth State NJ Zip 07207 Auth.: BP 62328
 To Attn. of: Mr. K.R. Behrsin Lot #: 1069
 Invoice #:
 Sample Date: 3/2/82

REPORT OF ANALYSIS

	Main Sewer (mg/l)	Secondary Sewer (mg/l)
Zinc	0.028	3.08
Cyanide	0.011	0.020
Arsenic	<0.001	<0.001
Phenols (Total)	0.009	0.0013
Chlorinated Hydrocarbons	<0.010	<0.010
TOC	180	160

*Sample not suitable for analysis according to Standard Methods procedure.

RARITAN BAY PROJECT

INDUSTRIAL WASTES SURVEY

Phelps Dodge Copper Products Corporation
Elizabeth, New Jersey

1. Date of Meeting: January 4, 1966

2. Personnel Participating:

The following is a list of men participating in this conference, grouped by organization represented.

Phelps Dodge Copper Products Corporation

Mr. L. F. Buckman, Division Manager
Mr. Robert Gigl, Works Manager
Mr. Howard Stout, Technical Director
Mr. Franklin Lange, Plant Engineer

Federal Water Pollution Control Administration

Raritan Bay Project

Mr. Richard T. Dewling, Chief, Operations
Mr. Douglas Brackney, Supervisory Sanitary Engineer

3. Purpose:

This meeting was scheduled by a letter from Mr. Paul De Falco, Jr., Raritan Bay Project Director, directed to Mr. L. F. Buckman, Division Manager, Phelps Dodge Copper Products Corporation, Elizabeth, New Jersey. The purpose of this meeting was to discuss process wastes created by operation of this facility as it relates to Arthur Kill and Raritan Bay pollution.

GENERAL INFORMATION

4. Organization:

The Phelps Dodge Copper Products Corporation Plant is located at the eastern edge of Elizabeth, New Jersey, between the Arthur Kill and the New Jersey Turnpike. This facility presently employs approximately 950 people. The company's main executive and operating offices are located at 300 Park Avenue, New York City.

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DEPS

DGE000041

5. Products:

This plant produces essentially copper products in the following form:

- Hot rolled rods
- Drawn wire, bare and tinned
- Flat wire and bus bar
- Stranded wire
- Pipe, tube, drawn rods and shapes

6. Raw Materials:

Principal raw materials include:

- Copper
- Tin
- Lead
- Zinc
- Nickel
- Non-ferrous metals
- Cable seal compound

For the most part, bulk copper bar is brought in by barge. Small quantities of this metal are brought in by truck and rail. All other raw materials are brought in by truck.

7. Capacity:

The capacity of this plant is reported to be more than one million pounds of copper per day. The company does not wish to reveal exact capacities.

8. Operations:

Basically, this plant operates on a 16 hour, five day per week basis.

Principal operations are outlined below:

Hot Rolling - Wire bars or alloy billets are heated in a suitable furnace to 1,300 - 1,600°F; hot worked by forming rolls to a suitable, useable or marketable copper rod; and then furnished black or cleaned by pickling in a sulfuric acid solution and rinsed. Approximately 2,000 to 3,000 gpm of recirculated fresh cooling water is used in the process. Temperature of the cooling water, depending upon the time of the year, is 90 to 110°F. This process operates on a five day, two shift basis.

Billet Casting -- Copper scrap or ingot copper is melted in an induction type furnace. The melt is cast into water cooled molds forming

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billets. Recirculated fresh water is used for mold cooling at a rate of approximately 1,500 gpm. The temperature varies, depending upon the time of year, from about 90 to 120°F. The casting shop usually operates on a one shift, five day per week basis.

Extrusion Mill - Copper or alloyed billets are heated in a suitable furnace to a temperature of 1,300 - 1,700°F; discharged into the container of a 2,200 ton hydraulic extrusion press, and with a plunger attached to the hydraulic ram, forced through a suitable die for the forming of rod, tube, shell, or any regular or irregular shape that is presently extrudable. Occasionally a small amount of fresh water is used for quenching the finished product. The finished stock is pickled and cleaned before passing to other operations. The extrusion department usually operates on a one shift, five day per week basis.

Wire Drawing - Clean rod is passed through various types of machines which will cold reduce the cross section through dies. This cold work hardens the wire. In the reducing process it is necessary to anneal (re-soften) the wire when it becomes too hard for further reduction. The wire drawing machines have recirculating systems of drawing compounds which are generally soluble in water. These solutions are recirculated and only changed in cases of emergency. Wire is drawn in many sizes from drawn rod. These products are sold as is, or sent to other departments for further processing. The wire mills operate on a two shift, five day per week basis.

Cold Rolling - Cleaned wire from the wire mill or cleaned rectangles from the extrusion presses are cold reduced by mechanically working them through rolls which reduce their size. This size reduction also increases the hardness, and thus annealing may be needed, depending on the size and temper of the required material. These cold reducing flats are finished in all sizes and are sent out in reels, coils, or cut to straight lengths as required by the customer. The rolling mills operate on a two shift, five day per week basis.

Timing - This is a process for coating copper wire with tin or tin alloy. It is accomplished by passing the wire through a fluxing tank; through a molten tin bath at approximately 850°F; through a series of wipes to remove the excess tin and form a smooth coat; through cooling water; and then wound on take-up reels.

This material is either shipped direct to the customer or else used elsewhere in the plant for further processing. This department usually operates two shifts, five days per week.

Stranding - This process merely mechanically twists small wire into cable to make the flexible equivalent of solid wire or bus bar. This material is either sold as is, or sent for further processing (insulating) elsewhere. This department normally operates two shifts, five days per week.

Tube and Shape Drawing Here, material from the extrusion presses is mechanically reduced in size by pulling it through dies on draw benches. This drawing and rolling hardens the material, and depending upon the number of reductions and the physical characteristics required in processing, annealing may be necessary. The finished material from the draw benches may require mechanical straightening and hydrostatic testing. This department would normally operate on a one shift, five day per week basis.

9. Water Supply:

Two sources of water are available, namely Arthur Kill and the municipal supply from the city of Elizabeth. Fresh water is used for drinking and sanitary purposes, and for makeup water in recirculating cooling systems used in the hot rolling, billet casting, tinning and cold rolling processes. Small quantities are also occasionally used for quenching in the extrusion mill process. Approximately 5,500 gallons per day of fresh water are used by this installation.

Salt water from the Arthur Kill is used for cooling at a rate of 1.3 mgd. Two separate systems, one with a capacity of 500 gpm and the other 1,000 gpm are in use. The smaller quantity of salt water is pumped through copper coils for cooling the drawing solutions and for minor cooling throughout the plant. This water is used on a once through basis before being discharged to the city sewer system. The remainder of the salt water, used in jacketed condensers for cooling process water in the hot rolling process, is discharged back to the Kill. This again is on a once through basis.

10. Sewerage:

Approximately 25 percent of the installation's sanitary wastes go to the city sewer, while the remainder discharge directly to the Arthur Kill through any one of six sewers.

