INVESTIGATIVE MEMORANDUM

City of Portland / Outfall 17 / Contaminated Sediment Source Identification

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Date: June 30, 2003

Background

In March 2002, BES and Metro Rooter Plumbing personnel did extensive cleaning of a 54"x 54" storm sewer line that drains to City Outfall 17. This cleaning centered around sediment removal from the storm sewer line. The storm line cleaning started near the 2300 block of NW 30th Ave and continued north along NW 30th Ave to the intersection of NW 29th Ave. and NW 31st Ave (Figure 1).

The 54" storm line originates near the 2100 block of NW 30th Ave and was built in the early 1920s. Originally the line was installed to pipe the flow from Balch Creek to the Willamette River. In the mid-1930s a larger storm line was installed to carry the flow from Balch Creek. From this point on the 54" line's primary function was to serve as an overflow pipe for two combined sewer diversion manholes (near 3000 NW Roosevelt St and 2900 NW Nicolai St). Downstream of the diversion manholes, the line serves as a storm water only drainage conduit. The 54" line travels approximately 5300 feet from its origin to where it outfalls into the Willamette River.

Land use along the storm water only portion of the storm line is primarily industrial and commercial. A review of the maintenance history of the storm line shows no cleaning has taken place, prior to the work done in March 2002.

Prior to the removal of the sediment, BES sampled the storm line's sediment in three different points to ascertain the proper disposal method for the sediment. The laboratory analytical reports for these 3 samples are provided in Attachment A.

Results

Sample point one (S1) is located 450 feet north of the intersection of NW Industrial St. and NW 30th Ave (see Figure 1). S1 is a City manhole and is located on the railroad tracks. This manhole's City ID number is AAX 469. The sediment analysis indicated a high level of PCB 1260 (6,770 ug/kg).

Sample point two (S2) is located 65 feet west of the intersection of NW 29th Ave and NW 31st Ave (see Figure 1). S2 is a City manhole and is located in the middle of the street.

This manhole's City ID number is AAX 501. The sediment analysis indicated an elevated level of PCB 1260 (617 ug/kg).

Sample point three (S3) is located 580 feet north of the intersection of NW Nicolai St. and NW 30th Ave (see Figure 1). S3 is a City manhole and is located in the middle of the street. This manhole's City ID number is ABB 739. The sediment analysis indicated high levels of zinc (20,400 mg/kg), lead (531 mg/kg) and cadmium (11.1 mg/kg).

The table below shows selected analytes for the three sampling locations, from upstream to downstream. These data suggest that there are sources of contaminants at different locations along the storm line. Metals are significantly higher at S3, indicating a source at or upstream of this manhole sampling location. PCB Aroclor 1260, in contrast, is higher at S1, indicating a source at or upstream (between the S1 and S3 sample locations). Concentrations at the downstream sample location S2 are much lower suggesting some attenuation of dilution of the analytes.

Analyte	Sample S3	Sample S1	Sample S2
Cadmium (mg/kg)	11.1	0.655	0.735
Lead (mg/kg)	531	152	29.3
Zinc (mg/kg)	20,400	549	1210
PCB - Aroclor1260 (µg/kg)	<50	6,770	617

Based on this information, potential sources for PCBs and metals (especially zinc) were investigated. The results of the source investigation are provided below.

Sampling point S1 investigation

Source Identification

Sampling point S1 indicated high levels of PCB 1260 (6,770 ug/kg). S1 has a connection into it from the General Electric Company (GE) located at 2727 NW 29th Ave. GE has been at the site since approximately 1953. Historically, this has been a PCB Decommissioning Facility. The main activity at the site was taking electrical transformers filled with oil containing PCBs and removing all traces of PCBs from the equipment. PCBs were removed by using solvents or other appropriate methods. Near the end of the 1990s, the activity at the site changed to more of an appliance repair center.

Upon review of the City's Industrial user file associated with this site, historical documents indicate a problem with contaminated runoff from the site entering the City's storm sewer system.

City plumbing records show GE connected to the City's sewer in July 1953. At that time, the site had two different sewer connections (Figure 1). The first connection was for the building's sanitary waste and storm water runoff from the south side of the facility. This connection discharged into the City's 24" storm sewer located on NW Industrial St. The 24" storm line drains into the 54"x54" storm line at NW 30th Ave. The other connection

was to the City manhole (S1) along the railroad tracks near the northwest corner of the site. This connection drained all storm water runoff from the northside storage yard of the GE site.

In 1972 City Industrial Waste staff inspected the GE facility. This inspection was initiated in order to identify the source of oil wastes found in the public sewer adjacent to the GE site. In a memo to GE, dated June 20th, 1972, City engineers identified a problematic discharge coming from the site:

- "A catch basin in your (GE) NE yard area was found to be heavily contaminated with steam cleaning wastes and transformer oil. This material is being discharged to a 54" storm sewer within the railroad right-of-way to the west of your plant."

In a follow-up letter to GE dated September 14th, 1972, a second source of contamination was identified:

- This contamination "originates in the steam cleaning area located in the southwest corner of your facility. Subsequent dye testing by our industrial waste staff has determined that this material as well as the plant's sanitary sewage discharges to the 24" storm sewer in the street. This waste water combines with the plant's storm drain line as it leaves the building and then discharges through a single branch to the storm sewer in the street."

At this time GE was asked to cease all process waste discharges to the storm sewer until corrections to the plumbing connection could be made (southside). In addition, GE was asked to discontinue its transformer servicing operations in the area served by the catch basins (northside). In February 1973, the connection identified in the September 14th, 1972 letter was corrected. This meant the site's sanitary waste now discharged to the City's sanitary sewer. The existing connection continued to serve as the storm sewer connection to the City's 24" storm line.

On June 1st, 1973, City personnel returned to the site to assess the condition of the 54" x 54" storm sewer manhole (S1) in the northwest corner of the site. Inspection of catch basins in the storage yard found two to be heavily contaminated with oil. These catch basins discharge to S1.

Following the June 1st, 1973, City inspection, GE pumped out all catch basins in the storage yard area. A few days later an oily film began to appear in the catch basins again. Further investigation by GE found oil seeping up from between a concrete separator crack approximately ten feet from the building. This appeared to be due to a buildup of oil underneath the concrete. GE filled the crack with epoxy and stated that the discharge ceased.

During the summer of 1974, GE installed an oil water separator to treat the waste water generated from steam cleaning activities on the north and south side of the facility. This meant that no more process waste was discharging the City's storm sewer.

There is no information regarding the storm water runoff from this site following the activities in 1974. On October 25th, 1995, City Industrial Storm Water inspectors visited the site. The inspectors found two storm water concerns at the site:

← used parts stored outside should be covered to prevent contact with storm water

↑ scrap dumpsters should be provided with some type of cover to prevent contact with storm water.

No follow-up information was provided by GE stating whether or not these concerns were addressed.

Another potential site for PCB discharge is Paco Pumps, located at 2551 NW 30th Ave. (southwest corner of NW 30th Ave and Industrial St). Paco Pumps manufactures and repairs pumps (SIC 3561).

A site summary report in the DEQ's Environmental Cleanup Site Information database identified PCBs and petroleum hydrocarbons as contaminants found at the site. In 1987, PCBs and petroleum hydrocarbons were found at low levels in soils on the west side of the building. Paco took responsibility for the petroleum hydrocarbons. The petroleum hydrocarbons were from a test pit discharge pipe that had discharged oil-contaminated water to the ground. Paco claimed the PCBs were from the rail lines which run adjacent to the building. Paco removed the petroleum hydrocarbon contaminated soil in the late 1980s. In 1995 DEQ sampled the soil again. The cleanup was successful in removing the petroleum hydrocarbons; however, the sampling showed PCBs were still present at low concentrations. It appears no removal of the contaminated sediment has taken place.

Paco does not appear to be a source of PCBs found in the sediment at S1. The area of contamination has no access to the City's 54" storm sewer. The catch basins located on their property are plumbed to the sanitary sewer. City Industrial Storm Water staff in 2001 identified a storm water exposure issue at the site. Storm water from a portion of the site came in contact with a scrap metal dumpster. This storm water sheet flowed to a City storm drain on NW 30th Ave. Following this inspection, Paco eliminated all storm water exposure and received a "No Exposure Certification."

Sampling point S3 Investigation

Source Identification

Sampling point S3 sediment results indicated high levels of zinc, lead and cadmium. Adjacent to S3 is the Galvanizers Company (Figure 1) located at 2406 NW 30th Ave. Galvanizers has been at this location since the 1940s and has been in continuous operation. The main activity at the site is coating steel parts and structural items with zinc as a corrosion inhibitor. The SIC description is 3479. In addition to the zinc coating process, maintenance is performed on equipment. There is also storage of process and boiler chemicals and equipment lubricating oils.

