PASSAIC VALLEY SEWERAGE COMMISSION - HEAVY METAL SOURCE DETERMINATION
PHASE II INDUSTRIAL CONTRIBUTION
SUB-AREA 2



| CONTROL NO. | NAME AND ADDRESS OF INDUSTRY | FLOW MGD | TOTAL CADMIUM LBS/DAY (MG/L) | TOTAL CHROMIUM LBS/DAY (MG/L) | TOTAL COPPER LBS/DAY (MG/L) | TOTAL LEAD LBS/DAY (MG/L) | TOTAL NICKEL LBS/DAY (MG/L) | TOTAL ZINC LBS/DAY (MG/L) | TOTAL ARSENIC LBS/DAY (MG/L) | TOTAL MERCURY LBS/DAY (MG/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| 380 | HANOVIA LIQUID GOLD<br>1 WEST CENTRAL AVE.<br>EAST NEWARK | 0.0220 | 0.001 < ( 0.008) | 0.001 ( 0.005) | 0.012 ( 0.066) | 0.033 < ( 0.179) | 0.001 ( 0.005) | 0.058 < ( 0.314) | 0.000 ( 0.001) | 0.0001 ( 0.044) |
| 430 | DRIVER HARRIS CO.<br>201 MIDDLESEX ST.<br>HARRISON | 0.2020 | 0.027 ( 0.016) | 2.022 ( 1.200) | 0.901 ( 0.535) | 0.136 ( 0.081) | 7.396 ( 4.390) | 0.099 < ( 0.059) | 0.002 ( 0.001) | < 0.0002 ( 0.000) |
| 440 | EAGLE AFFILIATES INC.<br>505 MANOR AVE.<br>HARRISON | 0.1150 | 0.024 ( 0.025) | 0.014 ( 0.013) | 0.181 ( 0.189) | 0.090 ( 0.094) | 0.093 ( 0.097) | 0.132 < ( 0.138) | 0.001 ( 0.001) | 0.0034 ( 0.003) |
| 450 | HARVEL PHOTO CO. INC.<br>111 SOUTH 4TH ST.<br>HARRISON | 0.0040 < | 0.000 ( 0.005) | 0.001 ( 0.031) | 0.006 ( 0.178) | 0.002 ( 0.059) | 0.003 ( 0.093) | 0.015 ( 0.454) | 0.000 ( 0.001) | 0.0001 ( 0.002) |
| 460 | C. S. OSBORNE & CO.<br>125 JERSEY ST.<br>HARRISON | 0.0001 | 0.000 ( 0.022) | 0.001 ( 0.778) | 0.009 ( 11.100) | 0.000 ( 0.479) | 0.001 ( 0.642) | 0.004 < ( 7.130) | 0.000 ( 0.001) | < 0.0000 ( 0.000) |
| 670 | OTIS ELEVATOR CO.<br>1000 1ST ST.<br>HARRISON | 0.0960 | 0.006 ( 0.008) | 0.418 ( 0.522) | 0.159 ( 0.199) | 0.113 ( 0.141) | 0.032 ( 0.040) | 3.268 ( 4.580) | 0.002 ( 0.003) | 0.0046 ( 0.006) |
| 690 | WORTHINGTON PUMP CORP.<br>401 WORTHINGTON AVE.<br>HARRISON | 0.2490 | 0.032 ( 0.025) | 0.064 ( 0.031) | 0.461 ( 0.222) | 0.287 ( 0.138) | 0.087 ( 0.042) | 0.326 < ( 0.157) | 0.002 ( 0.001) | 0.0768 ( 0.037) |
| 780 | BREW CHEMICAL<br>1104 HARRISON AVE.<br>KEARNY | 0.0440 | 0.006 ( 0.016) | 0.062 ( 0.169) | 0.090 ( 0.245) | 0.281 ( 0.767) | 0.021 ( 0.058) | 0.778 < ( 2.120) | 0.000 ( 0.001) | < 0.0000 ( 0.000) |
| | SUB-AREA 2 | | | | | | | | | |
| | TOTAL INDUSTRIAL HEAVY METALS LOCATED-PHASE II | | 0.117 | 2.583 | 1.820 | 0.943 | 7.634 | 4.683 | 0.008 | 0.0931 |

PASSAIC VALLEY SEWERAGE COMMISSIONERS

Date: 4/28/78 Interviewed by: Scott & Standfast

PVSC Industry # HR-660

Industrial Wastewater Questionnaire "attach business card"

Part A

1) Industry Name C.S. OSBORNE & CO.