11. Principal Processes:

Principal processes at this plant are hot rolling, billet casting, extrusion, wire drawing, cold rolling, tinning, stranding, and tube and shape drawing.

12. Waste Treatment:

This plant of the Phelps Dodge Corporation provides no treatment of its industrial or domestic wastes. At the present time, there are six discharges going directly into the Arthur Kill. Outlined below is a brief description of the discharges into each sewer.

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Discharge

Sewer

Billet casting	6
Extrusion mill	6
Wire Drawing	1,2,3
Cold rolling	1,2,3
Finning	1,2,3
Domestic wastes	1,2,3,4,5,6

13. Analytical Results:

At the request of the Interstate Sanitary Commission, the following analyses were performed on the raw discharges:

Sewer No.	Analysis, ppm				Flow cfs
	Solids, SS	Oil	Cu.	pH	
1	119.4	48.7	0	6.8	72.4
2	149.3	46.5	11.8	6.9	7.1
3	47.7	13.0	0	7.3	8.8
4	179.0	48.2	74.6	5.5	50.2
5	163.2	12.1	189.1	3.0	13.0
6	18.7	30.1	27.6	2.5	118.2

The above listed analyses were run on composite samples collected over an eight hour period. Flows were measured with a V-notch weir. The flow figures reported are average discharges, and therefore, could be used in computing loads. Only 4 of these discharge points (4,5,6) are readily accessible for sampling.

WATER POLLUTION ABATEMENT PROGRAM

On November 5, 1965, Phelps Dodge received a letter from the Interstate Sanitary Commission, advising them to set up an abatement program on the following basis: Diversion of all sewage to the city sewer system; consideration of a closed circulation system, or some other means to eliminate oil and fine copper solids from being discharged to the Arthur Kill; removal of all floating and settleable solids; and elimination of any precipitant which might form in the Arthur Kill as a direct result of the plant's discharges. The deadline set by I.S.C. for this abatement program is September, 1967.

On the basis of this request the plant has already taken steps to eliminate the discharge of domestic sewage, by moving to another location, their locker and toilet facilities. In addition, all recirculating systems which provide wash and cooling water for the rod mills are being extended and improved. Other inplant modifications designed

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to reduce quantities of wastes being discharged to the Mill are in the planning stage.

Time was devoted to a discussion of pollution parameters for study until sanitary wastes are discharged to the city sewer and industrial wastes eliminated. Examination of the discharges should be made for, but not necessarily be limited to, the following: Oil, BOD, COD, DO, Chlorides, and Copper. Testing for oil is recommended because soluble oils are used in drawing operations.

SUPPLEMENTAL INFORMATION AND SUMMARY

It is apparent from the foregoing that considerable thought has been given to principal wastes sources at this plant. The Phelps Dodge Copper Products Corporation is to be commended for the inplant modifications already completed and for its future abatement program. The continuous collection of effluent data, however, are essential in documenting this and other inplant improvements in order to demonstrate progress.

4/27/66

JOINT MEETING
of
ESSEX AND UNION COUNTIES
500 South First Street
Elizabeth, NJ 07202

Noted

NON-DOMESTIC WASTEWATER DISCHARGE PERMIT APPLICATION

Note: Please read all attached instructions prior to completing this application. Please type or print.

SECTION A - GENERAL INFORMATION

1. Facility Name: PHELPS DODGE SPECIALTY COPPER PRODUCTS CO.

a. Operator Name: Phelps Dodge Specialty Copper Products Co.

b. Is the operator identified in 1.a., the owner of the facility?
Yes [X] No []

If no, provide the name and address of the operator and submit a copy of the contract and/or other documents indicating the operator's scope of responsibility for the facility. _____

2. Facility Address:

Street: 48-94 Bayway

City: Elizabeth State: NJ Zip: 07207

3. Business Mailing Address:

Street or P.O. Box: PO Box 648

City: Elizabeth State: NJ Zip: 07207

4. Designated signatory authority of the facility:

[Attach similar information for each authorized representative]

Name: James J. Szalay

Title: Environmental Coordinator

Address: 48-94 Bayway

City: Elizabeth State: NJ Zip: 07207

Phone #: 908-351-3200 ext. 223

5. Designated facility contact:

Name: James J. Szalay

Title: Environmental Coordinator

Phone #: 908-351-3200, ext. 223

DGE000047

SECTION B - BUSINESS ACTIVITY

1. If your facility employs or will be employing processes in any of the industrial categories or business activities listed below (regardless of whether they generate wastewater, waste sludge, or hazardous wastes), place a check beside the category of business activity (check all that apply).

Industrial Categories*

- ☐ Aluminum Forming
- ☐ Asbestos Manufacturing
- ☐ Battery Manufacturing
- ☐ Can Making
- ☐ Carbon Black
- ☐ Coal Mining
- ☐ Coil Coating
- ☒ Copper Forming
- ☐ Electric and Electronic Components Manufacturing
- ☐ Electroplating
- ☐ Feedlots
- ☐ Fertilizer Manufacturing
- ☐ Foundries (Metal Molding and Casting)
- ☐ Glass Manufacturing
- ☐ Grain Mills
- ☐ Inorganic Chemicals
- ☐ Iron and Steel
- ☐ Leather Tanning and Finishing
- ☐ Metal Finishing
- ☐ Nonferrous Metals Forming
- ☐ Nonferrous Metals Manufacturing
- ☐ Organic Chemicals Manufacturing
- ☐ Paint and Ink Formulating
- ☐ Paving and Roofing Manufacturing
- ☐ Pesticides Manufacturing
- ☐ Petroleum Refining
- ☐ Pharmaceutical
- ☐ Plastic and Synthetic Materials Manufacturing
- ☐ Plastics Processing Manufacturing
- ☐ Porcelain Enamel
- ☐ Pulp, Paper, and Fiberboard Manufacturing
- ☐ Rubber
- ☐ Soap and Detergent Manufacturing
- ☐ Steam Electric
- ☐ Sugar Processing
- ☐ Textile Mills
- ☐ Timber Products

A facility with processes inclusive in these business areas may be covered by the U.S. Environmental Protection Agency's (EPA) categorical pretreatment standards. These facilities are termed "categorical users".

2. Give a brief description of all operations at this facility including primary products or services (attach additional sheets if necessary):

Copper and copper based alloy wire drawing; wire stranding; hot tin
coating of copper wire; copper flat wire rolling; extrusion of shape and
cold drawing of shapes and tubes.

3. Indicate applicable Standard Industrial Classification (SIC) for all processes (If more than one applies, list in descending order of importance.):

a. 3351
 b. _____
 c. _____
 d. _____
 e. _____

4. PRODUCT VOLUME: (If more space is needed, please attach additional pages to the application. If it is more convenient to attach a computer run-off of this data, please do so.)

