ecology and environment, inc.
108 SOUTH WASHINGTON, SUITE 302, SEATTLE, WASHINGTON 98104, TEL. 206-624-9537
International Specialists in the Environmental Sciences

MEMORANDUM

DATE: March 7, 1986

TO: John Osborn, FIT RPO, USEPA, Region X

FROM: Thomas A. Tobin, E&E, Seattle
Louis A. Craig, E&E, Seattle

THRU: David A. Buecker, FIT RPM, E&E, Seattle

SUBJ: And-All Electro Chrome, Inc.
Site Recommendations

REF: TDD R10-8502-08

CC: Joan McNamee, USEPA, Region X
James Pankanin, USEPA, Region X
Richard Fullner, E&E, Seattle

Based on the Ecology and Environment, Inc. (E&E) site inspection of And-All Electro Chrome, Inc. (AAEC), and on the review of the collected sample data, it is recommended that:

- Samples collected at AAEC from the on-site borehole (AA-BHA, -B, -C), the catchbasin (AA-CB), and from selected surface soil locations (AA-SS1, -3, -4) should be held by the USEPA laboratory for EP toxicity analysis for possible future enforcement action. If, at a later date, the site is cleaned up (i.e., removing contaminated soils/sediments), such EP toxicity analysis information could be used to determine whether the material must be treated as a hazardous waste.

- Deed restrictions (to be determined by the USEPA) should be placed on the sale of this property so that the new owners are aware that there is contaminated soil on the property.

- This Site Inspection report should be distributed by the USEPA to all appropriate State, King County, and Seattle regulatory agencies for informational purposes regarding potential environmental and public health implications.

- Local utility companies should be notified by the USEPA or the current property owner of the location(s) of on-site contaminanted soils in order to prevent the soils accidental excavation and subsequent exposure to employees.

- The Superfund Program Branch should distribute copies of the Site Inspection report to RCRA.

- Waste material currently being stored inside the plant should be disposed of in an approved manner.

- The sediments should be removed from the catchbasin so that residual contaminants are not being discharged into the METRO system everytime it rains.

If you have any questions, please call.

TT:dlk

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SITE INSPECTION
REPORT OF AND-ALL ELECTRO CHROME, INC.
SEATTLE, WASHINGTON

TDD R10-8502-08

Report Prepared By: Ecology and Environment, Inc.
Project Leader: Thomas A. Tobin
Date: March 1986

Field Investigation Team: Richard Brooks, Louis Craig, and Thomas A. Tobin

Submitted To: J.E. Osborn, Regional Project Officer
Field Operations and Technical Support Branch
U.S. Environmental Protection Agency
Region X
Seattle, Washington

ABSTRACT

A file review and site inspection was conducted at And-All Electro Chrome, Inc., Seattle, Washington under EPA Technical Directive Document R10-8502-08 to evaluate the facility's status within the USEPA's Uncontrolled Hazardous Waste Site Program. As a result of this inspection, sediment and soil samples were collected from areas of the site suspected of receiving contaminated electroplating and paint sludge wastes. The samples were analyzed and found to be contaminated with heavy metals and selected volatile organic compound.

SITE INSPECTION REPORT
AND-ALL ELECTRO CHROME, INC.
TDD R10-8502-08

Site Name/Address:

And-All Electro Chrome, Inc.
6332 Sixth Ave. S.
Seattle, WA 98108

Investigation Participants:

Louis A. Craig, Ecology and Environment, Inc. (E&E) - (206) 624-9537

Thomas A. Tobin, E&E - (206) 624-9537

David O. Murdock, Washington Department of Ecology (Ecology) - (206) 885-1900

Principal Site Contacts:

S. Blaine Anderson, Owner, And-All Electro Chrome (AAEC) - (206) 763-2377/8823

Date of Inspection:

February 28, 1985 0935-1200 hours

Date of Sampling:

May 23, 1985 0930-1400 hours

1.0 INTRODUCTION

And-All Electro Chrome has been identified by the Region X Environmental Protection Agency (EPA) and Washington Department of Ecology (Ecology) from preliminary assessment screening as requiring additional information to accurately profile the nature and extent of past waste disposal activity at the site. Ecology and Environment, Inc. (E&E) has been requested by EPA under Technical Directive Document No. R10-8502-08 to conduct a site inspection and to evaluate the facility's status within the Agency's Uncontrolled Hazardous Waste Site Program. This report summarizes the results of E&E's site inspection and is divided into the following sections:

- Owner/Operator
- Location
- Site Description and Surrounding Area
- Topography and Drainage
- Geology and Hydrology

- o Ground Water Use
- o Climate
- o Overview of Site Operation
- o Characterization of Waste Streams
- o Site Inspection by E&E
- o Sampling Program and Results
- o Conclusions

2.0 OWNER/OPERATOR

And-All Electro Chrome (AAEC) was owned and operated by the Superior Industrial Corporation, 6332 Sixth Ave. S., Seattle, WA 98108. The Corporation, which had owned AAEC since February 1983, consisted of the following members: Messrs. J. Barc MacKinnon (President, now deceased), Richard Newell, Terrence Cosgrove, and Richard Pratt. Prior to 1983, the company was owned and operated by S. Blaine Anderson (1969-1983). AAEC has always operated at its present location (1,2). In September 1985, Mr. Anderson reassumed ownership of AAEC and has subsequently shut down operations; he is in the process of selling off the company assets.

3.0 LOCATION

And-All Electro Chrome is located on Sixth Ave. S. in the City of Seattle in Section 29, Township 24N., Range 4E.; latitude 47°32'44.0", longitude 122°19'09.0" (USGS Seattle South Quadrangle) (Figure 1) (2,3).

4.0 SITE DESCRIPTION AND SURROUNDING AREA

The site covers approximately one acre and consists of a single plant designed for electroplating, aluminum anodizing, metal grinding, small machine parts manufacturing and painting, and machine parts testing using non-destructive methods (Figure 2). The site is not fenced but access to the plant is controlled by locked doors. The facility is surrounded by several commercial establishments to the west and east, several residences to the south, and a gravel parking lot to the north.

The facility is located in a commercial/industrial/urban area immediately northwest of the King County International Airport (i.e., Boeing Field) (1,2,3). It is estimated that the population within a one-mile radius of the site is approximately 5,954; and within a three-mile radius, greater than 10,000 (3,4).