2) Address 125 (No.) Jersey Street (Street) Harrison (Municipality)

3) Responsible Person to whom further inquiries should be directed:

George Akunowicz (Name) Plant Manager (Title) 483-3232 (Telephone)

4) Type of Industry Mechanic's Tools Mfg.

5) Primary S.I.C. number, if available 3546
(4 Digit Code from 1976 standard industrial classification manual)

6) Principle Raw Materials(s) used Steel

7) Principle Product(s) produced Mechanics Tools

8) Hours per day manufacturing operations are conducted 8

Days per week manufacturing operations are conducted 5

Process Discharge Frequency (circle one) Continuous (Intermittant) # of Batches/Day 1
Times of Day 8:00 - 8:30 A.M.

9) Number of employees at this location 90

10) Indicate plant water consumption figures in gallons or cubic feet during the most recent calender quarter. If you obtain water from a privately owned well and do not meter your consumption from this source, indicate the capacity of the well pump(s) in gallons per minute and the approximate daily running time(s) in hours per day.



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Industrial Wastewater

Questionnaire

Part A

Continued

City or Public Supply

718,080 Gallons/Quarter

9,610 Cubic Feet/Quarter

Harrison Name of City or Public Supply

'76 Total 793,580
To Storm (N.C.C.) 1,321,4400, Boiler 15,000
Sanitary 436,740 (EMPL) 15,200 Proc.

Private Well Supply

_____ Gallons/Quarter

_____ Cubic Feet/Quarter

_____ Well Pump(s) Gal/Min.

_____ Pump Running time(s) Hrs/Day

____ % of Water Used in Actual Process

____ % of Water Discharged From Process

____ % of Water Discharged as Non-Contact Cooling Water

25 % of Water Discharged From Sanitary Conveniences

Indicate Location of Water Meter:

1st Floor Under Deck.

Industrial Wastewater

Questionnaire

Part B

1) Number of metal contributing discharge points to municipal sewer: 1

2) Check off which of the below is in each metal discharge point:

| Line A | | Line B | | Line C | |
|---|---|---|---|---|---|
| Any detectable gas | ___ | Any detectable gas | ___ | Any detectable gas | ___ |
| Process | X | Process | ___ | Process | ___ |
| N.C. Cooling | - | N.C. Cooling | ___ | N.C. Cooling | ___ |
| Sanitary | - | Sanitary | ___ | Sanitary | ___ |
| Storm | - | Storm | ___ | Storm | ___ |

3) Illustrate the processing areas, the eminating discharge sanitary line(s) carrying the metals contaminated wastewater, the location of the proposed sampling manhole, any upstream manhole, and the receiving municipal sewer. Label each metal process sanitary line A,B,C,.... Indicate landmarks. If sampling or flow measuring device already exists, indicate so. Attach any existing schematics of sanitary layout provided by the company.

See Schematic.



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4) Describe each manhole or sampling location in detail. (Label A,B,C,...)

LETTER A

MANHOLE:

(circular) surface ∅ _____

inside length 15" (parallel with pipe)

inside width 4'

entire depth 10"

junction manhole yes____ no____ # of in pipes 1

PIPES:

in pipe ∅ 5" % full 0 at this time

out pipe ∅_____ % full _____

water depth in pipe _____

surcharged yes ____ no____

CHANNEL:

water depth _____ benched yes ____ no____

water depth range_____

water velocity _____ turburlence yes _____ no _____

roll in front of stake ____ super critical velocity yes_____ no _____

channel configuration straight _____ roll behind stake ____ curved _____ sloped _____

instantaneous flow _____ drop _____

SAMPLING:

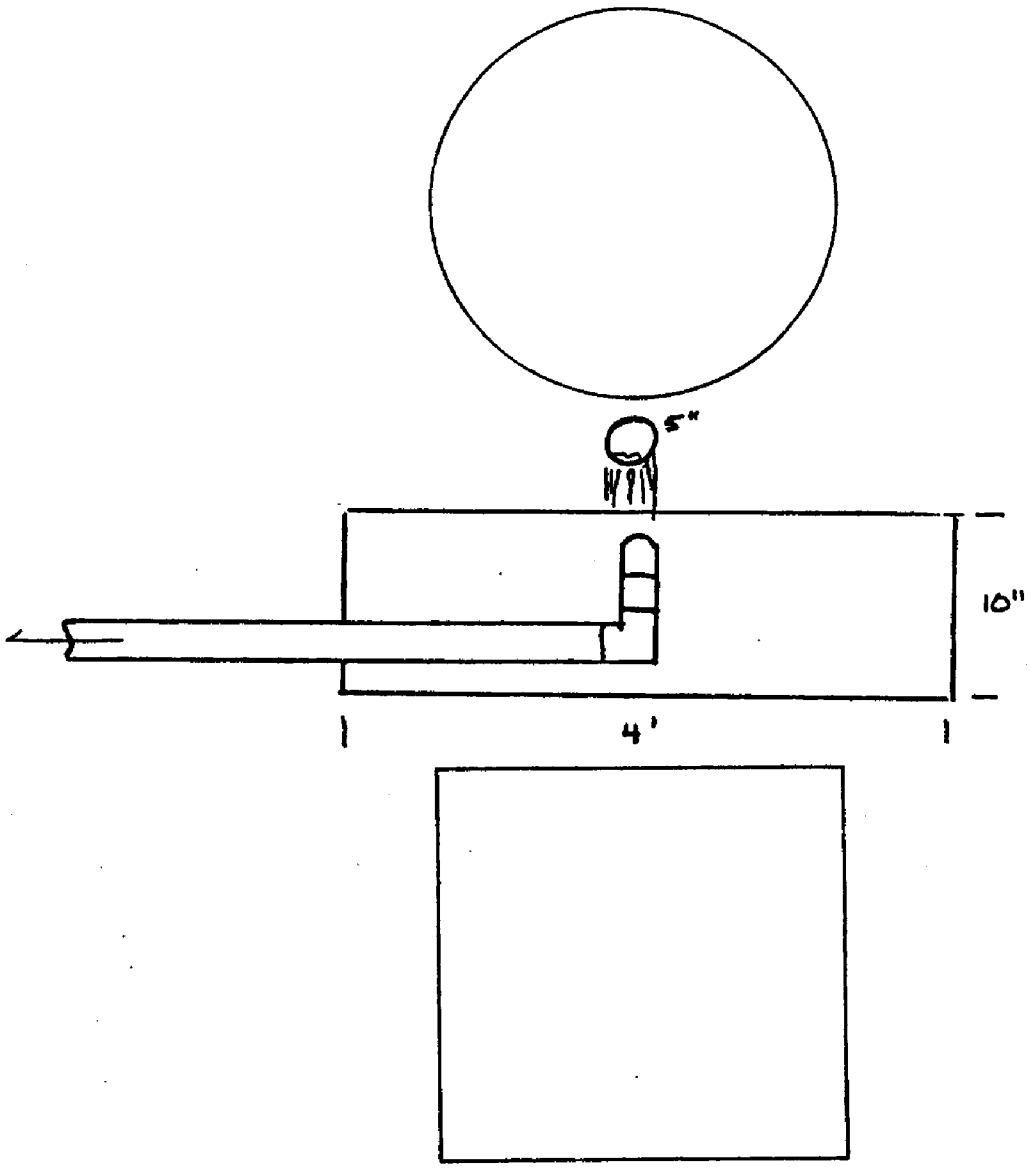
can be harnessed in MH _____ placed in MH _____

or placed outside MH X

(vandalism problem yes X no___)

5) Sketch each manhole or sampling location in detail. Attach photograph (Label A,B,C,.....).

LETTER A.



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TO BE COMPLETED IN OFFICE

6) Final recommendations for flow measurement & sampling.

| | Sampling Line A | B | C |
|---|---|---|---|
| SAMPLING: | | | |
| Automatic | ___ | ___ | ___ |
| Manual | X | ___ | ___ |
| FLOW MEASUREMENT: | | | |
| Automatic | | | |
| Depth of flow in in-pipe,veloc/cur. meter, dipper method | ___ | ___ | ___ |
| Depth of flow in in-pipe, veloc/dye, dipper method (shallow flows) | ___ | ___ | ___ |
| Depth of flow in in-pipe, slope to upstream MH, rough, dipper method | ___ | ___ | ___ |
| 90° v-notch weir in out-pipe, dipper method | ___ | ___ | ___ |
| Insert flume in out-pipe, dipper method | ___ | ___ | ___ |
| Inflatable flume in in-pipe, dipper method (up to 8"Ø) | ___ | ___ | ___ |
| Weir-box w/inflatable tube, dipper method | ___ | ___ | ___ |
| Up & downstream depths of flow in mun. coll/syst., slope, rough, dipper method | ___ | ___ | ___ |
| Manual | | | |
| Bucket & stop-watch (elevated sewers w/smaller flows) | X | ___ | ___ |
| Trajectory method (elevated sewers) carpenters square | ___ | ___ | ___ |
| Depth of flow in in-pipe, weir method | ___ | ___ | ___ |
| Water meter readings | ___ | ___ | ___ |



