

ANNUAL REPORT

by

Chief Engineer
S. A. LUBETKIN

to the

**PASSAIC VALLEY
SEWERAGE COMMISSIONERS**

FOR THE YEAR

1971



MBB000001

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Violation & Elimination-J. I. Hoss Company, 859 Communipaw Avenue, Jersey City, New Jersey.
August 31, 1971

(J. McLaughlin)

A reddish orange color was traced back to the Pulaski Skyway Bridge by Inspector J. McLaughlin. The J. I. Hoss Co., a painting contractor, was painting this bridge. Mr. James Papas, Supervisor, informed Mr. McLaughlin that a vehicle hit a 30 gallon drum of paint which spilled into the river. Mr. Papas showed Mr. McLaughlin drop cloths secured below the painting area to catch splatterings, but the above pollution was an accident.

Violation & Elimination-Imperial Electro Plating Co., Inc., 50-52 Park Avenue, Lyndhurst, New Jersey.
November 11 to December 29, 1971

(F. Cupo)

A sample taken by Inspector Cupo at Park and Lake Ave., (discharging into the Lake Avenue Storm Sewer) contained a large amount of iron oxide. This was traced by the inspector back to the Imperial Electro Plating Company.

On November 16, a sample was taken of the discharge from this company and analysis confirmed pollution. The waste was acid (pH 3.6) and a C.O.D. of 100.

Mr. Lubetkin wrote to this company on November 23, informing them of the pollution violation and directing they cease pollution at once.

Mr. Cupo met Mr. G. Dotoli, General Manager, on November 24, and was informed that carelessness in his back-yard had caused oil and iron chips to get into the storm sewer.

Mr. Cupo inquired about a 3'x3' pit located in front of the property which was covered with a heavy plate and was therefore not visible. Mr. Dotoli said he had covered a storm outlet that had been sealed. At Mr. Cupo's request the plate was removed and it was discovered that the pipe was not sealed.

On November 30, Mr. Cupo, Mr. Cuccinello and Mr. Fleming visited this company at 10:30 A. M. They had the plate lifted and took a sample of the discharge which flows into the Lake Avenue Storm Sewer. This was analyzed and found to be polluting.

On December 8, Mr. Lubetkin wrote to Mr. G. Dotoli and informed him of the pollution and directed him to take whatever steps are necessary to halt this pollution.

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Mr. Dotoli, informed the inspector that he would plug the line to the storm sewer and had ordered a plug. Meanwhile samples taken December 9 and 15 confirmed continued pollution.

Mr. Lubetkin requested Chief Counsel Segreto to write to this company, which he did on December 20, informing the company that if a satisfactory reply is not received by the Commissioners by their December 29 meeting, the matter would be referred to suit without further notice. A sample December 21, was still polluting.

On December 23, Mr. G. Dotoli wrote the Commissioners that they were waiting for the necessary material and feel that by December 31, or sooner the problem will be corrected.

On December 29, at 9:45 A. M., Supervisor L. Cuccinello inspected this plant and found the pipe sealed with an 8" cap., thus no flow could reach the storm sewer from this pit.

On December 30, Mr. Dotoli wrote to Mr. Lubetkin, informing him of the steps taken to eliminate the pollution and thanking the Commissioners for their cooperation and courtesy.

Violation & Elimination-Inmont Chemical Corp., 150 Wagaraw Road, Hawthorne, New Jersey.
January 6, 1971

(T. Costello)

Inspector T. Costello traced green in the Passaic River to this plant. He found that heavy rain washed material from old fiber & steel drums containing residue dye into storm drains. Sodium Hypochlorite was used to bleach residue dye in the storm ditches.

The company removed the drums and promised in the future they would be stored in a protected area.

In addition to the above, a pump in their pretreatment system failed. The maintenance foreman pumped the overflow to the storm system by mistake, contributing to the River problem. When this was pointed out they halted pumping immediately, and repaired the pump to the sanitary system.

March 22, 1971.

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Inspector, T. Costello, traced oil in a storm ditch to this company and to a leaky oil pump. When the plant engineer was informed of this, he immediately switched to a stand-by-pump until leaky pumps could be repaired, thus eliminating pollution..