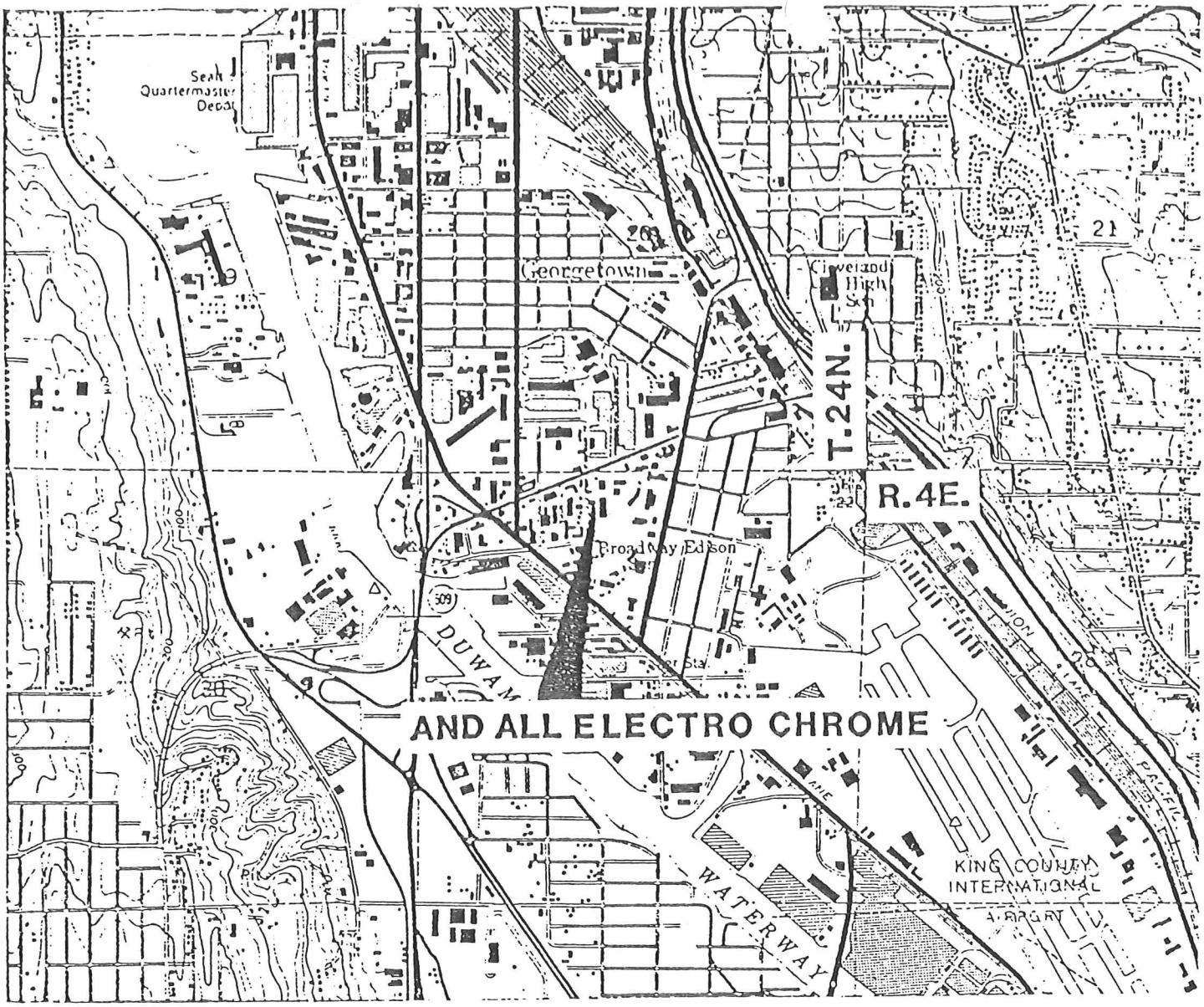
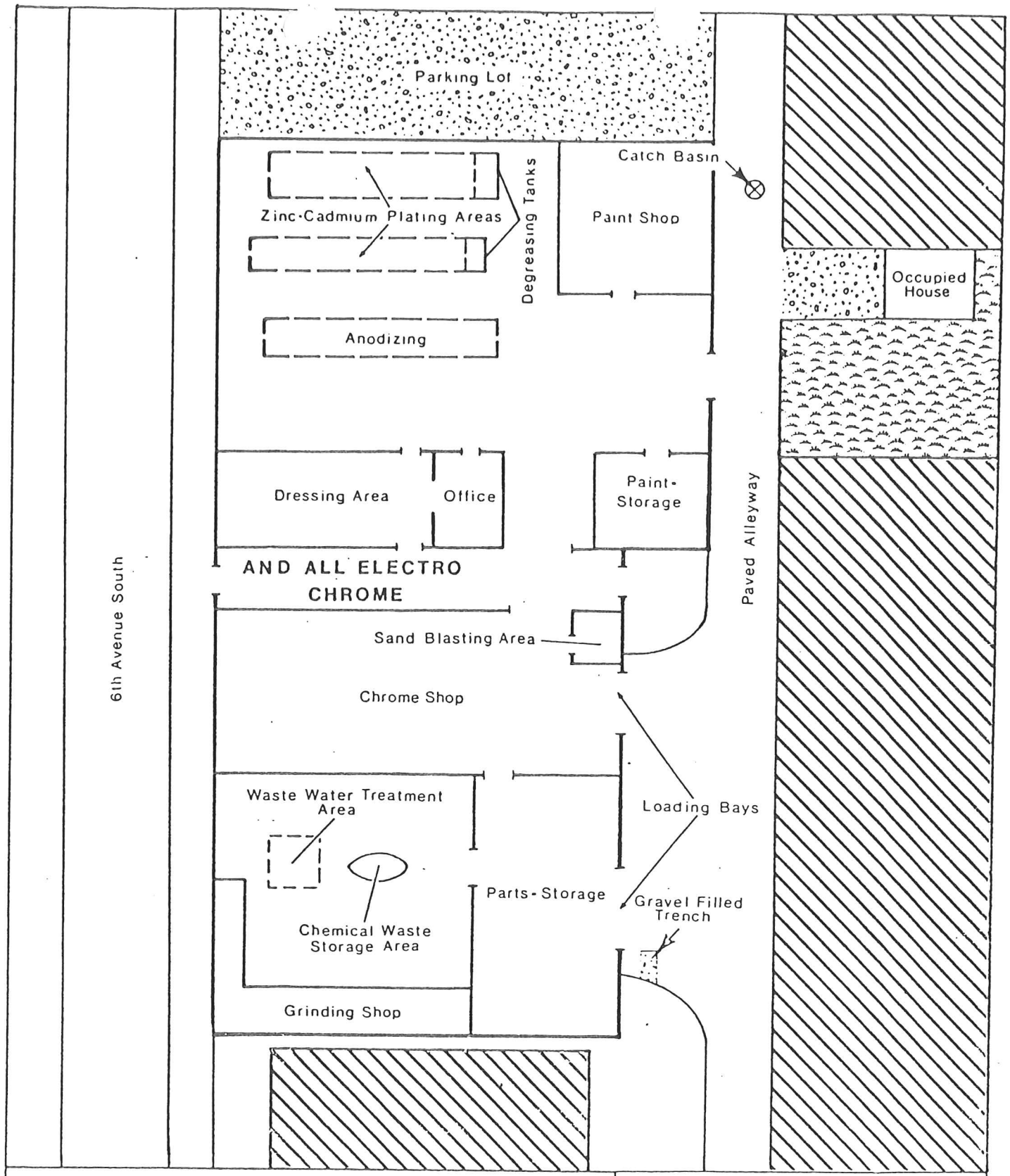