PRODUCT (Brand Name)	PAST CALENDAR YEAR Amounts Per Day (Daily Units)		ESTIMATE THIS CALENDAR YEAR Amounts Per Day (Daily Units)	
	<u>Average</u>	<u>Maximum</u>	<u>Average</u>	<u>Maximum</u>
<u>Copper</u>	<u>207,577</u>	_____	<u>116,260</u>	_____
_____	<u>Lbs.</u>	_____	<u>Lbs.</u>	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

SECTION C - WATER SUPPLY

1. Water Sources: (Check as many as are applicable)

Is It Metered?

Yes No

☒ Public Supply

X

☐ Private Well

☐ Surface Water

☐ Other (Specify):

2. Name on the water bill: Phelps Dodge

Name: City of Elizabeth Water and Sewer Utility

Street: 50 Winfield Scott Plaza

City: Elizabeth

State: NI

Zip: 07201

3. a) Water service account number: 700-093 and 700-094

b) Water received (report volume in gallons). Attach water bills. Please use the latest 4 quarters available.

	Public Supply	Well	Surface	Other	Total
1st Qtr(1991)	<u>1,817,883</u>	<u> </u>	<u> </u>	<u> </u>	<u>1,817,883</u>
2nd Qtr(1991)	<u>1,729,607</u>	<u> </u>	<u> </u>	<u> </u>	<u>1,729,607</u>
3rd Qtr(1991)	<u>988,988</u>	<u> </u>	<u> </u>	<u> </u>	<u>988,988</u>
4th Qtr(1991)	<u>532,647</u>	<u> </u>	<u> </u>	<u> </u>	<u>532,647</u>

Grand Total 5,069,125

If water source is not metered, indicate below the method of determining the volume(s).

PRODUCTION POUNDS FOR 1991

January	6,327,105
February	6,372,818
March	6,708,677
April	5,745,382
May	4,531,829
June	4,414,173
July	2,661,005
August	5,782,470
September	2,802,160
October	2,590,173
November	2,381,941
December	<u>1,991,637</u>
Total	52,309,370

21 working days/month

12 months per year

$$52,309,370 \times \frac{1}{12} \times \frac{1}{21} = 207,577 \text{ average pounds per day}$$

WATER METER WATER METER WATER METER WATER H2O
 METER 3721999 METER 19411474 METER 20527 METER 2052
 USAGE USAGE -797 USAGE 7797 USAGE
 DATE READ GALLONS READ GALLONS READ GAL'S READ GAL'S

TOTAL - DELTA
 GALLONS GALLONS
 PREV MD

12/17/87	145198	28598	736	34	0	1249327
1/15/88	146348	860315	29118	389012	736	1122150 -127177
2/18/88	147408	792986	29548	321683	746	1810402 688252
3/17/88	149098	1264289	30268	538632	756	1623377 -187025
4/18/88	150578	1107188	30948	508708	766	3276678 1653301
5/18/88	153568	2236819	32328	1032378	776	1870250 -1406428
6/21/88	155138	1174517	33248	688252	786	1548567 -321683
7/22/88	156358	912682	34098	635885	786	1443833 -104734
8/20/88	157508	860315	34878	583518	786	1309175 -134658
9/21/88	158558	785505	35578	523670	786	1982465 673290
10/20/88	160168	1204441	36618	778024	786	1765516 -216949
11/25/88	161668	1122150	37478	643366	786	1780478 14962
12/20/88	163048	1032378	38478	748100	786	1354061 -426417
1/25/89	164118	800467	39218	553594	786	1623377 269316
2/21/89	165498	1032378	40008	590999	786	1765516 142139
3/20/89	166878	1032378	40988	733138	786	2259262 493746
4/25/89	168608	1294213	42278	965049	786	1571010 -688252
5/19/89	169828	912682	43158	658328	786	1473757 -97253
6/20/89	171038	905201	43918	568556	786	1383985 -89772
7/24/89	172178	852834	44628	531151	786	1383985 0
8/24/89	173318	852834	45338	531151	786	1428871 44886
9/28/89	174488	875277	46078	553594	786	1466276 37405
10/23/89	175688	897720	46838	568556	786	1517147 50871
11/27/89	177098	1054821	47456	462326	786	1475253 -41894
12/22/89	178428	994973	48098	480280	786	1578491 103238
1/22/90	179688	942606	48948	635885	786	1533605 -44886
2/22/90	180988	972530	49698	561075	786	1615896 82291
3/23/90	182388	1047340	50458	568556	786	1204441 -411455
4/23/90	183288	673290	51168	531151	786	1069783 -134658
5/21/90	184208	688252	51678	381531	786	703214 -366569
6/22/90	184848	478784	51978	224430	786	1047340 344126
7/25/90	185848	748100	52378	299240	786	778024 -269316
8/24/90	186488	478784	52778	299240	786	830391 52367
9/24/90	187188	523670	53188	306721	786	336645 -493746
10/24/90	187528	254354	53298	82291	786	608953 272308
11/26/90	188032	377042	53608	231911	786	1041355 432402
12/24/90	189024	742115	54008	299240	786	950087 -31268
1/28/91	190104	149620	54578	134658	786	284278 -665809
2/26/91	190644	403974	54858	209468	786	613442 329164
3/25/91	191444	598480	55288	321683	786	920163 206721
4/25/91	192194	561075	55618	246873	786	807948 -112215
5/24/91	192954	568556	55940	240888	786	809444 1496
6/26/91	193054	74810	55990	37405	786	112215 -697229
7/26/91	193654	448860	56012	16458	786	465318 353103
8/26/91	193954	224430	56082	52367	786	276797 -188521
9/23/91	194158	152612	56208	94261	786	246873 -29924
10/23/91	194398	179544	56238	22443	786	201987 -44886
11/22/91	194568	127177	56338	74810	786	201987 0
12/24/91	194728	119696	56350	8977	786	128673 -73314

1491
 Total = 5,069,125

new business plan (8/91-12/91)
 1,056,317

BASIS OF AVERAGE GPD WATER USAGE

Restructured: New Business Plan initiated on August 1, 1991

(A) Work force cut by 60%

(B) Departments and machines eliminated

(C) Water usage radically reduced

Working days:

August 1991 22 working days + 1 working weekend = 24 days

September 1991 21 working days + 1 working weekend = 23 days

October 1991 23 working days + 1 working weekend = 25 days

November 1991 21 working days + 1 working weekend = 23 days

December 1991 22 working days + 1 working weekend = 24 days

Total = 119 days

Based on attached water bills:

Water consumption for August - December 1991

= 1,056,317 gallons

$$\text{Average GPD} = \frac{1,056,317}{119} = 8,877$$

$$= 9,000 \text{ GPD}$$

SECTION C (CONT'D)

4. List average water usage on premises:
[New facilities may estimate]

<u>Type</u>	<u>Indicate Average Water Usage (GPD)</u>	<u>Indicate Estimated (E) or Measured (M)</u>	<u>Discharge Location Sanitary (San) Storm (St)</u>
a. Contact cooling water	<u>0</u>	<u></u>	<u></u>
b. Non-contact cooling water	<u>2,000</u>	<u>E</u>	<u>No Discharge</u>
c. Boiler feed	<u>1,000</u>	<u>E</u>	<u>No Discharge</u>
d. Process	<u>4,000</u>	<u>E</u>	<u>No Discharge Combined</u>
e. Sanitary	<u>2,000</u>	<u>E</u>	<u>Sewer</u>
f. Air pollution control	<u>0</u>	<u>E</u>	<u></u>
g. Contained in product	<u>0</u>	<u></u>	<u></u>
h. Plant and equipment washdown	<u>0</u>	<u></u>	<u></u>
i. Irrigation and lawn watering	<u>0</u>	<u></u>	<u></u>
j. Other	<u>0</u>	<u>E</u>	<u></u>
k. Total of A-J	<u>9,000</u>	<u></u>	<u></u>

SECTION D - SEWER INFORMATION

1. a. For an existing business:

Is the building presently connected to the public sanitary sewer system?