June 15, 1971.

At approximately 10:00 A. M. on June 15, 1971, while transferring filter press boxes of fluorescein from one building to another, some of the dye fell to the ground.

PASSAIC VALLEY SEWERAGE COMMISSION
NEWARK, NEW JERSEY

HEAVY METALS

SOURCE DETERMINATION STUDY

APPENDIX B

INDUSTRIAL WASTE SURVEYS

Part B.- Results of Sampling and Analysis

PHASE I

August 15, 1978

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Elson T. Killam Associates, Inc.



TIERRA-B-012293

PASSAIC VALLEY SEWERAGE COMMISSION - HEAVY METAL SOURCE DETERMINATION
 PHASE II INDUSTRIAL CONTRIBUTION
 SUB-AREA 4

| 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) | PAGE 2 |
|--|---|----------|------------------------------|-------------------------------|-----------------------------|---------------------------|-----------------------------|---------------------------|------------------------------|------------------------------|--------|
| 900 | IMPERIAL ELECTROPLATING CO. 52 PARK AVE. LYNDHURST | 0.0490 | 0.010 (0.025) | 1.569 (3.840) | 0.206 (0.503) | 0.074 (0.181) | 0.013 (0.032) | 10.543 (25.800) | 0.000 (0.001) | 0.0016 (0.004) | |
| 910 | S. B. PENICK CO. 540 NEW YORK AVE. LYNDHURST | 0.2030 | 0.063 (0.037) | 0.356 (0.210) | 0.791 (0.467) | 0.797 (0.471) | 0.655 (0.387) | 2.404 (1.420) | 0.005 (0.003) | 0.0044 (0.003) | |
| 1700 | INT'L TELEPHONE & TELEGRAPH CORP. 390 WASHINGTON AVE NUTLEY | 0.2180 | 0.058 (0.032) | 0.102 (0.056) | 0.213 (0.117) | 0.133 (0.073) | 0.147 (0.081) | 0.153 (0.084) | 0.002 (0.001) | 0.0045 (0.002) | |
| 1710 | OXY-METAL INDUSTRIES CORP. 75 RIVER RD. NUTLEY | 0.1090 | 0.019 (0.021) | 0.530 (0.583) | 0.964 (1.060) | 0.125 (0.137) | 6.363 (7.000) | 45.726 (50.300) | 0.001 (0.001) | 0.0015 (0.002) | |
| SUB-AREA 4 | | | | | | | | | | | |
| TOTAL INDUSTRIAL HEAVY METALS LOCATED-PHASE II | | | 1.800 | 86.432 | 12.443 | 18.781 | 23.001 | 130.606 | 0.032 | 0.2364 | |

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KL1013804

WEEKLY RESUME

10/29/79 to 11/2/79

11/2 Cordasco/Parr
TOWN OF BELLEVILLE
Chestnut St. outlet

Samples taken of outlet analyzed
as polluting.

11/2 Sventy/Cuccinello
~~CBS~~ TOYS
Paul Kohner Drive
Elmwood Park

Monthly

Oily material continues to seep
under and around filter fence -
despite efforts to contain.

11/2 Fleming/Perrapato
CITY OF CLIFTON
Athenia Storm

Sample polluting - nothing new being
done to correct pollution.

11/2 Fleming/Perrapato
CITY OF CLIFTON
8" Sanitary Line, Crossing
3rd River at A.D.P.

Sample taken polluting - seepage
continues at this point.

11/2 Sventy/Cuccinello
COOK MACHINERY
380 Pleasantview Ave.
Hackensack

INSP

Violation-Elimination - runoff from
steam cleaning of machinery reached
catch basin thence Millbank Brook.

11/2 Sventy/Cuccinello
CURTISS WRIGHT
Passaic St.
Wood Ridge

Monthly

Several inspections of Feds Brook
reveals no visible oil - source as
yet undetermined.

11/2 Fleming/Perrapato
DUNKIN DONUTS
Union Ave. and Main Ave.
Clifton

INSP

Special - city completed new tie in
of sanitary line.