Figure 1
Location Map
And All Electro Chrome
Seattle, Washington


Parking Lot
Catch Basin
Zinc-Cadmium Plating Areas
Degreasing Tanks
Paint Shop
Occupied House
Anodizing
Dressing Area
Office
Paint-Storage
AND ALL ELECTRO CHROME
6th Avenue South
Paved Alleyway
Sand Blasting Area
Chrome Shop
Waste Water Treatment Area
Loading Bays
Parts-Storage
Gravel Filled Trench
Chemical Waste Storage Area
Grinding Shop
LEGEND
Gravel
Building
Grass
N
TITLE. Figure 2
Site map
And All Electro Chrome
Seattle, Washington
JOB # R10-8502-08
ecology and environment, Inc.
SEATTLE, WA
Date 4/9/85
Drawn by DP
Scale not to scale

5.0 TOPOGRAPHY AND DRAINAGE

The AAEC site is located on a relatively flat piece of land with an average slope of 1-2%. Most on-site surface water is collected into a catchbasin located in the alley behind the facility; water in the catchbasin discharges into the Municipality of Metropolitan Seattle (METRO) sewer system where it is treated at the West Point Treatment Plant before discharge into Puget Sound (2). The surrounding terrain has a slope of approximately 1-2%. Surface water in the area is collected into a storm drainage system that discharges water into the METRO system (2,3).