☒ Yes

☐ No: Have you applied for a sanitary sewer hookup? ☐ Yes ☐ No

b. For a new business:

(i). Will you be occupying an existing vacant building (such as in an industrial park)? ☐ Yes ☐ No

(ii). Have you applied for a building permit if a new facility will be constructed? ☐ Yes ☐ No

(iii). Will you be connected to the public sanitary sewer system? ☐ Yes ☐ No

2. List size, descriptive location, and flow of each facility sewer which connects to the sewer system. (Attach additional sheets if necessary).

<u>Sewer Size</u>	<u>Descriptive Location of Sewer Connection or Discharge Point</u>	<u>Average Flow (GPD)</u>
<u>24"</u>	<u>Sample Point 01</u> <u>Plant sanitary & storm</u>	<u>2,000</u>
<u>8"</u>	<u>Alleyway along weatherproof building - storm only</u>	<u>Nil, except storm</u>
<u>8"</u>	<u>Old boiler room and storm</u>	<u>Nil, except storm</u>
<u>Unknown</u>	<u>Main administration building sanitary/storm/laboratory</u>	<u>Unknown</u>
<u>Unknown</u>	<u>Weatherproof building sanitary</u>	<u>Unknown</u>
<u>Unknown</u>	<u>Shipping building sanitary</u>	<u>Unknown</u>
<u>Unknown</u>	<u>Old foremen's lockerroom sanitary</u>	<u>Unknown</u>

SECTION E - WASTEWATER DISCHARGE INFORMATION

1. Does (or will) this facility discharge any wastewater other than from restrooms to the sewer?

[X] Yes If the answer to this question is "yes", complete the remainder of the application.

[] No If the answer to this question is "no", skip to Section I.

2. Provide the following information on wastewater flow rate. Please make photocopies of this page and complete for each of the discharge locations. [New facilities may estimate]

- a. Hours/Day Discharged (e.g., 8 hours/day):

M 16 T 16 W 16 Th 16 F 16 SAT 8* SUN 0

- b. Hours of Discharge (e.g., 9 a.m. to 5 p.m.): *as needed 8 AM - 4:30 PM*

M 8-12AM T 8-12AM W 8-12AM Th 8-12AM F 8-12AM SAT SUN

- c. Peak hourly flow rate (GPD) 250 GPH

- d. Maximum daily flow rate (GPD) 5,000 GPD

- e. Annual daily average (GPD) 2,000 GPD

3. If batch discharge occurs or will occur, indicate:
[New facilities may estimate]

- a. Number of batch discharges per day

- b. Average discharge per batch (GPD)

- c. Time of batch discharges at
(days of week) (hours of day)

- d. Flow rate gallons/minute

- e. Percent of total discharge

SECTION E (CONT'D)

4. Schematic Flow Diagram - For each major activity in which wastewater is or will be generated, draw a diagram of the flow of materials, products, water, and wastewater from the start of the activity to its completion, showing all unit processes. Indicate which processes use water and which generate wastestreams. Include the average daily volume and maximum daily volume of each wastestream [new facilities may estimate]. If estimates are used for flow data this must be indicated. Number each unit process having wastewater discharges to the sewer. Use these numbers when showing the unit processes in the building layout in Section H. This drawing must be certified by a State Registered Professional Engineer.

See attached drawing certified by Dames & Moore showing estimated volumes.

SECTION E (CONT'D)

Facilities that checked activities in question 1 of Section B are considered Categorical Industrial Users and should skip to question 6.

5. For Non-Categorical Users Only: List average wastewater discharge, maximum discharge, and type of discharge (batch, continuous, or both), for each plant process. Include the reference number from the process schematic that corresponds to each process. [New facilities should provide estimates for each discharge]. Please attach additional sheets if necessary.

<u>No.</u>	<u>Process Description</u>	<u>Average Flow (GPD)</u>	<u>Maximum Flow (GPD)</u>	<u>Type of Discharge (batch, continuous, none)</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

ANSWER QUESTIONS 6 & 7 IF YOU ARE SUBJECT TO CATEGORICAL PRETREATMENT STANDARDS

6. For Categorical Users: Provide the wastewater discharge flows for each of your processes or proposed processes. Include the reference number from the process schematic that corresponds to each process. [New facilities should provide estimates for each discharge]. Please attach additional sheets if necessary.

<u>No.</u>	<u>Regulated Process</u>	<u>Average Flow (GPD)</u>	<u>Maximum Flow (GPD)</u>	<u>Type of Discharge (batch, continuous, none)</u>
_____	<u>Pickle System</u>	<u>3,000</u>	<u>4,000</u>	<u>None-recycled through RO</u>
_____	<u>Cooling System</u>	<u>200</u>	<u>200</u>	<u>None-recycled through RO</u>
_____	<u>Lubricating System</u>	<u>250</u>	<u>1,000</u>	<u>None - evaporated</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

<u>No.</u>	<u>Unregulated Process</u>	<u>Average Flow (GPD)</u>	<u>Maximum Flow (GPD)</u>	<u>Type of Discharge (batch, continuous, none)</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

<u>No.</u>	<u>Dilution</u>	<u>Average Flow (GPD)</u>	<u>Maximum Flow (GPD)</u>	<u>Type of Discharge (batch, continuous, none)</u>
_____	<u>Boiler Blowdown</u>	<u>250</u>	<u>1,000</u>	<u>None-evaporated</u>
_____	<u>Sanitary</u>	<u>2,000</u>	<u>2,500</u>	<u>continuous</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

SECTION E (CONT'D)

7. For Categorical Users Subject To Total Toxic Organic (TTO) Requirements:

Provide the following (TTO) information.

- a. Does (or will) this facility use any of the toxic organics that are listed under the TTO standard of the applicable categorical pretreatment standards published by EPA?

☐ Yes
☒ No

- b. Has a baseline monitoring report (BMR) been submitted which contains TTO information?

☐ Yes
☒ No

- c. Has a toxic organics management plan (TOMP) been developed?

☐ Yes, (Please attach a copy)
☒ No

8. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Current:	Flow Metering	☐ Yes	☒ No	☐ N/A
	Sampling Equipment	☒ Yes	☐ No	☐ N/A
Planned:	Flow Metering	☐ Yes	☒ No	☐ N/A
	Sampling Equipment	☒ Yes	☐ No	☐ N/A

If so, please indicate the present or future location of this equipment on the sewer schematic and describe the equipment below:

Monitoring periodically the waste stream at sample point
01 for metals, pH.

9. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics? Consider production processes as well as air or water pollution treatment processes that may affect the discharge.

☐ Yes
☒ No, (skip question 10)

SECTION E (CONT'D)

10. Briefly describe these changes and their effects on the wastewater volume and characteristics: (Attach additional sheet if needed.)

11. Are any materials or water reclamation systems in use or planned?

☒ Yes
☐ No, (skip question 12)

12. Briefly describe recovery process, substance recovered, percent recovered, and the concentration in the spent solution. Submit a flow diagram for each process: (Attach additional sheets if needed.)

A reverse osmosis unit is utilized to purify and recycle process
wastewater. The RO concentrate is evaporated with the resultant
concentrate shipped to off-site permitted treatment facilities.

SECTION F - CHARACTERISTICS OF DISCHARGE

All current industrial users are required to submit monitoring data for each discharge point. EACH discharge point must be analyzed for all parameters listed in Tables 1 and 2 (see Appendix A). A description of each discharge point that requires sampling has been attached to your cover letter.

Analysis is to be performed by a laboratory certified in the State of New Jersey to perform wastewater analysis.

Please refer to the Instructions section for remaining instructions.

New dischargers should use the tables to indicate what pollutants will be present or are suspected to be present in proposed wastestreams.

See attached monitoring data

G - TREATMENT

1. Is any form of wastewater treatment (see list below) practiced at this facility?

☒ Yes
☐ No

2. Is any form of wastewater treatment (or change to an existing wastewater treatment) planned for this facility within the next three years?

☐ Yes, describe: _____
☒ No

3. Treatment devices or processes used or proposed for treating wastewater or sludge (check as many as appropriate).

☐ Air Flootation
☐ Centrifuge
☒ Chemical precipitation
☐ Chlorination
☐ Cyclone
☒ Filtration
☐ Flow equalization
☐ Grease or oil separation, type: _____
☐ Grease trap
☐ Grinding filter
☐ Grit removal
☐ Ion exchange
☒ Neutralization, pH correction
☐ Ozonation
☒ Reverse osmosis
☐ Screen
☐ Sedimentation
☐ Septic tank
☐ Solvent separation
☐ Spill protection
☐ Sump
☐ Biological treatment, type: _____
☐ Rainwater diversion or storage
☐ Other chemical treatment, type: _____
☐ Other physical treatment, type: _____
☐ Other, type: _____

SECTION C (CONT'D)

4. Description

Describe the pollutant loadings, flow rates, design capacity, physical size, and operating procedures of each treatment facility checked above.

Waste stream from pickle rinse is pH adjusted, sent through clarifier for precipitation, through filter press, through sand filter, through reverse osmosis with the permeate (treated water) fed to the boiler condensate makeup tank and the concentrate (containing contaminants) fed to the fluid evaporators with ultimate off-site disposal.

5. Attach a process flow diagram for each existing treatment system. Include process equipment, by-products, by-product disposal method, waste and by-product volumes, and design and operating conditions.

See attachment - W2 CAD Drawing

6. Describe any changes in treatment or disposal methods planned or under construction for the wastewater discharge to the sanitary sewer. Please include estimated completion dates.

None

7. Do you have a treatment operator? ☒ Yes ☐ No

(if Yes,) Name: James Szalay

Title: Environmental Coordinator

Phone: 908-351-3200

Is this operator licensed ☐ Yes ☒ No

(if Yes,): license classification _____

license number _____

8. Do you have a manual on the correct operation of your treatment equipment?

☒ Yes ☐ No

9. Do you have a written maintenance schedule for your treatment equipment?

☒ Yes ☐ No

SECTION II - FACILITY OPERATIONAL CHARACTERISTICS

1. Shift Information

Work Days	☒ Mon.	☒ Tues.	☒ Wed.	☒ Thur.	☒ Fri.	☒ Sat.	☒ Sun.
Shifts per work day:	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>*</u>	<u>*</u>
Empl's per shift							
1st	<u>46</u>	<u>46</u>	<u>46</u>	<u>46</u>		<u>*</u>	<u>*</u>
2nd	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>		<u>*</u>	<u>*</u>
3rd						<u>*</u>	<u>*</u>
Shift start and end times:							
1st	<u>8 AM - 4:30 PM</u>					<u>*</u>	<u>*</u>
2nd	<u>4 PM - 12 midnight</u>					<u>*</u>	<u>*</u>
3rd							

*Sat & Sun dependent upon production load - overtime

2. Indicate whether the business activity is:

- ☒ Continuous through the year, or
☐ Seasonal - Circle the months of the year during which the business activity occurs:

J F M A M J J A S O N D

COMMENTS: _____

3. Indicate whether the facility discharge is:

- ☒ Continuous through the year, or
☐ Seasonal - Circle the months of the year during which the business activity occurs:

J F M A M J J A S O N D

COMMENTS: _____

SECTION B (CONT'D)

4. Does operation shut down for vacation, maintenance, or other reasons?

☒ Yes, indicate reasons and period when shutdown occurs:

☐ No

5. List types and amounts (mass or volume per day) of raw materials used or planned for use (attach list if needed):

Copper rod and billets - 220,000 pounds per day

6. List types and quantity of chemicals used or planned for use (attach list if needed). Copies of Material Safety Data Sheets will be reviewed during the Annual Inspections of your facility. (if available) for all chemicals identified:

Chemical	Quantity
<u>Sulphuric Acid</u>	<u>500 gal. max.</u>
<u>Hydrogen peroxide</u>	<u>500 gal. max.</u>
<u>10% sulphuric acid sol'n</u>	<u>7,500 gal. max.</u>
<u>50% sodium hydroxide</u>	<u>3,000 Lbs.</u>
<u>Zinc chloride 50%</u>	<u>200 gal.</u>
<u>ADL drawing solution</u>	<u>15,000 Gal. max. (94% water)</u>
<u>Rich Cool Coolant</u>	<u>20,000 Gal. max. (99.6% water)</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

SECTION B (CONT'D)

7. Building Layout - Draw to scale the location of each building on the premises. Show map orientation and location of all water meters, storm drains, numbered unit processes (from schematic flow diagram), public sewers, and each facility sewer line connected to the public sewers. Number each sewer and show existing and proposed sampling locations. This drawing must be certified by a State Registered Professional Engineer.

A blueprint or drawing of the facilities showing the above items may be attached in lieu of submitting a drawing on this sheet.

Previously submitted to Joint Meeting.

SECTION I - SPILL PREVENTION

1. Do you have chemical storage containers, bins, or ponds at your facility? ☒ Yes ☐ No See attachment

If yes, please give a description of their location, contents, size, type, and frequency and method of cleaning. Also indicate in a diagram or comment on the proximity of these containers to a sewer or storm drain. Indicate if buried metal containers have cathodic protection.