11/2 Sventy/Cuccinello
IMPERIAL ELECTRO PLATING
52 Park Ave.
Lyndhurst

Monthly

To date no corrective action has
been taken at this company.

11/2 Fiore/Colello
TOWN OF KEARNY
Pennsylvania Ave.

✓

Pollution still present at this
location.

11/2 Sventy/Cuccinello
BORO OF LODI
Millbank Brook Before &
After Gibraltar Chem. & Plastics

✓

Samples taken were analyzed as
polluting.

11/2 Sventy/Cuccinello
BORO OF LODI
12" Overflow into Saddle
River at Hendricks St. Pump
Station

Monthly

Numerous efforts were made, requesting
boro to take action in eliminating
this pollution - but to no avail.

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ALL027135

✓ Weekly progress reports

✓ cards
✓ brand

WEEKLY RESUME

11/26/79 to 11/30/79

11/30 Cordasco/Parr
TOWN OF BELLEVILLE ✓
Chestnut St. outlet

No samples taken this week - will continue to investigate.

11/30 Sventy/Cuccinello
CBS TOYS
Paul Kohner Dr. *Monthly*
Elmwood Park

Oily material continues to seep through filter fence - company seeking solution to problem.

11/30 Fleming/Perrapato
CITY OF CLIFTON ✓
Athenia Storm

City to conduct survey with help of P.V.S.C. River Inspection Dept. in order to locate source of pollution problem.

11/30 Fleming/Perrapato
CITY OF CLIFTON ✓
8" Sanitary Line Crossing
3rd River at A.D.P.

Work to correct problem to begin on 12/3/79.

11/30 Sventy/Cuccinello
CURTISS WRIGHT
Passaic St. *Monthly*
Wood Ridge

Boom and pads maintained - source of oil undetermined - brook appears clear.

11/30 Tomaro/Mc Laughlin
BORO OF FAIR LAWN ✓
North Chamber

Special - due to heavy rains chamber opened - closed on following day.

11/30 Sventy/Cuccinello
CITY OF GARFIELD ✓
Schroeders Brook

Samples taken analyzed as non polluting

11/30 Sventy
IMPERIAL ELECTRO PLATING
52 Park Ave. *Monthly*
Lyndhurst

No corrective action has been taken - pollution still exists - recommend our legal dept. to intercede.

11/30 Sventy/Cuccinello
BORO OF LODI ✓
Millbank Brook at
Saddle River

Sanitary line to be checked for any leaks or breaks.

11/30 Sventy/Cuccinello
BORO OF LODI ✓
Millbank Br. before - after
Gibraltar Chemical and
Plastics

Dye tests conducted to locate source - inconclusive - sample taken analyzed as high fecal coliform.

11/30 Sventy/Cuccinello
BORO OF LODI *Monthly*
12" Overflow at Hendricks
St. Pump Station

Monies to correct problem are a problem at present time.

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KLL027163

WEEKLY RESUME

12/17/79 to 12/21/79

✓ Board
1/10/80

12/17 Sventy/Cuccinello
IMPERIAL ELECTRO PLATING
52 Park Avenue
Lyndhurst

update

On 12/15 necessary corrections were made (replacements) to 12' and 30' sanitary lines, which were found to rotted

✓ 12/19 Cordasco/Parr
Cuccinello
PASSAIC PARK AUTO REPAIR
169 Monroe Street
Passaic

insp.

Motor oil dumped into catch basin

12/20 Perrapato/Tomaro
PASSAIC PARK AUTO REPAIR
169 Monroe Street
Passaic

follow up

Violation-Elimination - catch basin cleaned and empty drum placed along-side building to be used for discarded oils

12/21 Tomaro/Perrapato
CITY OF CLIFTON
Athenis Storm Sewer

Sample still shows signs of pollution fecal coliform

12/21 Perrapato/Tomaro
CITY OF CLIFTON
8" Sanitary Line Crossing
at A.D.P.