6.0 GEOLOGY AND HYDROLOGY

6.1 Regional Geology

Geologic features of the general site area have been influenced by two primary events: Fraser Glaciation and Olympia Interglaciation. Table 1 describes the principle formations associated with each event. Relatively little information exists for glacial or interglacial events prior to late Olympia Interglacial time due to burial or erosion of the earlier sediments. Some authors suggest, however, that possibly two older glaciations have occurred (5,6).

During the Olympia Interglaciation period the Puget Sound lowland probably exhibited topographic features very similar to those found today: Northwest-southeast trending ridges separated by broad valley floors. Weathering and erosion of the ridge tops and sides resulted in an accumulation of fluvial and lacustrine deposits in the valleys. These deposits consist primarily of sand, silt, and clay (Table 1).

The Fraser Glaciation period followed Olympia Interglaciation approximately 25,000 years ago. Fraser Glaciation began with the formation of alpine glaciers in western Washington mountains. Effects of the event were felt in the Puget Sound area when a lobe of ice (Puget Lobe) blocked the northward drainage of the Strait of Juan de Fuca approximately 15,000 years ago (5). This blockage resulted in the creation of a proglacial lake and subsequent deposition of the Lawton Clay (Table 1).

Advancement of the Puget Lobe also resulted in the deposition of a thick unit of proglacial fluvial and lacustrine sands. This unit, the Esperance Sand, was spread over the Lawton Clay. The contact between the Esperance Sand and the Lawton Clay is, in general, a gradual transition consisting of sand interspersed with silt and clay. The Esperance Sand grades into the coarser and more pebbly Vashon Outwash near its top. Advance outwash also occurs in stream channels cut into the Esperance Sand.

Post glacial till sediments were deposited after the main event of the Fraser Glaciation. These sediments consist of glacier scoured bedrock and proglacial materials which were incorporated into the ice. Deposition occurred as the glacial margin retreated, resulting in the creation of a poorly sorted, nonstratified, and heterogenous till unit (5).

TABLE 1

DESCRIPTION OF GEOLOGIC UNITS (5)

Geologic Period	Event	Geologic Unit	Geologic Sub-Unit	Post Glacial Deposits Description
Miocene	Fraser Glaciation	Vashon Drift	Till	Nonsorted, nonstratified sediment carried and deposited by glacial movement.
			Advance Outwash	Rounded sand and gravel better sorted than till.
			Esperance Sand	Fluvial and lacustrine sands. In places becomes coarser at top. Usually has transition zone with Lawton Clay.
			Lawton Clay	Lake deposited clay, occasionally grading to silt.
	Olympia Interglaciation			Nonglacial sand, silt and clay.
Middle Oligocene-Early Miocene		Blakely Formation		Marine tuffaceous sandstone siltstone, shale.

The youngest bedrock exposed in the greater Seattle areas is the Blakely Formation. The Blakely consists of marine tuffaceous sandstone, siltstone, and shale (5). Bedrock outcrops are infrequent, occurring only in parts of southeastern Seattle and Alki Point. Depths to bedrock in the northern parts of the city range from 2,000 to 4,000 feet (5,6).

6.2 Site Specific Geology

And-All Electro Chrome is located in the floodplain of the Duwamish River. A review of local boring logs has shown that the subsurface soils are fluvial and beach deposited sediments consisting of "beach sands and gravels" (5). The sediments were deposited during the meanderings of the Duwamish River across its floodplain and the wave or tidal action on the beach. Sediments deposited in this manner are typically heterogeneous and, therefore, exhibit a wide range of permeabilities.

The deepest of the local borings extended to 96 feet below ground surface and reportedly encountered sands grading from fine- to coarse-grained to its total depth. The remaining area soil boring logs reported encountering similar materials (5,6). The thickness of the overburden is unknown because none of the soil boring logs report encountering bedrock. Hence, bedrock is greater than 96 feet deep at this site.