2. Do you have floor drains in your manufacturing or chemical storage area(s)? ☐ Yes ☒ No If yes; Where do they discharge to?

3. If you have chemical storage containers, bins, or ponds in manufacturing area, could an accidental spill lead to a discharge to: (check all that apply).

☐ an onsite disposal system

☐ public sanitary sewer system (e.g. through a floor drain)

☐ storm drain

☐ to ground

☐ other, specify:

☒ not applicable, no possible discharge to any of the above routes

4. Do you have an accidental spill prevention plan (ASPP) to prevent spills of chemicals or slug discharges from entering the Joint Meeting's collection systems?

☐ Yes - [Please enclose a copy with the application]

☐ No

- * ☒ N/A, Not applicable since there are no floor drains and/or the facility discharge(s) only domestic wastes.

5. Please describe below any previous spill events and remedial measures taken to prevent their reoccurrence.

Packing in a liquid system failed causing a minor discharge of coolant solution. The packing was repaired. A release of drawing solution occurred when the evaporator dike leaked. The dike was sealed, tested and a storage tank gravity feeding the evaporators was demolished to prevent a reoccurrence.

*See discussion on floor drains in Section I #1 notes. Daily inspection of all critical process tanks are completed every shift and documented by engineering and/or manufacturing personnel. In addition, the Security Guards monitor critical tank system during their scheduled rounds.

SECTION J - NON-DISCHARGED WASTES

1. Are any waste liquids or sludges generated and not disposed of in the sanitary sewer system?

☒ Yes, please describe below
☐ No, skip the remainder of Section J

<u>Waste Generated</u>	<u>Quantity (per year)</u>	<u>Disposal Method</u>
Copper Hydroxide	10,000 Lbs.	Off site
Zinc Chloride Flux	500 Lbs.	Off site
Waste Oil Mixture	20,000 gal.	Off site
Sludges	10,000 gal.	Off site

2. Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site.
3. If any of your wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility. See attachment
4. If an outside firm removes any of the above checked wastes, state the name(s) and address(s) of all waste haulers:

a. Environmental Management Strategies

209 N. Center Drive

N. Brunswick, NJ 08902

Permit No.
(if applicable):

Permit No.
(if applicable):

5. Have you been issued any Federal, State, or local environmental permits?

☒ Yes
☐ No

If yes, please list the permit(s): Air permits for tin pots 1856/57
and two atmospheric evaporators. Boiler stack permits for #1 and
#2 boilers,

Compliance certification:

Yes ☒ No ☐ Not yet discharging ☐

b. Provide a schedule for bringing the facility into compliance. Specify major events planned along with reasonable completion dates. Note that if the Joint Meeting issues a permit to the applicant, it may establish a schedule for compliance different from the one submitted by the facility.

[illegible]

CERTIFICATION STATEMENT / AUTHORIZED REPRESENTATIVE STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

In consideration of the granting of this permit, the undersigned agrees:

1. To furnish any additional information (including reports) relating to the installation or use of the industrial sewer for which this permit is sought as may be requested by the Joint Meeting.
2. To accept and abide by all provisions of the Joint Meeting Regulations and the Municipal Sewer Use Ordinance, and of all other pertinent Ordinances or Regulations that may be adopted in the future.
3. To operate and maintain any wastewater pretreatment facilities, as may be required as a condition of the acceptance into the wastewater treatment system of the industrial wastes involved, and subject to amendments to the Permit (including, but not limited to, Compliance Schedules).
4. To cooperate at all times with the Joint Meeting and its representatives in their inspecting, sampling and study of the industrial wastes, and any facilities provided for pretreatment.
5. To notify the Joint Meeting immediately in the event of any accident, or other occurrence that occasions the contribution to the wastewater treatment system of any wastewater or prohibited substances not covered by this permit.

James J. Szalay
Name(s)

Environmental Coordinator
Title

James J. Szalay
Signature

4/22/92
Date

908-351-3200 X 223
Phone

FOR JOINT MEETING USE ONLY

Inspection/Permit Fee \$ _____ Paid _____

Application Approved (Date) _____ Effective Date of Permit _____

Signed _____ Title _____

JOINT MEETING

Section I #1

Sulfuric acid storage - one pallet with secondary containment in extrusion department - no sewer drain access.

Sulfuric acid solution storage tank - 7,500 gal. rubber lined tank located next to storeroom building in a diked area - no sewer drain access.

Hydrogen peroxide - one pallet with secondary containment in extrusion department - no sewer drain access.

50% solution hydroxide - in 700 Lb. plastic drums stored within diked waste treatment area - no sewer drain access.

50% zinc chloride - in 30 gal. DOT plastic drums stored within the storeroom building below grade - no sewer drain access.

Two ADL Drawing Solution Storage Tanks - 1 - 10,000 gal., 1 - 5,000 gal., in a diked area - no sewer drain access.

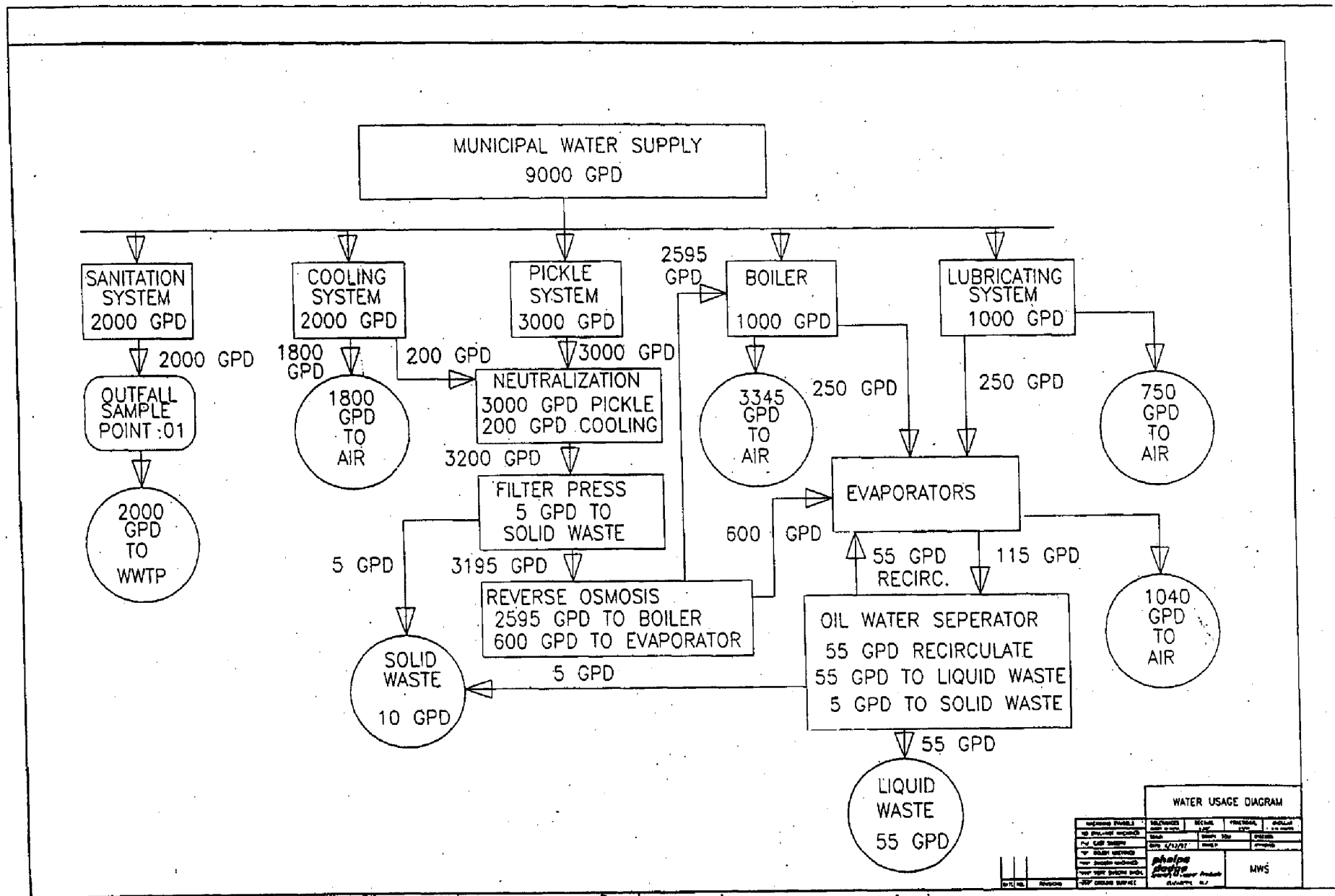
Rich cool coolant solution system with three sumps totalling 20,000 gal. - no sewer drain access.