Violation-Elimination - installation of new line completed - line along 3rd River - pipe crossing sealed at both ends

12/21 Fiore/Colello
FINE PIGMENTS INC.
180 Blanchard St.
Newark

Special - work to install 4" line to relieve heavy flow at Blanchard St. to begin in the spring of 1980

12/21 Cordasco/Parr
CITY OF NEWARK
Meadowbrook Storm

Pollution still evident at this location - no new progress made to abate

12/21 Cordasco/Parr
CITY OF ORANGE
Washington St. Storm

Sample taken analyzed as non polluting

12/21 Perrapato/Tomaro
CITY OF PASSAIC
Madison St. Storm

Samples taken analyzed as polluting fecal coliform

12/21 Tomaro/Perrapato
CITY OF PASSAIC
Paulison and Oak

Violation-Elimination - blockage in sanitary line released - which eliminated pollution (of overflow)

12/21 Tomaro/Perrapato
CITY OF PASSAIC
Speer Village outlet

Due to bad weather sample cancelled

12/21 Tomaro/Perrapato
Oily Film in Passaic River
Fair Lawn - Paterson

Follow up

Violation-Elimination - follow up investigation made - found no trace of oil


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K11022177

New Jersey Department of Environmental Protection
Solid & Hazardous Waste Enforcement
Bureau of Hazardous Waste Enforcement - Northern

MEMORANDUM

October 6, 1997

TO: File through Jeff Sterling, Supervisor 
FROM: Stephan Szardenings, Sr. Env. Specialist
RE: Imperial Electroplating - Hazardous Waste Investigation (Possible Non-Notifier)

On 9/23/97, and 9/30/97, this inspector conducted a hazardous waste investigation at Imperial Electroplating (NJD001252634), located at 523 Park Avenue, in Lyndhurst, N.J. The facility representatives were Mr. Fred Englehart, and Mr. Ed Englehart - both co-owners of the facility. Mr. Mike Mariano (NJDEP-BHWC&E-Northern) accompanied this inspector on 9/23/97, and Mr. Damiano Albanese (Bergen County Health Services) who was onsite during both inspection dates. A Mrs. Sherry Schirripa, from Interactive Environmental Compliance Corp. (consultant for Imperial) was onsite on 9/30/97.

Imperial operates a medium sized electroplating business out of their Lyndhurst location. Currently they perform primarily zinc, cadmium, copper, copper nickel, and black oxide plating onsite. On 9/8/97, the Department received a referral from the Bergen County Health Services (BCHS), indicating that Imperial might be a non-notifier of hazardous waste generation. This referral included a copy of Mr. Albanese's report, Case Information (case number 97-8-57), and a letter/NOV from Passaic Valley Sewerage Commission. Both a representative from PVSC, and Mr. Albanese were onsite on 8/14/97, in regards to a complaint of "disposing of chemicals down the sanitary sewer", that was called in to the Department's Trenton Dispatch.

Imperial does maintain a discharge permit with PVSC, and as per Mr. Albanese, has not violated/exceeded their discharge parameters in the past 3 years (as per Mr. Albanese). PVSC alleges in their letter that Imperial may be discharging solids and/or sludges into their sewer system, due to the nature of their business. The Englehart's claim that the changing discharge parameters in the permit have forced them to place a filter press, metal precipitation unit, updated wastewater treatment unit, and eventually a sludge drying unit in place. These units, with the exception of the drying unit, were placed into operation in July 1997. Imperial applied for a Generation Identification Number (w/ USEPA) in early August, and received their USEPA ID number (mentioned earlier) shortly afterwards. This inspector inquired as to how Imperial had managed, over the past 11 years, not to have generated any hazardous waste offsite. Mr. Fred Englehart replied by stating that @90% of Imperial's business had been black oxide, tin, and zinc plating, with small amounts of cadmium plating occurring onsite. Imperial has not generated any hazardous waste offsite because of the use of multiple dead rinses, counterflow rinses, dragouts, recycling, and the reconstitution of plating & other baths - these procedures allowed to discharge only wastewater to PVSC, within permit limits. The black oxide, tin, and zinc plating lines would

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not generate a listed hazardous waste, however, there could be the possibility of a characteristic (ex. D002) hazardous waste being generated if a plating bath solution were to go bad.