The depth at which ground water was encountered during borehole drilling was not recorded. However, due to the flatness of the local topography it is assumed that ground water level is close to the level of the Duwamish River (10-15 feet below ground surface). While the direction of ground water flow in this area has not been determined, it is likely to be to the west, towards the Duwamish River (6).

7.0 GROUND WATER USE

The area surrounding the And-All Electro Chrome site receives potable water from the City of Seattle (1,7,8). The City maintains two reservoir supply systems on the western slopes of the Cascade Mountain Range which supply 90% of the King County residents. There are no known industrial or domestic water wells in the area of the site (6).

8.0 CLIMATE

The marine climate of the Seattle area is mild and moderately moist due to the prevailing westerly air currents which move inland from the Pacific Ocean. The winters are comparatively mild (December-February: 47°-37°F) and the summers are cool (June-August: 72°-55°F). The Seattle area receives approximately 48 inches of total precipitation annually with a mean lake evaporation rate of 24 inches. The maximum two-year, 24-hour rainfall is approximately 2.0 inches (9-11).

9.0 SITE OPERATIONS

And-All Electro Chrome (AAEC) has been at its present location since 1969 (7). The company operated a metal plating/ anodizing shop using various heavy metals (cadmium, zinc, chrome) and acids (hydrochloric) and bases (caustic soda) in their processes with metal grinding and spray painting adjuncts to their processes. There were three plating processes employed by AAEC: 1) the stall line (large metal parts were dipped into the cadmium/zinc tanks via overhead racks); 2) the barrel line (small metal parts were physically dumped into a barrel which was then processed through the plating tanks); and 3) the anodizing line (aluminum is the major material used in this process) (7).

A schematic diagram of the company's plating process is shown in Figure 3. According to this diagram, surfaces of metal products to be plated were initially cleaned with a degreasing solvent (trichloroethylene) followed by an alkali solution and then placed in an acid bath to remove all metal oxides. After that the products were immerced either in a plating bath solution or in an anodizing bath solution and then transferred to a drag out rinse tank to remove excess plating solution. The metal surface usually underwent a series of rinses before being dried in the open air. The final products may also have been painted (2,7).

The cleaning solutions and many of the plating bath solutions were mixed with the rinse water and sent to the wastewater treatment system where, after adjusting the pH with lime, the wastewater was discharged into the METRO sewer at a rate of approximately 100 gallons per day (7). All floor runoff also went into the wastewater treatment system.

Trichloroethylene was recycled by distillation of the solvent in the degreasing tank and returned to the process. The facility generated two types of hazardous sludges including a residue from the distillation of trichloroethylene and sludges from the plating baths. Waste sludges from the electroplating process (plating baths, degreasing tank residue, and used caustics) were currently being stored on-site at the time of the E&E inspection at an amount that would fill one dumpster (7).

The company also maintained a painting shop and a metal grinding shop. All waste paint, lacquer thinner wastes, and rinsate resulting from the painting process were also being stored on-site. Waste metal cans were dumped into the dumpster.

Past disposal records by the previous site owner were not kept. Washington Department of Ecology (Ecology) site files, however, indicated that Mr. Anderson was notified on several occasions by METRO for improper disposal and/or storage of electroplating waste. On one occasion (August 23, 1978), METRO personnel observed plating solution entering the alley catchbasin behind the facility.

10.0 CHARACTERIZATION OF WASTE STREAM

The majority of waste producted by And-All Electro Chrome consisted of electroplating wastes, distillation sludges, paint wastes, wastewater treatment sludges, and dust particles from their metal grinding operations.