Galvanizers has had two different storm water connections to the City's 54"x 54" storm sewer. The first connection was to a City catch basin (referred to as sampling point X01-OLD in table 1) located on NW 30th Ave., in the northwest corner of the property. This catch basin has an inlet into it that drains from the Galvanizers property. The flow from the catch basin then discharges directly into the 54" storm sewer. This connection is located 44 feet downstream of S3. This connection was plugged during the summer of 2001.

The new connection (referred to as sampling point 01 – pump vault in table 1) to the City's 54"x 54" storm sewer discharges directly into the 54" storm line. This connection is located 25 feet upstream of S3. The new connection receives the discharge from a new pump vault installed in the summer of 2001. This vault is equipped with an oil water separator.

A review of storm water sampling data, collected from the City of Portland's Industrial Storm Water section, indicates an on-going problem of high zinc levels in the company's storm water discharge. Table 1 shows the sampling results for samples taken by City of Portland Storm Water personnel and samples taken by Galvanizers for their self-monitoring requirements. Table 1 has sample results dating back to 1995. There are 26 documented sampling events during the period of 1995 to 2003. Of these, only one of the samples did not exceed the 1200-Z benchmark for zinc. The 1200-Z benchmark for zinc is 0.6 mg/l. All other samples exceeded the benchmark, anywhere from 2.2 times to as much as 200 times.

Galvanizers has never had a pretreatment system for its storm water discharge. They have attempted to implement numerous BMPs but they still continue to exceed the benchmark.

Additional information regarding the Galvanizers site was found in the DEQ's Environmental Cleanup Site Information database. The information available indicates that soil and groundwater contamination were identified in 1992. The two main pollutants identified were zinc and lead. DEQ identified the source of this contamination as being caused by drippage from acid/caustic dip tanks used for zinc galvanizing. Galvanizers removed contaminated soil from the site. In 1996, follow-up sampling done by DEQ found that the zinc and lead were still present at high levels. At that time, DEQ recommended further investigation of the groundwater and soil to determine the extent of the pollution on and off the site. DEQ gave this action medium priority. There is no other information regarding clean up activities post 1996.

Backup documentation for the GE, Galvanizers, and Paco Pumps sites are provided in Attachment B.

Table 1

Storm Water Discharge Sampling Results for Galvanizers (2003 to 1995)

Sampling location:	Sample date:	Tester:	Zinc result (mg/l):	1200 Z Benchmark (mg/l)
01(NEW)	04/10/2003	Self	**4.09**	0.6
	01/31/2003	City	**2.76**	0.6
	12/11/2002	Self	**4.68**	0.6
	05/28/2002	Self	**12.6**	0.6
	02/05/2002	City	**16.5**	0.6
	10/23/2001	Self	**12.6**	0.6
X01(OLD)	05/14/2001	Self	ND	0.6
	02/15/2001	City	**65.4**	0.6
	12/15/2000	Self	**20.1**	0.6
	05/08/2000	Self	**10.2**	0.6
	03/27/2000	City	**13.0**	0.6
	12/06/1999	Self	**10.4**	0.6
	11/16/1999	City	**24.0**	0.6
	05/03/1999	Self	**13.8**	0.6
	03/01/1999	City	**4.2**	0.6
	12/01/1998	City	**130.0**	0.6
	12/01/1998	Self	**5.38**	0.6
	05/13/1998	Self	**3.53**	0.6
	11/21/1997	Self	**6.43**	0.6
	10/08/1997	City	**23.9**	0.6
	04/22/1997	Self	**22.6**	0.6
	12/29/1996	Self	**11.1**	0.6
	04/23/1996	Self	**1.32**	0.6
	04/12/1996	City	**24.5**	0.6
	11/30/1995	Self	**49.7**	0.6
	06/06/1995	Self	**81.8**	0.6

Key:
01(NEW) – Sampling point – installed summer of 2001 – this sampling point is a pump vault – discharges directly to 54" storm sewer line on NW 30th Ave.

X01(OLD) – original sampling point – sampling point is a City catch basin located on NW 30th Ave. – catch basin had storm water connection into it from Galvanizers – catchbasin discharges to 54" storm sewer line

City – Indicates sample taken by City of Portland personnel – analysis done at City of Portland, Wastewater laboratory

Self – Indicates sample taken by Galvanizers personnel – analysis done by outside laboratory

Zinc result – **bolded** sample results exceeded the 1200Z permit discharge benchmark for zinc

References

City of Portland-Bureau of Environmental Services-Industrial Source Control Division. 2003. *General Electric Industrial User File*. June 2003.

City of Portland-Bureau of Environmental Services-Industrial Source Control Division. 2003. *Galvanizers Company Industrial User File*. June 2003.

Department of Environmental Quality. 2003. *Environmental Cleanup Site Information. Site Name: Galvanizers Company.* June 2003

Department of Environmental Quality. 2003. *Environmental Cleanup Site Information. Site Name: Paco Pumps.* June 2003

Attachment A – Analytical Laboratory Results

Specialty Analytical

Date: *12-Mar-02*

CLIENT: City of Portland
Lab Order: 0203028
Project: 7249

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
S-1	**0203028-01A**			**Date Collected**		**3/5/2002**
MERCURY, TOTAL		**SW7471**				Analyst: **mgh**
Mercury	0.410	0.0400		mg/Kg	2	3/11/2002
NWTPH-DX		**NWTPH-DX**				Analyst: **btf**
Diesel	ND	227	A3	mg/Kg-dry	10	3/8/2002
Lube Oil	1350	758		mg/Kg-dry	10	3/8/2002
Surr: o-Terphenyl	207	50-150	S,D	%REC	10	3/8/2002
NWTPH-HCID		**NWHCID**				Analyst: **btf**
Gasoline	ND	30.3		mg/Kg-dry	1	3/6/2002
Mineral Spirits	ND	30.3		mg/Kg-dry	1	3/6/2002
Kerosene	ND	75.8		mg/Kg-dry	1	3/6/2002
Diesel	ND	75.8	A3	mg/Kg-dry	1	3/6/2002
Lube Oil	Lube Oil	152		mg/Kg-dry	1	3/6/2002
Surr: BFB	90.0	50-150		%REC	1	3/6/2002
Surr: o-Terphenyl	100	50-150		%REC	1	3/6/2002
PCB'S IN SOIL		**SW8082**				Analyst: **bda**
Aroclor 1016	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1221	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1232	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1242	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1248	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1254	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1260	6770	500		µg/Kg	10	3/7/2002
Surr: Decachlorobiphenyl	72.2	53.8-169		%REC	10	3/7/2002
Surr: Decachlorobiphenyl	89.0	53.8-169		%REC	1	3/7/2002
TOTAL METALS BY ICP		**E6010**				Analyst: **djm**
Arsenic	2.80	1.00		mg/Kg	1	3/6/2002
Cadmium	0.665	0.0500		mg/Kg	1	3/6/2002
Chromium	32.3	0.250		mg/Kg	1	3/6/2002
Lead	152	1.00		mg/Kg	1	3/6/2002
Zinc	549	0.500		mg/Kg	1	3/6/2002
S-1	**0203028-01B**			**Date Collected**		**3/5/2002**

Specialty Analytical

Date: *12-Mar-02*

CLIENT: City of Portland
Lab Order: 0203028
Project: 7249

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **skc**
1,1,1,2-Tetrachloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,1,1-Trichloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,1,2,2-Tetrachloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,1,2-Trichloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,1-Dichloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,1-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,1-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2,3-Trichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2,3-Trichloropropane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2,4-Trichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2,4-Trimethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2-Dibromo-3-chloropropane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2-Dibromoethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2-Dichloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,2-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,3,5-Trimethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,3-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,3-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
1,4-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
2,2-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
2-Butanone	ND	40.0		µg/Kg	1	3/8/2002 12:35:00 PM
2-Chlorotoluene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
2-Hexanone	ND	20.0		µg/Kg	1	3/8/2002 12:35:00 PM
4-Chlorotoluene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
4-Isopropyltoluene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
4-Methyl-2-pentanone	ND	40.0		µg/Kg	1	3/8/2002 12:35:00 PM
Acetone	ND	100		µg/Kg	1	3/8/2002 12:35:00 PM
Benzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Bromobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Bromochloromethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Bromodichloromethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Bromoform	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Bromomethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Carbon disulfide	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Carbon tetrachloride	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Chlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Chloroethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Chloroform	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Chloromethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
cis-1,2-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
cis-1,3-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM

CLIENT: City of Portland
Lab Order: 0203028
Project: 7249

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Dibromochloromethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Dibromomethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Dichlorodifluoromethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Ethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Hexachlorobutadiene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Isopropylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
m,p-Xylene	ND	20.0		µg/Kg	1	3/8/2002 12:35:00 PM
Methyl tert-butyl ether	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Methylene chloride	ND	50.0		µg/Kg	1	3/8/2002 12:35:00 PM
n-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
n-Propylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Naphthalene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
o-Xylene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
sec-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Styrene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
tert-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Tetrachloroethene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Toluene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
trans-1,2-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
trans-1,3-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Trichloroethene	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Trichlorofluoromethane	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Vinyl chloride	ND	10.0		µg/Kg	1	3/8/2002 12:35:00 PM
Surr: 1,2-Dichloroethane-d4	109	61.2-130		%REC	1	3/8/2002 12:35:00 PM
Surr: 4-Bromofluorobenzene	104	80.2-120		%REC	1	3/8/2002 12:35:00 PM
Surr: Dibromofluoromethane	111	81.4-111		%REC	1	3/8/2002 12:35:00 PM
Surr: Toluene-d8	113	78.5-130		%REC	1	3/8/2002 12:35:00 PM
S-2	**0203028-02A**			**Date Collected**		**3/5/2002**
MERCURY, TOTAL		**SW7471**				Analyst: **mgh**
Mercury	0.0384	0.0200		mg/Kg	1	3/11/2002
NWTPH-DX		**NWTPH-DX**				Analyst: **btf**
Diesel	ND	19.2		mg/Kg-dry	1	3/8/2002
Lube Oil	469	64.1		mg/Kg-dry	1	3/8/2002
Surr: o-Terphenyl	112	50-150		%REC	1	3/8/2002

Specialty Analytical

Date: *12-Mar-02*

CLIENT: City of Portland
Lab Order: 0203028
Project: 7249

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-HCID		**NWHCID**				Analyst: **btf**
Gasoline	ND	25.6		mg/Kg-dry	1	3/6/2002
Mineral Spirits	ND	25.6		mg/Kg-dry	1	3/6/2002
Kerosene	ND	64.1		mg/Kg-dry	1	3/6/2002
Diesel	ND	64.1		mg/Kg-dry	1	3/6/2002
Lube Oil	Lube Oil	128		mg/Kg-dry	1	3/6/2002
Surr: BFB	98.3	50-150		%REC	1	3/6/2002
Surr: o-Terphenyl	104	50-150		%REC	1	3/6/2002
PCB'S IN SOIL		**SW8082**				Analyst: **bda**
Aroclor 1016	625	50.0		µg/Kg	1	3/7/2002
Aroclor 1221	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1232	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1242	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1248	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1254	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1260	617	50.0		µg/Kg	1	3/7/2002
Surr: Decachlorobiphenyl	98.3	53.8-169		%REC	1	3/7/2002
TOTAL METALS BY ICP		**E6010**				Analyst: **djm**
Arsenic	4.29	1.02		mg/Kg	1	3/6/2002
Cadmium	0.735	0.0510		mg/Kg	1	3/6/2002
Chromium	29.2	0.255		mg/Kg	1	3/6/2002
Lead	29.3	1.02		mg/Kg	1	3/6/2002
Zinc	1210	0.510		mg/Kg	1	3/6/2002

S-2 **0203028-02B** **Date Collected** **3/5/2002**

Specialty Analytical

Date: *12-Mar-02*

CLIENT: City of Portland
Lab Order: 0203028
Project: 7249

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **skc**
1,1,1,2-Tetrachloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,1,1-Trichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,1,2,2-Tetrachloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,1,2-Trichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,1-Dichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,1-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,1-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2,3-Trichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2,3-Trichloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2,4-Trichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2,4-Trimethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2-Dibromo-3-chloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2-Dibromoethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2-Dichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,2-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,3,5-Trimethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,3-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,3-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
1,4-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
2,2-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
2-Butanone	ND	40.0		µg/Kg	1	3/8/2002 1:09:00 PM
2-Chlorotoluene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
2-Hexanone	ND	20.0		µg/Kg	1	3/8/2002 1:09:00 PM
4-Chlorotoluene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
4-Isopropyltoluene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
4-Methyl-2-pentanone	ND	40.0		µg/Kg	1	3/8/2002 1:09:00 PM
Acetone	ND	100		µg/Kg	1	3/8/2002 1:09:00 PM
Benzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Bromobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Bromochloromethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Bromodichloromethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Bromoform	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Bromomethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Carbon disulfide	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Carbon tetrachloride	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Chlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Chloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Chloroform	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Chloromethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
cis-1,2-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
cis-1,3-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM

CLIENT: City of Portland
Lab Order: 0203028
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Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
Dibromochloromethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Dibromomethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Dichlorodifluoromethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Ethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Hexachlorobutadiene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Isopropylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
m,p-Xylene	ND	20.0		µg/Kg	1	3/8/2002 1:09:00 PM
Methyl tert-butyl ether	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Methylene chloride	ND	50.0		µg/Kg	1	3/8/2002 1:09:00 PM
n-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
n-Propylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Naphthalene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
o-Xylene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
sec-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Styrene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
tert-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Tetrachloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Toluene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
trans-1,2-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
trans-1,3-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Trichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Trichlorofluoromethane	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Vinyl chloride	ND	10.0		µg/Kg	1	3/8/2002 1:09:00 PM
Surr: 1,2-Dichloroethane-d4	106	61.2-130		%REC	1	3/8/2002 1:09:00 PM
Surr: 4-Bromofluorobenzene	109	80.2-120		%REC	1	3/8/2002 1:09:00 PM
Surr: Dibromofluoromethane	111	81.4-111		%REC	1	3/8/2002 1:09:00 PM
Surr: Toluene-d8	109	78.5-130		%REC	1	3/8/2002 1:09:00 PM
S-3	**0203028-03A**			**Date Collected**		**3/5/2002**
MERCURY, TOTAL		**SW7471**				Analyst: **mgh**
Mercury	0.185	0.0200		mg/Kg	1	3/11/2002
NWTPH-DX		**NWTPH-DX**				Analyst: **btf**
Diesel	ND	20.3		mg/Kg-dry	1	3/8/2002
Lube Oil	318	67.6		mg/Kg-dry	1	3/8/2002
Surr: o-Terphenyl	103	50-150		%REC	1	3/8/2002

Specialty Analytical

Date: *12-Mar-02*

CLIENT: City of Portland
Lab Order: 0203028
Project: 7249

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
NWTPH-HCID		**NWHCID**				Analyst: **btf**
Gasoline	ND	27.0		mg/Kg-dry	1	3/6/2002
Mineral Spirits	ND	27.0		mg/Kg-dry	1	3/6/2002
Kerosene	ND	67.6		mg/Kg-dry	1	3/6/2002
Diesel	ND	67.6		mg/Kg-dry	1	3/6/2002
Lube Oil	Lube Oil	135		mg/Kg-dry	1	3/6/2002
Surr: BFB	97.5	50-150		%REC	1	3/6/2002
Surr: o-Terphenyl	100	50-150		%REC	1	3/6/2002
PCB'S IN SOIL		**SW8082**				Analyst: **bda**
Aroclor 1016	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1221	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1232	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1242	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1248	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1254	ND	50.0		µg/Kg	1	3/7/2002
Aroclor 1260	ND	50.0		µg/Kg	1	3/7/2002
Surr: Decachlorobiphenyl	95.9	53.8-169		%REC	1	3/7/2002
TOTAL METALS BY ICP		**E6010**				Analyst: **djm**
Arsenic	4.10	1.02		mg/Kg	1	3/6/2002
Cadmium	11.1	0.0510		mg/Kg	1	3/6/2002
Chromium	27.2	0.255		mg/Kg	1	3/6/2002
Lead	531	1.02		mg/Kg	1	3/6/2002
Zinc	20400	5.10		mg/Kg	10	3/8/2002

S-3 **0203028-03B** **Date Collected** **3/5/2002**

Specialty Analytical

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Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**				Analyst: **skc**
1,1,1,2-Tetrachloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,1,1-Trichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,1,2,2-Tetrachloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,1,2-Trichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,1-Dichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,1-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,1-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2,3-Trichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2,3-Trichloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2,4-Trichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2,4-Trimethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2-Dibromo-3-chloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2-Dibromoethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,2-Dichloroethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
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1,3,5-Trimethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
1,3-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
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1,4-Dichlorobenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
2,2-Dichloropropane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
2-Butanone	ND	40.0		µg/Kg	1	3/8/2002 1:43:00 PM
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2-Hexanone	ND	20.0		µg/Kg	1	3/8/2002 1:43:00 PM
4-Chlorotoluene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
4-Isopropyltoluene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
4-Methyl-2-pentanone	ND	40.0		µg/Kg	1	3/8/2002 1:43:00 PM
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cis-1,2-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
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Dichlorodifluoromethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Ethylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Hexachlorobutadiene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Isopropylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
m,p-Xylene	ND	20.0		µg/Kg	1	3/8/2002 1:43:00 PM
Methyl tert-butyl ether	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Methylene chloride	ND	50.0		µg/Kg	1	3/8/2002 1:43:00 PM
n-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
n-Propylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Naphthalene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
o-Xylene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
sec-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Styrene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
tert-Butylbenzene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Tetrachloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Toluene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
trans-1,2-Dichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
trans-1,3-Dichloropropene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Trichloroethene	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Trichlorofluoromethane	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Vinyl chloride	ND	10.0		µg/Kg	1	3/8/2002 1:43:00 PM
Surr: 1,2-Dichloroethane-d4	106	61.2-130		%REC	1	3/8/2002 1:43:00 PM
Surr: 4-Bromofluorobenzene	107	80.2-120		%REC	1	3/8/2002 1:43:00 PM
Surr: Dibromofluoromethane	113	81.4-111	S	%REC	1	3/8/2002 1:43:00 PM
Surr: Toluene-d8	111	78.5-130		%REC	1	3/8/2002 1:43:00 PM