Currently, Imperial has two (2) zinc plating lines, two nickel plating (electroless & electroplating), copper, silver, gold, and a tin plating line each. All of the plating lines are operated via an automated barrel plating line (various sizes). Imperial also operates a small parts, dip plating operation - this area performs passivation, silver, nickel, tin, and alodine plating. Imperial also has an area dedicated to performing rack plating - here too Imperial performs zinc, copper, nickel, cadmium, and tin plating. The final metal finishing operations is a black oxide line, where a black oxide, suspended in a hot sodium hydroxide solution, is used to coat the parts (see Item #6 on map).

Upon initiating the facility tour, the first plating line inspected was the cadmium (barrel) plating line. It was initially explained by Mr. Englehart that all of the metal preparation steps are, for the most part, identical to one another. The only notable exception is that all of the plating lines, with the exception of the tin plating, utilize a 25% hydrochloric acid (HCL) solution to activate the metal surfaces of the parts. The tin plating lines utilize a 1% sulfuric (H₂SO₄) acid solution to activate the metal surfaces of the parts.

The cadmium plating line begins by having a part being initially in a soak cleaner (which is sodium hydroxide-NaOH), and then an electrocleaner (also NaOH). The only differences between the cleaners is that the electrocleaner has an ionically charged caustic solution. Next, the part is run through a dead rinse, before being placed into the "Pickling" tank, or the metal activation tank. This is the tank that will contain either the HCL, or the H₂SO₄ acid solution. Two (2) flow rinses follow, before the parts are placed into one of two plating tanks (90 gallon capacity). The cadmium plating tanks utilize a sodium cyanide based solution. The parts are run through a drag out tank, and then through an additional two dead rinse tanks. The parts are then run through a neutralization tank (utilizes hydrogen peroxide & sulfuric acid), before going through another dead rinse. Lastly, based upon the customers request, the parts are then sent through a clear chromate solution, or a yellow chromate solution. Both solutions contain tri-valent chrome, and the parts are both sent through a final flow rinse tank before being dried, and sent to Imperial's customer's.

Imperial is currently performing a unique operation at their cadmium, barrel plating line (see Item #1 on map). After the parts have been plated in the sodium cyanide based bath, the rinses are first directed to a separate cyanide destruct system. This system consists up of six (6)-55 gallons drums that are hard piped together. Imperial adds bleach to the system, and the drums provide a counterflow system to allow for the destruction of any cyanides present. In the past, the deactivated solution was sent directly to the primary wastewater treatment (WWT) unit. However, Imperial is planning to add a 200 gallon pH adjustment tank, followed by a smaller sludge retention unit in which Imperial can add a flocculent to create a slurry. This slurry solution will then be run through a two (2) cubic yard filter press to remove all of the solids. This will generate a small amount of waste filter cake (F006) material when the system is up and running (all of the units are in place and are in need of only being hooked up). The resultant water, which is removed by the filter press, will then be sent through Imperial's primary WWT operation.

Next, the tin, barrel plating line was inspected (see Item #2 on map). The initial metal preparation is similar to all of the plating lines, however, this line uses the 1% H₂SO₄ solution to

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clean the parts. The 400 gallon plating tank is comprised up of a sulphuric acid, and stannus sulphate solution to create the desired plating solution. All of the flow through rinses from this line go through Imperial's primary WWT.

The next plating line inspected was Imperial's zinc, barrel plating line (see **Item #3** on map). This line can handle larger parts, but with the exception of the zinc plating tank (Imperial uses a zinc chloride solution) the plating line, and the sequence of baths, are identical to the cadmium plating line (Item #1).

The nickel, barrel electroplating line was next inspected (see **Item #4** on map). The cleaning stages are the same. A 25% HCL solution is used as the metal activator, followed by a rinse, and a series of four (4)- 125 gallon nickel plating tanks. Having been plated, the parts are run through a dead rinse, before being sent through a series of three (3) counter-flow rinses. The rinsate from the counter-flow tanks is sent to a retention tank, where it is then run through an evaporator unit. The evaporator unit removes as much water as possible, before sending the material to a smaller storage tank. This material is used to help reconstitute the nickel plating tank(s) when needed.