Note: All tank systems have been fitted with an elaborate hi-level alarm system and spring loaded water addition valves to eliminate the possibility of chemical spills. Every floor drain inside the manufacturing building with a remote possibility of receiving a chemical spill has been permanently sealed off.

OFF SITE WASTE LOCATIONS - SECTION J # 3

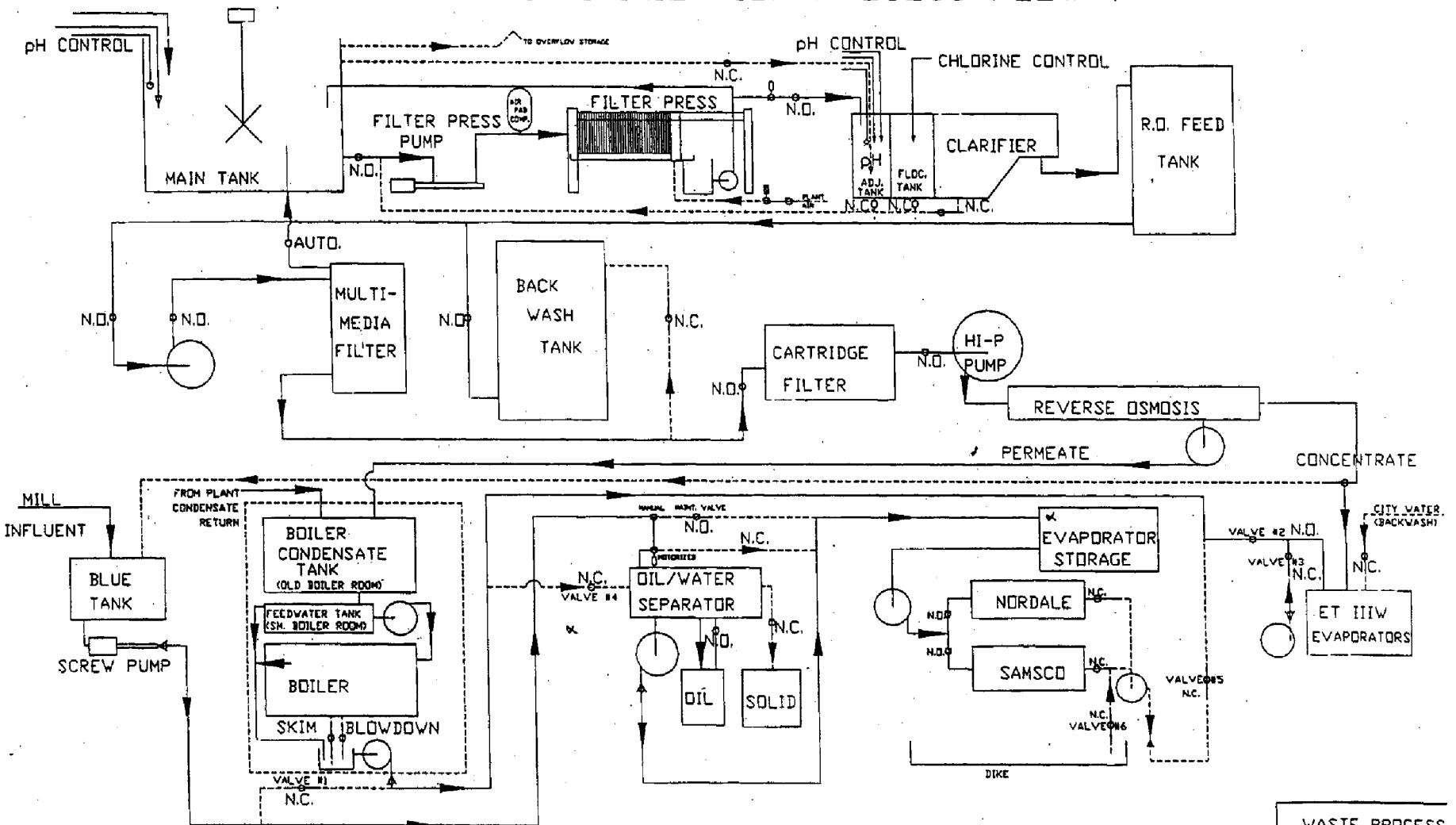
FOR JOINT MEETING

TSDF NAME	TSDF ID	ADDRESS	CITY_STATE_ZIP	WASTE STREAM
MICHIGAN DISPOSAL, INC.	MI0000724831	49350 NO. I94 SERVICE DRIVE	BELLEVILLE, MI 48111	COPPER HYDROXIDE, SLUDGES
RENTECH	NJD980536577	1800 CARMAN STREET	CAMDEN, NJ 08105	WASTE OIL MIXTURE
RENTECH (PA.)	PAD067098822	550 INDUSTRIAL DRIVE	LEWISBERRY, PA 17339	ZINC CHLORIDE FLUX



WASTE MINIMIZATION PROCESS FLOW

PICKLING
INFLUENT



✓	CHECK VALVE	✓	PUMP
○	MANUALLY-OPERATED VALVE	○	NORMALLY OPEN VALVE
□	3-WAY VALVE (MANUAL)	□	NORMALLY CLOSED VALVE
◇	3-WAY VALVE (MOTORIZED)		