Attachment B – Supporting Documentation

Certified Mail
Return Receipt Requested

File: Industrial Waste

June 20, 1972

General Electric Company
2727 NW 29th Avenue
Portland, Oregon 97210

Attention: Mr. Albert Bechtel

Gentlemen:

This office wishes to express its appreciation for the cooperation extended by the General Electric Company to members of our Industrial Wastes staff during their recent visit to your NW 29th Avenue and Industrial Street facility. The purpose of this visit was to determine the source of quantities of oil wastes found in the public sewers adjacent to this facility.

A catch basin in your NE yard area was found to be heavily contaminated with steam cleaning wastes and transformer oil. This material is being discharged to a 54-inch storm sewer within the railroad right-of-way to the west of your plant.

This discharge is unlawful as outlined in Sections 17.32.090 and 17.32.100 of the Code of the City of Portland, Oregon. A copy of the pertinent sections of the Code is enclosed for your information. This discharge is also in violation of State laws which specify that only clean water containing no more than 10 parts per million (ppm) oil may be discharged through a storm sewer to the public waters of the State.

It was also found that the steam cleaner located in the SW portion of your facility is discharging excessive emulsified oil to the sanitary sewer in NW Industrial Street. The discharge of waste water containing in excess of 100 ppm oil to a public sanitary sewer is unlawful as specified in Section 17.32.100 of the Code.

We must, therefore, require that you install pre-treatment facilities sufficient to achieve Code compliance within six months of the date of this letter. You should submit plans to this office for approval prior to installing any pre-treatment equipment as specified by Section 17.32.130 of the Code.

You are also requested to install a standard City of Portland sampling manhole on the discharge side of the pre-treatment facility as further required by Section 17.32.130 of the Code. A copy of the drawing for this sampling manhole is enclosed for your information.

We further request that you direct a letter to this office by July 21, 1972, indicating your intent to comply with these requirements.

If you desire further information concerning this problem, please feel free to contact this office, attention M. J. Anderson, telephone 228-6141, extension 401.

Very truly yours,

James L. Apperson, City Engineer

By

J. P. Niehuser, Chief
Bureau of Sanitary Engineering

MJA:dm

Enclosures

cc: Jim Cooke, Industrial Waste Chemist
Columbia Blvd. S.T.P.

HGE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

September 14, 1972

File: Industrial Waste

General Electric Company
2727 NW 29th Avenue
Portland, Oregon 97210

Attention: R. J. Madden, Accountant

Gentlemen:

This will acknowledge your letter dated July 25, 1972, regarding the discharge of oily water from your plant.

As stated in our earlier letter to you dated June 20, 1972, a very serious problem exists from the steam cleaning and transformer oil wastes which contaminate the storm water runoff discharged to the City's 54" x 54" storm sewer. This material enters the storm sewer from a catch basin in the northeast area of your yard. The second source of oil contamination originates in the steam cleaning area located in the southwest area of your facility. Our earlier letter stated that the waste from this area discharged to the sanitary sewer in N.W. Industrial Street. Subsequent dye testing by our industrial waste staff has determined that this material as well as the plant's sanitary sewage discharges to the 24-inch storm sewer in this street. This waste water combines with the plant's storm drain line as it leaves the building and then discharges through a single branch to the storm sewer in the street.

Mr. J. M. Phillips of G.E.'s Environmental Division contacted our Industrial Waste Water Section by telephone on September 11, 1972 and explained to H.G. Edmonds the progress your firm was making toward meeting the City of Portland requirements.

Because of the complexity of the oil-water problem, it may be necessary to extend our original six (6) month deadline. However, we cannot permit the discharge of contaminated water in a City storm sewer to continue. This is strictly prohibited by Sec. 17.32.090 of the Code.

Since sanitary sewers are available to serve your plant in both N. W. Industrial St. and N.W. 29th Ave., we shall require that all contaminated waste water be removed from the storm sewer system and

BJ

reconnected to the appropriate sanitary sewer. Storm water and uncontaminated cooling waters shall remain connected to the existing storm sewer system. This work shall be completed within thirty (30) days. The City will be responsible for reconnection work in the street area between curb line and main sewer. General Electric Co. shall be responsible for all other work.

If you desire further information regarding this problem, please feel free to contact this office, attention H. G. Edmonds, telephone 226-6141, Extension 401.

Yours very truly,

JAMES L. APPERSON
City Engineer

By
J. P. NIEHUSER, Chief
Bureau of Sanitary Engineering

HGE:bc

cc: J.M. Phillips, Environmental Engineer
General Electric Co.

H.H. Smith, Senior Engineer
City of Portland

E P/HGE

GENERAL ELECTRIC

SERVICE SHOPS
DEPARTMENT

GENERAL ELECTRIC COMPANY, 2727 N.W. 29TH AVENUE, PORTLAND, OREGON 97210
Phone (503) 221-5093

PORTLAND APPARTUS
INDUSTRIAL SERVICE SHOP

June 12, 1973

The City of Portland
Bureau of Sanitary Engineering
1220 S.W. Fifth Avenue
Portland, Oregon

Attention: J. P. Niehuser

Gentlemen:

We are in receipt of your June 4, 1973 letter regarding oily water found in our manhole located on the outside northwest corner of our shop.

Following your inspection we had all our catch basins pumped out and we found that after two days an oily film again appeared on the surface of the water in this same catch basin even though there had been no cleaning activity whatever performed in this area.

In an attempt to located the source of this oil we hosed the entire area down with water and discovered a constant stream of oil seeping up from between a concrete separator crack located approximately ten feet from the building.

We noticed that pressure from any source, whether from pedestrian or vehicular traffic, resulted in both oil and water being gushed out between the crack coming from an apparent built up oil deposit located under the concrete.

I phoned your Mr. Edmunds and told him what we had found and asked him to come down to the shop in order that he might witness this and possibly offer some suggestions for correcting the problem.

Mr. Edmunds informed me he had some previous engagements but that he would try to make it down to our shop.

GENERAL ELECTRIC

We waited for Mr. Edmunds until the latter part of last week and then proceded to clean out the concrete separator crack and fill it with epoxy.

This now appears to have eliminated the problem of seeping oil and we would appreciate having one of your people come over to our shop to review what has been done and let us know if you have any further suggestions regarding this matter.

Very truly yours,

R. J. Madden
Accountant

pjh

November 1, 1973

File: Industrial Wastewater Management

General Electric Co.
2727 N.W. 29th Avenue
Portland, Oregon 97210

Attention: Mr. Karl F. Beckie, Manufacturing Engineer

Re: Proposed Oily Water Pretreatment Facility
Portland Apparatus Industrial Service Shop

Gentlemen:

We are in receipt of your letter dated 10-29-73 to Mr. Edwards of our staff. This letter briefly describes the oil-water separation equipment proposed for the treatment of the steam cleaner effluent from this property.

We have reviewed the information provided in your letter and discussed the project with Mr. P. Sanstad, project manager for Lee & Sons, Contractor. It is the recommendation of our staff that these plans be given tentative approval. This approval is subject to the conditions:

A. Final acceptance shall be based upon the satisfactory operation of the pretreatment equipment.

B. Failure to consistently provide an acceptable effluent shall be grounds for rejection of the effluent by the City.

C. Regarding item #1 of your letter, the City shall allow subsurface disposal (via dry well) of the oil-contaminated water from the catch basin located in the north end of the building. This approval shall be limited to a period not exceeding 12 months. This approval may be revoked at any time by order of the City Engineer.

D. Item #2 - No comments at this time.

E. Item #3 - The owner (G.E. Co.) is advised to begin the necessary preparations for the future extension of the high bay area in order to cover the catch basin in the north end of the building. This office will require that the oil contaminated effluent from this area be routed to the oil-water separator for treatment and subsequent discharge to the public sanitary sewer within 12 months. The Code (Sec. 17.32.090) prohibits rainwater discharge into the public sanitary sewer system, hence the requirement for appropriate roofing and/or curbing.

F. The owner shall supply a complete set of plans and drawings to this office for review and approval within 30 days of receipt of this letter.