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TO BE COMPLETED IN OFFICE

7) Recommendations for sampling and flow measurement, including equipment and special devices required (A,B,C,...). Check if required and size.

| AUTOMATIC | A | B | C |
|---|---|---|---|
| Samplers | | | |
| Harness | | | |
| Current Meter (velocity) | | | |
| Dye & Watch | | | |
| Dippers | | | |
| Rod & Transit | | | |
| Flumes | | | |
| Insert | | | |
| Inflatable | | | |
| 4" | | | |
| 6" | | | |
| 8" | | | |
| 10" | | | |
| 12" | | | |
| 15" | | | |
| Weirs v-notch (90°) | | | |
| 4" | | | |
| 6" | | | |
| 8" | | | |
| 10" | | | |
| 12" | | | |
| 15" | | | |
| Weir Box (inflatable) | | | |
| | | | |
| Packing | | | |
| Blocks | | | |
| Sand Bags | | | |
| Caulking | | | |
| | | | |
| MANUAL | | | |
| Bottles | | | |
| Bucket & watch | X | | |
| Weirs (v-notch 90°) | X | | |
| 4" | | | |
| 6" | | | |
| 8" | | | |
| 10" | | | |
| 12" | | | |
| 15" | | | |
| Carpenter's square with level | | | |
| NOTES: | | | |



845180011

## Industrial Wastewater

## Questionnaire

## Part C

1) Do you pretreat any wastewater before discharging to the sanitary sewer?

YES

If the answer is "yes", briefly describe pretreatment method(s), what specific parameter pretreatment is utilized for, and how is residue generated by pretreatment disposed.

PH CONTROL

2) The following tests will be performed by PVSC at a later date on a series of 24 hour flow proportioned composite samples collected over a period of two (2) consecutive production days. Samples shall be collected from each individual waste sewer leaving your plant which is connected directly to the municipal PVSC sanitary sewer system.

Previous Measurements of Flow and Metals (if available)

| Analysis | A & B | B | C |
|---|---|---|---|
| Daily Flow (Gal/Day) | 600,000 | | |
| Chromium (mg/l) | .05-30 | | |
| Cadmium (mg/l) | | | |
| Copper (mg/l) | 1 -4.5 | | |
| Lead (mg/l) | .05 - .95 | | |
| Nickel (mg/l) | | | |
| Zinc (mg/l) | 4.0 - 75 | | |
| Mercury (mg/l) | | | |
| Arsenic (mg/l) | | | |
| Vanadium (mg/l) | | | |
| Selenium (mg/l) | | | |
| Beryllium (mg/l) | | | |

TO BE COMPLETED IN OFFICE

8) Miscellaneous notes and recommendations (i.e., manhole construction recommended, must be monitored during dry weather, equipment suggestions, etc.)

Flow consists of 15-20 gal. dumped once a day from tumbling machines.



845180013

Industrial Wastewater

Questionnaire

Part C

1) Do you pretreat any wastewater before discharging to the sanitary sewer?

NO

If the answer is "yes", briefly describe pretreatment method(s), what specific parameter pretreatment is utilized for, and how is residue generated by pretreatment disposed.

2) The following tests will be performed by PVSC at a later date on a series of 24 hour flow proportioned composite samples collected over a period of two (2) consecutive production days. Samples shall be collected from each individual waste sewer leaving your plant which is connected directly to the municipal PVSC sanitary sewer system.

Previous Measurements of Flow and Metals (if available)

| Analysis | A | B | C |
|---|---|---|---|
| Daily Flow (Gal/Day) | | | |
| Chromium (mg/l) | | | |
| Cadmium (mg/l) | | | |
| Copper (mg/l) | | | |
| Lead (mg/l) | | | |
| Nickel (mg/l) | | | |
| Zinc (mg/l) | | | |
| Mercury (mg/l) | | | |
| Arsenic (mg/l) | | | |
| Vanadium (mg/l) | | | |
| Selenium (mg/l) | | | |
| Beryllium (mg/l) | | | |