Next, Imperial's oldest plating line was inspected. This is Imperial's second zinc, barrel plating line (see **Item #5** on map). This line is separated into two smaller lines. One side dedicated to the cleaning operations, with the other side dedicated to the actual plating operations. The plating sequence is identical to the zinc plating line mentioned earlier.

Located adjacent to the zinc plating line (Item #5), is Imperial's rack plating operation (see **Item #7** on map). This one of two plating operation onsite, that are manually operated. A total of nine (9) tanks are located here. Again, Imperial has a tank dedicated for the caustic cleaner, electrocleaner, metal activator (25% HCL), cadmium plating solution (sodium cyanide), two zinc tanks, tin plate, copper, electroplated nickel, and a single tank that is divided into six sections - which are comprised up of rinse tanks & the clear, and yellow chromates. All of these tanks have a capacity of @400-500 gallons.

One of the last areas inspected by this inspector was Imperial's primary WWT operation (see **Item #8** on map). Prior to July 1997, it appears that Imperial only performed a pH neutralization operation. But since receiving the NOV letter from PVSC, additional WWT devices have been placed in-line, and in operation. The rinse waters, from the plating lines, are initially received in a 100 gallon congregation tank. From here, the wastewater is sent to a 500-700 gallon, pH adjustment tank. Imperial adds calcium chloride to initiate precipitation. The wastewater is retained inside of the tank for @1 hour. Next, the wastewater is sent through a clarifier unit, which will aid in the metal precipitation. In the first chamber, polymers are added to start the flocculation. As the metal begins to precipitate out, the solids fall through a series of honeycomb chambers, so that the solids and the cleaned water can be separated. The solids are allowed to settle to the bottom of the clarifier unit. When the clarifier has reached a particular solids level, it will pump out the solids to a 1000 gallon, slurry holding tank. The cleaned water from the tank is pH monitored one last time, before being discharged to PVSC. From here, the slurry solution can be pumped through a 4 cubic yard filter press located adjacent to the slurry tank. Currently, the filter press squeezes out the water, and the water is collected into a square polyethylene container, to retain it. This polyethylene container is also used to collect the waste filter cake when it has been removed from the filter press (the polyethylene container was found

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to have @3/4 of a 55 gallon drum's worth of waste filter cake material inside of it). The water is allowed to separate out in this container, and is placed back into the slurry tank. Imperial was hoping to have had a sludge drying unit in place, and operational, but the wrong unit was sent to Imperial by the manufacturer. Imperial stated that in 30-60 days, the new sludge drying unit should be in place, and operational. Imperial plans to place the filter press directly over the sludge drying unit, so that when filter cake is generated, it can be dropped straight down into the dryer, avoiding exposure, and eliminating some labor intensive work. Since Imperial has put this new WWT in operation, Imperial has not generated any hazardous waste offsite. During the facility tour, this inspector did observe two (2)-55 gallon drums of wet filter cake material. Each drum was no more than 1/2 full, and both were properly labeled, and marked with an accumulation start date. No container management problems were observed. No other hazardous waste was found during the facility tour.

The final area inspected was Imperial's small parts plating operation (see Item #9 on map). This area incorporates several larger tanks, that have been sectioned down into even smaller plating baths. The parts are hand dipped into the baths, until the desired coating is achieved. Again, Imperial performs tin, silver, nickel plating operation. They also perform passivation here, as well as alodine plating on aluminum parts. No problems were found here.

Based upon the facility tour, this inspector found no evidence of Imperial disposing of any hazardous materials / chemicals down the sewer line(s), with the exception of the cleaned water being discharged to PVSC, at the end of the WWT operations. No NOV's were issued against Imperial. However, based upon the history of the facility, and based upon the fact that the new WWT has just been put into operation, this inspector is unable to determine what class of waste generator Imperial would fall into. This inspector recommends that the Department perform another onsite inspection in 6-12 months, after Imperial has established a regular rate & amount of waste generation.

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