G. Item #4 - We are familiar with the design and operation of the Fram-Akers Model [illegible]-23 oily water separator. This is the first stage unit which is adequate for the separation of "[illegible]" oil-water mixtures. However, emulsified oil/water requires additional treatment in order to "break" the emulsion. It is our understanding through the 10-31-73 telephone conversation with Mr. P. Sansted that the necessary chemical pretreatment (pH control, neutralization, coagulation, etc.) is included with this proposal.

It is our desire to see this facility installed and placed in operation as soon as possible. For this reason we must again emphasize the Code's requirement (Sec. 17.32.130 (b)) that approved pretreatment equipment be placed in operation within 6 months. We appreciate your prompt attention to this matter. Please contact Harry G. Edmonds (Phone 248-4046) if you have any questions or comments regarding this matter.

Very truly yours,

J. P. NIEHUSER
Chief Civil Engineer

HGE:bc

cc: P. Sansted - Law & Sons
R. E. Gilbert, Dist. Engr.-DEQ

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 11, 1974

General Electric Company
2727 N. W. 29th Avenue
Portland, Oregon 97210

ATTN: Karl Beckle

RE: Wastewater Disposal

Gentlemen:

The purpose of this letter is to reply to the letter from General Electric dated June 6, 1974 and signed by Mr. Karl Beckle. After receiving this letter, Mr. Harry Edmonds and Mr. Dan Miller of our Industrial Waste staff visited General Electric's plant on June 7, 1974. During this visit Mr. Edmonds and Mr. Miller had an extensive discussion with Mr. Beckle concerning the plan of action stipulated in the letter.

In replying to the letter on a point by point basis:

1. Point #1 is acceptable.
2. As per the discussion on June 7, 1974, a trench type drain will be built to catch the wastewater from the south steam cleaning rather than letting this steam cleaning waste run to the catch basin in the middle of the yard. This steam cleaning wastewater will then be transported to the settling tank/oil trap. The above mentioned catch basin will be retained to drain rainfall runoff from the yard area but will be modified to have enough storage capacity in it to trap any oil spills that might occur. This catch basin will be pumped out as necessary to prevent oil from being discharged to the storm sewer.
3. Point #3 is acceptable as is the contingency plan of installing a Fram-Akers Model OWS-23 oil water separator should the existing settling tank/oil trap prove inadequate.

Please proceed with this course of action with all due promptness. Members of our Industrial Waste staff will

continue to monitor the progress of this project. Please contact Dan Miller, phone 248-4150.If you have any questions or comments regarding this matter.

Very truly yours,

L. D. BROWNSON
Principal Engineer

cc: Larry Patterson, Dept. of Environmental Quality

NP-1

GE Industry
Sales & Services

May 5, 1994

Decommissioning Facility
General Electric Company
2535 NW 28th Avenue, Portland, OR 97210
503 221-5098, Fx: 503 221-5099

CITY OF PORTLAND
Industrial Waste Water Section
1120 SW 5th Avenue, Room 400
Portland, OR 97204-1972
Attention: Emergency Response Personnel

RE: Arrangements With Local Authorities 40 CFR 265.37

As a small quantity generator of hazardous waste I am required to make arrangements with local and state emergency teams to help assure proper response in the event of an emergency. Emergency response personnel both state and local (fire, police, ambulance and hospital) must be made aware of the access to and layout of the facility, properties of the hazardous waste handled at the facility, types of possible injuries, and evacuation routes. This information is to be used by your department to better plan for an emergency response at this facility.

Our business is a PCB Decommissioning Facility. Electrical transformers filled with oil which contains PCBs must be decommissioned by draining the oil and removing all traces of the PCB oil be repeated flushing with solvents or other appropriate methods. The oil is then either distilled, separating the PCBs from the oil, or shipped for incineration at an off site facility. Strict controls for PCB handling and management are maintained.

This facility employs a total of (6) six persons in one shift. Standard operating hours are 7:00 am through 3:30 pm, however as necessary personnel may be required to work extended hours.

Our facility is equipped with a dry type fire alarm system and a monitored internal audio alarm as well. In the event of an after hours emergency, the monitoring agency will contact the appropriate authority.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

1211 S.W. 5th Ave., Suite 800, Portland, Oregon 97204-3713
(503) 823-5320, FAX (503) 823-5559

October 26, 1995

Steve Phelps
General Electric
2727 N.W. 29th Ave.
Portland, OR 97210

RE: Facility Inspection of October 25, 1995.

Dear Mr Phelps:

The inspection of General Electric verified that 7694 is the primary standard industrial classification (SIC) code for the 2727 N.W. 29th Ave. facility. Industries with this SIC code are not required at this time to apply for a stormwater permit. There are some areas that should be addressed to minimize stormwater pollution. The following is a list of recommended actions.

1) Used parts stored outside should be covered to prevent contact with stormwater.

2) Scrap dumpsters should be provided with some type of cover to prevent contact with stormwater.

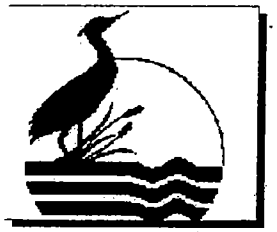
If you have any questions regarding this letter please call me at 823-7885.

Sincerely

John Holtrop

John Holtrop
Industrial Stormwater Section

CC: Paul Keiran, DEQ



Stormwater Monitoring Data

GALVANIZERS COMPANY

2406 NW 30TH AVE

ORG: 4879

1200-Z Benchmarks:

Cu =	*0.1*	*p.H. =*	*5.5 - 9.0*
Pb =	*0.4*	*TSS =*	*130*
Zn =	*0.6*	*O/G =*	*10*

Sample Date	*Tester*	*Copper*	*Lead*	*Zinc*	*TSS*	*O/G - Total*	*pH*	*COD*
Location: 01		**Description:** PUMP VAULT SAMPLE PORT.						
10/23/2001 10:00:00 AM	self	=0.0498none	=0.27none	=12.6POC>	=126none	=11.2POC>	=6.98none	
02/05/2002 10:30:00 AM	city	=0.00982none	=0.0464none	=16.5POC>	=4none	=18.6POC>	=5.6none	=15none
05/28/2002 9:45:00 AM	self	=0.0266none	=0.214none	=12.6POC>	=23none	<5none	=6.17none	
Location: X01-OLD		**Description:** SAMPLE FROM STREET CATCH BASIN CONNECTION.						
06/06/1995	self	=0.0379	=0.421	=81.8	=50	=6	=6.2	=85
11/30/1995	self	=0.0372	=0.644	=49.7	=50	<5	=4.6	=60
04/12/1996	city	=0.119	=1.28	=24.5	=180	=22	=6.7	=170
04/23/1996	self	=0.0129	=0.076	=1.32	=35	<5	=5.9	=25
12/29/1996	self	=0.0412	=0.42	=11.1>LOC	=95		=7.2	=70
04/22/1997	self	=0.019	=0.15	=22.6>LOC	<10	<5	=6.6	=35
10/08/1997 2:40:00 PM	city	=0.106none	=0.604none	=23.9none	=236none	=15none	=6.9none	=220none
11/21/1997 9:00:00 AM	self	=0.011none	=0.063none	=6.43>LOC	=15none	<5none	=6.9none	=30none
05/13/1998 11:20:00 AM	self	=0.0301none	=0.134none	=3.53POC>	=22none	<5none	=6.32none	=45.5none
12/01/1998 9:09:00 AM	self	<0.01none	<0.2none	=5.38POC>	=136none	<5none	=6.82none	
12/01/1998 2:45:00 PM	city	=0.098none	=0.182none	=130POC>	=58.7none	=9.6none	=4.9POC<	=44none

Sample Date	Tester	Copper	Lead	[redacted]	TSS	O/G - Total	pH	COD
03/01/1999 10:50:00 AM	city	=0.035none	=0.1none	=4.2POC>	=114none	=5.9none	=6.4none	=31none
05/03/1999	self	=0.0474none	=0.314none	=13.8POC>	=55none	<5none	=7.07none	
11/16/1999 12:11:00 PM	city	=0.07none	=0.3none	=24POC>	=93.3none	=5.8none	=6.7none	=110none
12/06/1999	self	=0.0125none	=0.00882none	=10.4POC>	=18none	<5none	=6.48none	
03/27/2000 2:55:00 PM	city	=0.036none	=0.35none	=13POC>	=89none	<5none	=5.7none	=59none
05/08/2000 1:00:00 PM	self	=0.0172none	=0.116none	=10.2POC>	=19none	<5.81none	=6.76none	
12/15/2000 10:45:00 AM	self	=0.0345none	=0.227none	=20.1POC>	=83none	<5none	=6.56none	
02/15/2001 10:24:00 AM	city	=0.066none	=0.472POC>	=65.4POC>	=146POC>	<5none	=6none	=100none
05/14/2001 1:25:00 PM	self	<0.002none	<0.001none	<0.005none	=40none	<5none	=6.47none	