WASTE PROCESS

INSTRUMENT SYMBOL	INSTRUMENT NAME	INSTRUMENT TYPE	INSTRUMENT LOCATION	INSTRUMENT STATUS
✓	100-101	MANUAL	100-101	100-101
○	100-102	MANUAL	100-102	100-102
□	100-103	MANUAL	100-103	100-103
◇	100-104	MANUAL	100-104	100-104
✓	100-105	MANUAL	100-105	100-105
○	100-106	MANUAL	100-106	100-106
□	100-107	MANUAL	100-107	100-107
◇	100-108	MANUAL	100-108	100-108

phelps
dodge
W-2

JOINT MEETING
of
ESSEX AND UNION COUNTIES
500 South First St.
Elizabeth, N.J. 07202

027

INDUSTRIAL SEWER CONNECTION/
NON-DOMESTIC WASTEWATER DISCHARGE PERMIT APPLICATION

To the Joint Meeting of Essex and Union Counties:

The undersigned, being the Phelps Dodge Copper Prods. Co. of the
Owner/Tenant
property located at 48-94 Bay Way, Elizabeth, N. J. 07207
does hereby request a permit to use an industrial
Connect/Use
sewer connection serving Phelps Dodge Copper Prods. Co., which
Company Name
company is engaged in Manufacturing Copper Rod and Wire

at said location.

ENCLOSURES

1. A plan of the property showing accurately all sewers and drains now existing is attached hereunto as Exhibit "A".
2. Plans and specifications covering any work proposed to be performed under this permit is attached hereto as Exhibit "B".
3. A complete schedule of all process waters and industrial wastes produced or expected to be produced at said property, including a description of the character of each waste, the daily volume and maximum rate of discharge, representative analyses, and compliance with any applicable Pretreatment Standard or requirements, is attached hereunto as Exhibit "C".
4. The name and address of the person or firm who will perform the work covered by this permit is _____

Phelps Dodge Copper Prods. Co. (address above)

In consideration of the granting of this permit, the undersigned agrees:

DGE000058

1. To furnish any additional information relating to the installation or use of the industrial sewer for which this permit is sought as may be requested by the Joint Meeting.
2. To accept and abide by all provisions of the Joint Meeting Regulations and the Municipal Sewer Use Ordinance, and of all other pertinent Ordinances or Regulations that may be adopted in the future.
3. To operate and maintain any wastewater pretreatment facilities, as may be required as a condition of the acceptance into the wastewater treatment system of the industrial wastes involved, in an efficient manner at all times, and at no expense to the Joint Meeting.
4. To cooperate at all times with the Joint Meeting and its representatives in their inspecting, sampling and study of the industrial wastes, and any facilities provided for pretreatment.
5. To notify the Joint Meeting immediately in the event of any accident, or other occurrence that occasions the contribution to the wastewater treatment system of any wastewater or prohibited substances not covered by this permit.

Date: March 18, 85

Signed

K.R. Dehism

Title

Engineering Manager

For Joint Meeting Use Only

\$ Inspection/Permit Fee Paid

Application Approved and Permit Granted:

Date:

Signed

EXHIBIT "A" - P. D. Drawing #J-341-B (attached)

EXHIBIT "B"

Phelps Dodge Copper Products Co. plans to expand the present effluent collecting and neutralizing tank system to incorporate dual sandfilters to maintain compliance parameters.

Specifics can be supplied later.

EXHIBIT "C"

Boiler feed water,

None contact cooling water for various heat exchangers for the Wire Drawing Machines and Flat Wire Rolling Mills.

Makeup water for the Fire Protection System,

Makeup water for Recirculating Systems such as Wire Mill equipment and Extrusion System.

Total discharge for the above = 54,750 Gal./Day

Effluents prior to discharge are neutralized,
tested daily for PH and total copper concentration

JOINT MEETING INDUSTRIAL
INSPECTION REPORT

Facility Name: PHELPS DODGE COPPER I.D.# 0120 Date: 10/1/85 Time: 0920
or

Location:

Street: BAYWAY

Town: ELIZABETH, N.J.

Phone: 351-3200

Inspector: J. KRAUS, A. MALANCA

Person Contacted: KURT BEHRIN
Position:

Weather Conditions: Clear ☒ Rain ☐ Snow ☐

Wind Direction: SE Temp: 76°F Speed 5-8 MPH

Inspection Observations:

Odors: On Site ☐ Yes ☒ No Off Site ☐ Yes ☒ No

Source: _____

Leaks, Spills: On Site ☐ Yes ☒ No Off Site ☐ Yes ☒ No

Source: _____

Overall Housekeeping: Poor ☐ Fair ☒ Good ☐ Excellent ☐

Monitoring System: Air ☐ Yes ☐ No

Water ☐ Yes ☐ No

Pretreatment System: ☒ Yes ☐ No

Description: Electrolytic recovery of copper from acid
pickling process. Overflow treated with soda ash for
pH adjustment.

Number of Outfalls Five (one process outfall)

Description: 1. (Process) Treated water from
acid pickling (2) non-contact
3. cooling water (3) Boiler blow-down.
4. _____

Inspector's Signature _____

DGE000059

Samples Gathered: ☐ Yes ☒ No Number _____

Photos: ☐ Yes ☒ No No. _____ Location: _____

1. _____
2. _____
3. _____
4. _____
5. _____

Observations and/or Other Comments The purpose of the inspection
tour was to try to pin-point the source of the
high copper concentrations found in the manhole
near the truck scale. This manhole is the JM sampling
point and the last manhole before the Bayway
interceptor. A BMR, recently submitted by Phelps
Dodge, showed that the facility is in compliance
with the categorical standards at the point source
but out of compliance at the manhole.

Mr. Kurt Behrsin accompanied us on the tour.
He showed us how all contact and non-contact
cooling water is recirculated in the cold rolling, drawing
and extruding operations. No leakage or spillage was
detected. The only water wasted is from the acid
pickling operation (which is also recirculated until
such time as the pickling solution becomes useless.

Inspector's Signature

Observations and/or other comments

due to saturation with copper. This pickling waste is treated with sulfuric acid and the resulting copper sulfate solution is run through an electrolytic cell and discharged to holding tanks where it is neutralized with soda ash and discharged at the average rate of 70-90 gpd. This waste has been tested by Princeton Aqua Science which ~~remains~~ confirms that it is not the source of the high copper at the manhole. During the course of the investigation, Mr. Behrsin explained that at one time the building ^{was} ~~on~~ to the east of the sampling point housed the older and larger pickling operation which discharged untreated waste for about 50 years. It is very probable that this copper rich waste created the copper bearing sludge noticed by PAS during a recent sampling operation.

It is therefore recommended that JM test the waste at a sampling point discovered upstream of the sludge-bearing lateral to see if the sludge is the source of the high copper. If this theory is correct, it is further recommended that the sludge be removed from this pipe to prevent further leaching of copper to the sanitary system.

Inspector's signature

Facility Plan - Show locations of Process equipment Pretreatment equipment, outfalls, etc.

(see Attached)

Inspectors Signature