Location: X02 **Description:** CB 3 IN PARKING LOT OFF NW 29TH

11/30/1995	self	=0.0185	=0.145	=1.98	=45	=14	=6.8	=35
04/12/1996	city	=0.041	=0.206	=2POC>	=31	=5.7	=6.2	=34
04/23/1996	self	=0.0481	=0.585	=14.6	=135	=10	=6.4	=30
11/21/1996 12:40:00 PM	city	<0.004none	=0.544none	=0.446none	=27none	=12none	=5.6none	=51none
12/29/1996	self	=0.013	=0.097	=1.37>LOC	=30	<5	=6.8	=45
04/22/1997	self	=0.0437	=0.23	=3.08	=20	=5	=6.3	=45
05/28/1997 4:30:00 PM	city	=0.039none	=0.235none	=12.9none	=69none	=8none		=90none
11/21/1997 8:30:00 AM	self	=0.0075none	<0.025none	=1.64none	=5none	<5none	=4.4<LOC	=25none
05/13/1998 11:00:00 AM	self	=0.046none	=0.25none	=25.9POC>	=24none	<5none	=6.55none	=52.9none
12/01/1998 9:10:00 AM	self	<0.01none	<0.2none	=1.4POC>	<10none	<5none	=6.49none	

Oregon DEQ

Environmental Cleanup Site Information Database
Site Summary Report - Details for Site ID 1196

This report shows data entered as of June 5, 2003 at 12:10:03 PM

See the bottom of this page for a key to certain acronyms and terms used in the report below

For more information on what is occurring at this site see DEQ's Facility Profiler.

Site Information

Site ID: 1196

Site Name: Galvanizers Co.

CERCLIS No:

Address: 2406 NW 30th AVE Portland 97210

County: Multnomah

Region: Northwest

Investigation Status: Listed on CRL or Inventory

NPL Site: No

Orphan Site: No

Study Area: No

Property:

Twnshp/Range/Sect: 1N , 1E , 29

Tax Lots:

Latitude: 45 deg. 32 ' 22"

Longitude: -122 deg. 42 ' 44"

Site Size: 2.6 acres

Other Site Names:

Operations:

Name: Galvanizers Co.

Comments: zinc galvanizer

Years of Operation: 1941 to present

SIC Code: 3479

Operating Status: Active

Contamination Information

Hazardous Substances/Waste Types: Metals, particularly zinc and lead; oil-range hydrocarbons.

Manner and Time of Release: Overflow, spillage, and "dragout" from formerly uncontained dip tanks; possible entry of contaminated surface runoff into large dry well. Time of release from 1941 to 1993.

Contamination Information: (5/12/92 Rai Peterson) Site visit conducted by NWR in response to a referral from Oregon OSHA involving soil contamination and possible improper disposal of hazardous waste. DEQ found minor hazardous-waste violations, but main concern was soil contamination caused by drippage from acid/caustic dip tanks used for zinc galvanizing. Galvanizers submitted a report to DEQ 3/93 that documented improvements in waste-management practices, as well as removal of contaminated soil from an area where new secondary containment was installed. This report discusses a 4-ft.-diameter dry well that was installed at a low point on the property in 1962, and intercepts runoff from most of the site. A groundwater grab sample from the excavation contained 2,330 ppm dissolved zinc and 2 ppm dissolved lead. (12/3/96 GMW) More recent groundwater sampling has shown that high levels of zinc and lead are still present. In addition, DEQ recently received a report documenting the 10/90 removal of two gasoline USTs that was never reported to the agency. After the UST Section sent a Notice of Noncompliance to Galvanizers over the failure to report, the company hired a consultant to sample soil beneath the former USTs. These samples contained no gasoline, but did contain elevated concentrations of oil-range hydrocarbons. DEQ's UST Section referred this contamination to Site Assessment, since the USTs did not appear to be the source of oil.

	the USTs did not appear to be the source of oil.
Pathways:	Groundwater is considered to be the primary pathway; groundwater is found at a depth of about 10 feet, flows to the north, and has most likely spread inorganic contamination off-site.
Environmental/Health Threats:	Soil and groundwater are contaminated, with groundwater having been significantly affected by zinc.
Status of Investigative or Remedial Action:	(12/3/96 GMW/SAS) In 1993, Galvanizers upgraded its operation by excavating and removing contaminated soils beneath previously uncontained dip tanks, and replacing these tanks within a concrete containment basin. Zinc-contaminated soil was left in place (up to 592 mg/L TCLP), and a groundwater grab sample, collected after purging the pit three times, contained extremely high levels of dissolved zinc, lead above drinking water standards, and a pH of 4.7. These results indicate significant releases of zinc and other metals have occurred to soils and groundwater over many years. Site Assessment recommends further investigation of soil, sediments (in the dry well), and groundwater throughout the site to determine the extent of contamination and whether it extends off-site. The sources and extent of hydrocarbon contamination found in 1996 should also be investigated. Further state action at this site is a medium priority.
Data Sources:	NWR memo (5/12/92); "Status Report of Site Cleanup and Process Upgrading, The Galvanizers Company, 2406 NW 30th Avenue, Portland, Oregon," by Soil Tech, Inc. 3/29/93; letter report from Enviro-Comp Services dated 11/96.

Substance Contamination Information

Substance	Media Contaminated	Concentration Level	Date Recorded	Lab Data	Agency Observation	Owner Operator Admission
CHROMIUM	Soil	2.27 mg/L (TCLP)	9/4/1992	Yes	No	No
IRON	Groundwater	2,040 ppm (dissolved)	9/4/1992	Yes	No	No
IRON	Soil	241 mg/L (TCLP)	9/4/1992	Yes	No	No
LEAD	Groundwater	2 ppm (dissolved)	2/28/1993	Yes	No	No
LEAD	Groundwater	0.21 ppm (dissolved)	7/12/1996	Yes	No	No
LEAD	Soil	1.36 mg/L (TCLP)	11/3/1992	Yes	No	No
PETROLEUM HYDROCARBONS	Soil	15,000 ppm	11/11/1996	Yes	No	No
ZINC	Groundwater	172 ppm (dissolved)	7/12/1996	Yes	No	No
ZINC	Groundwater	2,330 ppm (dissolved)	2/28/1993	Yes	No	No
ZINC	Soil	592 mg/L (TCLP)	9/4/1992	Yes	No	No

Investigative, Remedial and Administrative Actions

Action	Start Date	Compl. Date	Resp. Staff	Agency Code	Region	Lead Pgm
SITE EVALUATION	05/13/1992	05/14/1992		DEQ	HQ	SAS
Listing Review completed	05/14/1992	05/14/1992		DEQ	HQ	SAS
Site added to database	05/15/1992			DEQ	HQ	SAS
Proposal for Confirmed Release List recommended	05/15/1992	05/15/1992		DEQ	HQ	SAS
State Basic Preliminary Assessment recommended (PA)	05/16/1992	05/16/1992		DEQ	HQ	SAS
Facility proposed for Confirmed Release List	12/03/1992	12/03/1992	Heather Schijf	DEQ	HQ	SAS
Extension requested by owner/operator	01/29/1993	01/29/1993	Daniel Crouse	DEQ	HQ	SAS

Owner/operator comments received on listing notification	02/12/1993	02/12/1993	Daniel Crouse	DEQ	HQ	SAS
Petition or request granted	02/16/1993	03/18/1993	Daniel Crouse	DEQ	HQ	SAS
SITE PRIORITY EVALUATION FOR FURTHER ACTION	09/12/1994	08/08/1995	Gil Wistar	DEQ	NWR	SAS
Remedial Action recommended (RA)	08/08/1995	08/08/1995	Gil Wistar	DEQ	NWR	SAS
Extension requested by owner/operator	04/26/1996	04/26/1996	Heather Schijf	DEQ	HQ	SAS
Petition or request granted	04/30/1996	04/30/1996	Heather Schijf	DEQ	HQ	SAS
Owner/operator comments received on listing notification	08/14/1996	08/14/1996	Kim Van Patten	DEQ	HQ	SAS
Review for final listing	08/21/1996	08/22/1996	Gil Wistar	DEQ	NWR	SAS
Listing on Confirmed Release List recommended	08/22/1996	08/22/1996	Gil Wistar	DEQ	NWR	SAS
Facility placed on Confirmed Release List	10/04/1996	10/04/1996	Kim Van Patten	DEQ	HQ	SAS

Key to certain acronyms and terms in this report:

CERCLIS No.: The U.S. EPA's Hazardous Waste Site identification number, shown only if EPA has been involved at the site.

Region: DEQ divides the state into three regions (E, NW, and W); the regional office shown is responsible for site investigation/cleanup.

NPL Site: Is the site on EPA's Superfund List? (Y/N).

Orphan Site: Has DEQ's Orphan Program been active at this site? (Y/N). The Orphan Program cleans up high-priority sites where owners and operators responsible for the contamination are absent, or are unwilling or unable to use their own resources for cleanup.

Study Area: Is this site a Study Area? (Y/N). ECSI assigns unique Site ID numbers to both individual sites and to Study Areas, which are groupings of individual ECSI sites that may be contributing to a larger, area-wide problem.

SIC Code: The Standard Industrial Classification code assigned to the operation described in this part of the report.

Pathways: A description of human or environmental resources that site contamination could affect.

Lead Pgm: This column refers to the Cleanup Program affiliation of the DEQ employee responsible for the action shown. SAS = Site Assessment; VCS = Voluntary Cleanup; SRS = Site Response (enforcement cleanup).

For more information about this page please contact Gil Wistar at (503) 229-5512 or via email at wistar.gil@deq.state.or.us.

Oregon DEQ

Home > Programs> Cleanup & Spills > ECSI Query > ECSI Site Details

Environmental Cleanup Site Information Database
Site Summary Report - Details for Site ID 146

This report shows data entered as of June 13, 2003 at 3:48:35 PM

See the bottom of this page for a key to certain acronyms and terms used in the report below

For more information on what is occurring at this site see DEQ's Facility Profiler.

Site Information

Site ID: 146	Site Name: Paco Pumps		CERCLIS No:
	Address: 2551 NW 30th AVE Portland 97210		
	County: Multnomah		Region: Northwest
	Investigation Status: Suspect site requiring further investigation	NPL Site: No	Orphan Site: No / Study Area: No
Property:	Twnshp/Range/Sect: 1N , 1E , 29		Tax Lots:
	Latitude: 45 deg. 32 ' 30.1"	Longitude: - 122 deg. 42 ' 43.2"	Site Size: 1.3 acres
Other Site Names:			

Operations:

Name: Paco Pumps
Comments: Industrial pump assembly, rental, and repair
Years of Operation: mid 1960s to present
SIC Code: 3561
Operating Status: Active

Contamination Information

Hazardous Substances/Waste Types:	PCBs, petroleum hyrocarbons.
Manner and Time of Release:	Release of oil-range hydrocarbons occurred prior to 1987 via a small-diameter PVC pipe that discharged a water and oil mixture from a pit that was used to test new pumps. The source and manner of release of PCBs are not known.
Contamination Information:	(12/31/95 GMW/SAS) Site evaluation and remediation work initiated by Paco Pumps in 1987 turned up oil-range hydrocarbons and PCBs, at low levels, in soils along the back (west) side of the building. Paco accepted responsibility for the oil & grease, since a test-pit discharge pipe had discharged oil-contaminated water to the ground in this area. However, the company attributed the presence of PCBs to the rail lines that run along the back of the building. 1995 investigations at the site showed that PCBs above Oregon Soil Cleanup Standards remain along the west wall of the building, although generally at low levels. The highest level of petroleum hydrocarbons in this area appear to be associated with the rail right of way.
Pathways:	
Environmental/Health Threats:	
Status of Investigative or Remedial Action:	(12/31/95 GMW/SAS) Beginning in August 1987, Paco Pumps removed a small area of petroleum-contaminated soil beneath the PVC pipe outfall and adjacent to the rail line that runs along the west side of the building. The removal was not well documented, and there is no evidence that the contractor, Pegasus Waste Management, collected confirmation samples. In addition, there was confusion over the source of PCBs in soil, since Paco has claimed that it never used PCBs in its operation. In May 1995, Paco hired Earth Tech to document past activities and determine if any further remediation were needed. Earth Tech sampled soils

along the west side of the building and confirmed that the 1987 cleanup was successful in removing petroleum contamination, but this sampling also showed PCBs still present at low concentrations in the area. Paco joined the Voluntary Cleanup Program via a voluntary PA letter agreement in September 1995. VCP reviewed the file and concluded in November 1995 that further investigation of the PCB contamination was necessary before DEQ could issue an NFA letter. Based on this conclusion, Paco Pumps decided not to proceed with further investigation, and the VCP agreement was terminated on 12/31/95.

Data Sources: Past practice files contained in ECSI #146; cleanup documentation prepared by Pegasus Environmental Services in 1987; review of cleanup activity and report on confirmation sampling from Earth Tech, 1995.

Substance Contamination Information

Substance	Media Contaminated	Concentration Level	Date Recorded	Lab Data	Agency Observation	Owner Operator Admission
OIL - LUBRICATING	Soil	30 ppm	7/20/1995	Yes	No	No
PCB 1254	Soil	15 ppm	9/11/1987	Yes	No	No
PCB 1254	Soil	1.3 ppm	7/20/1995	Yes	No	No
PCB 1260	Soil	1.2 ppm	12/31/1987	Yes	No	No

Investigative, Remedial and Administrative Actions

Action	Start Date	Compl. Date	Resp. Staff	Agency Code	Region	Lead Pgm
INDEPENDENT CLEANUP	08/01/1987	05/31/1995				
Site added to database	05/12/1988		Michael Zollitsch	DEQ	HQ	SAS
Responsible party notified re 11/88 Inventory listing	11/30/1988			DEQ	HQ	SAS
Site Screening recommended (EV)	02/12/1994	02/12/1994	Daniel Crouse	DEQ	HQ	SAS
SITE EVALUATION	05/16/1995	08/31/1995	Gil Wistar	DEQ	NWR	SAS
NEGOTIATIONS	09/01/1995	09/11/1995	Gil Wistar	DEQ	NWR	SAS
Letter Agreement	09/11/1995	09/11/1995	Gil Wistar	DEQ	NWR	SAS
PRELIMINARY ASSESSMENT EQUIVALENT	09/12/1995	12/31/1995	Gil Wistar	DEQ	NWR	SAS
Site Investigation recommended (SI)	12/31/1995	12/31/1995	Gil Wistar	DEQ	NWR	SAS

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For more information about this page please contact Gil Wistar at (503) 229-5512 or via email at wistar.gil@deq.state.or.us.

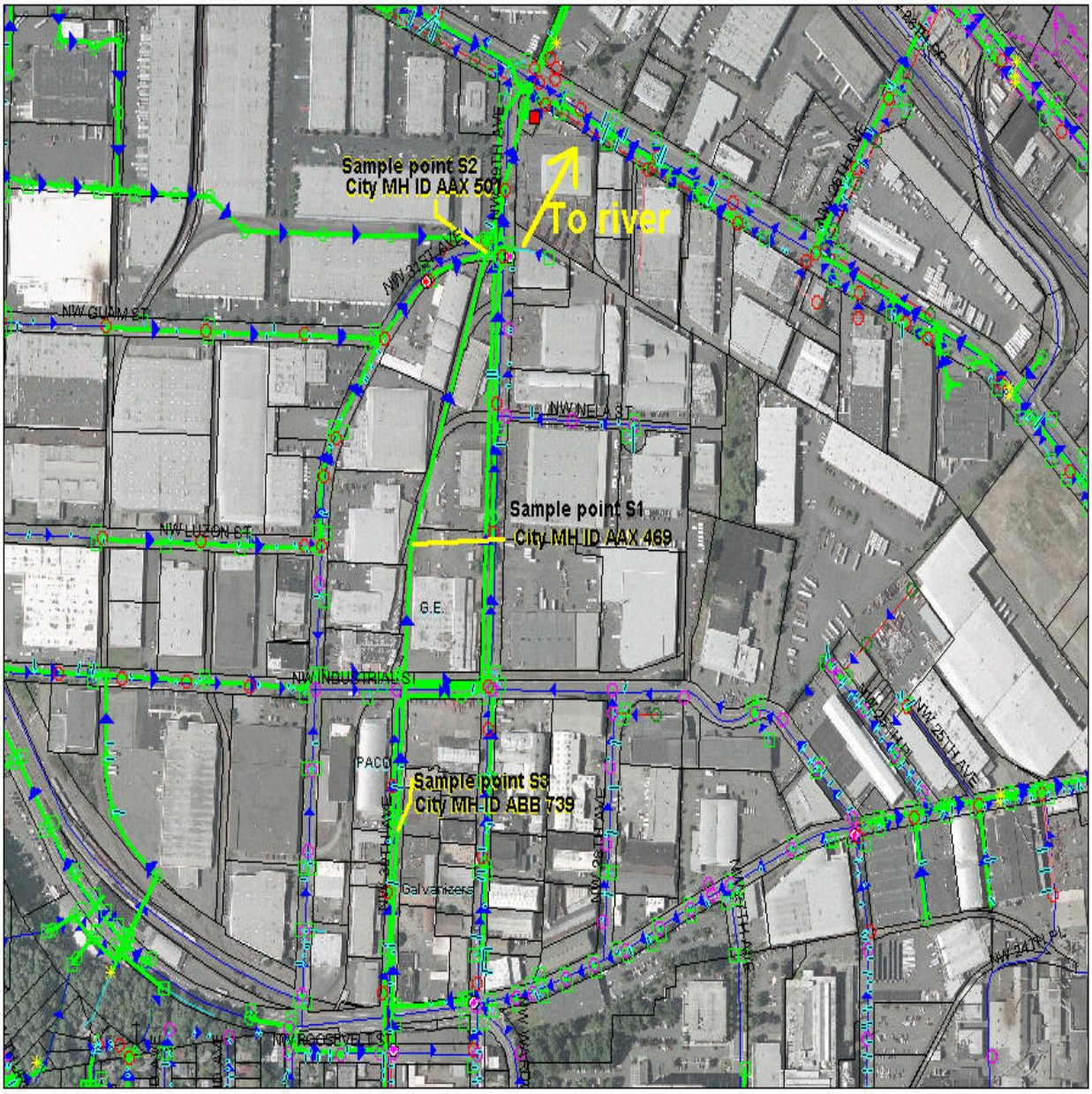

Figure 1. Location of Stormline Samples in Basin 17

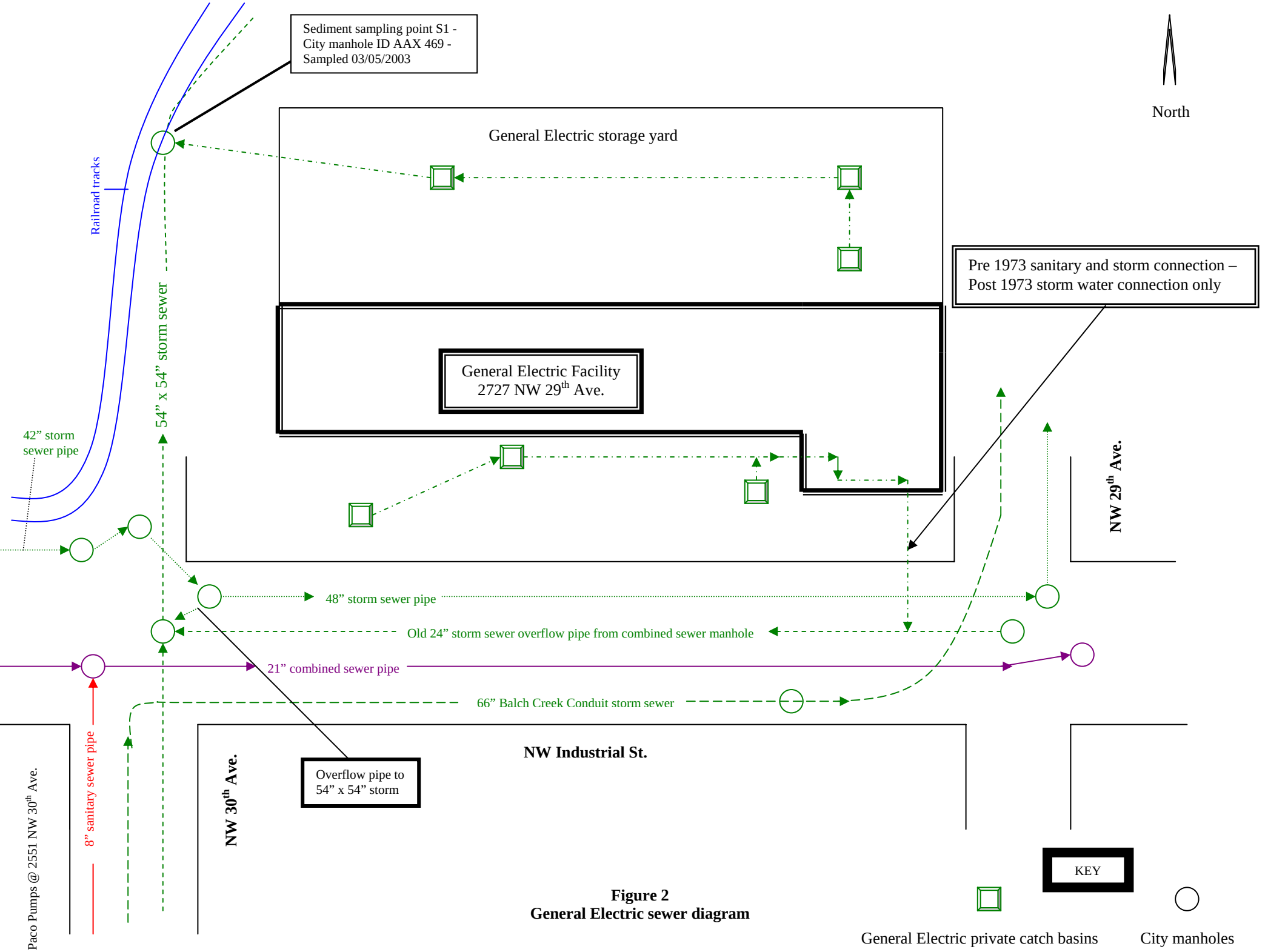

Figure 2
General Electric sewer diagram

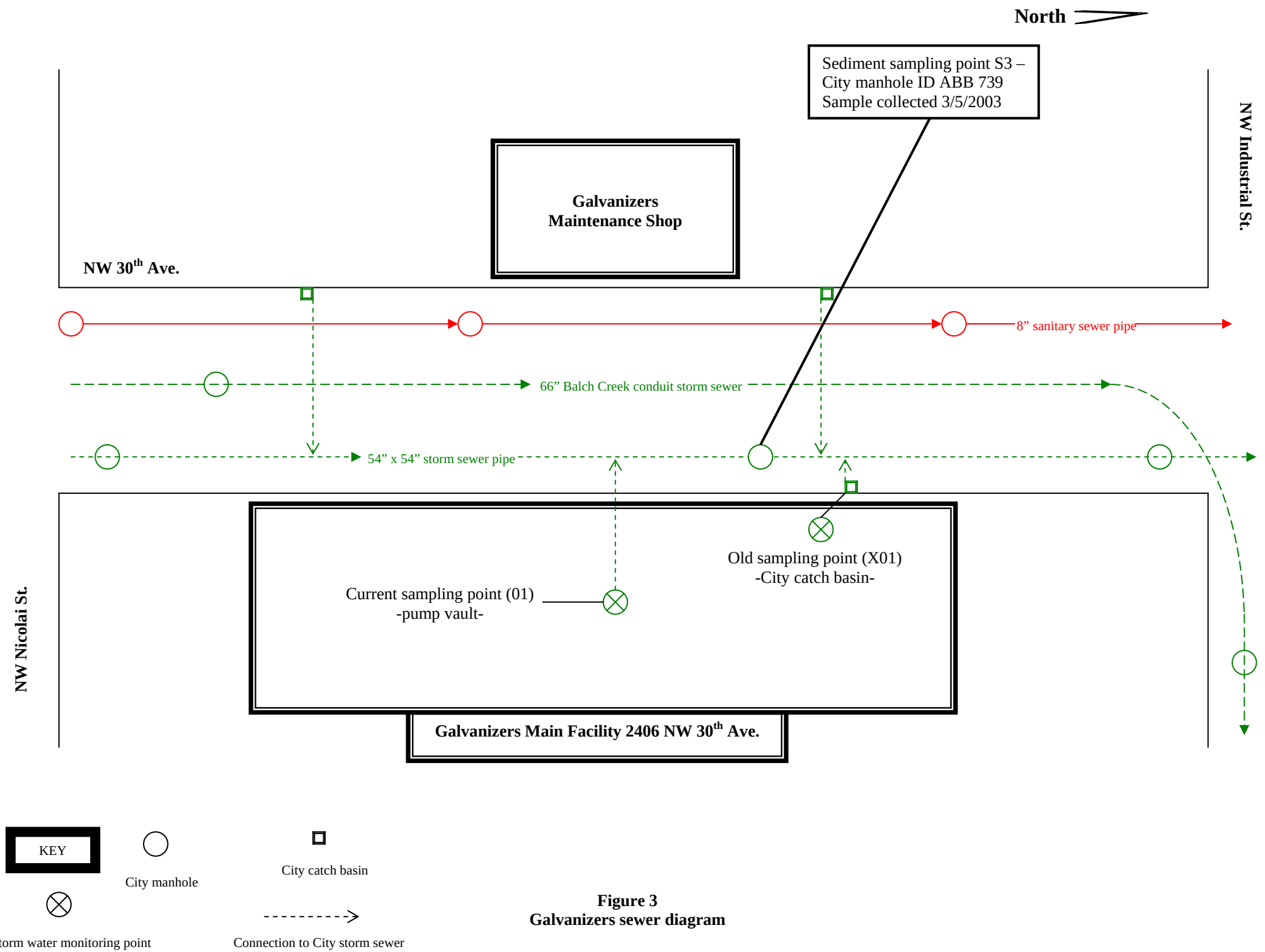

Figure 3
Galvanizers sewer diagram