According to the EPA criteria for listing of hazardous waste, the following waste streams from this facility are assumed to be hazardous electroplating wastes unless proven otherwise (12):

- spent plating bath solutions (F007) from electroplating operations (reactive and toxic)

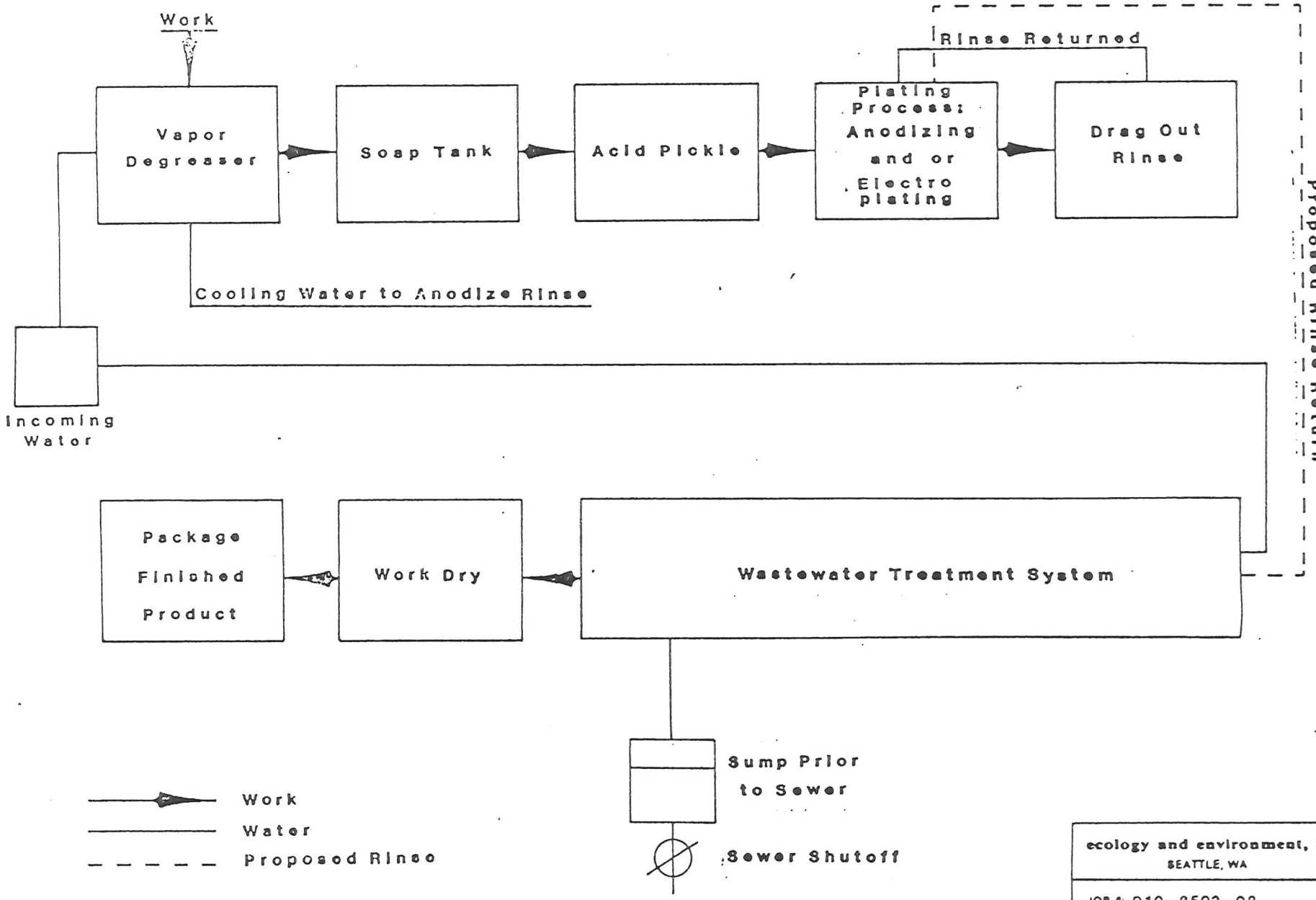


FIGURE 3--Flow Process Chart, And All Chrome, Seattle, Washington

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- o plating bath sludges (F008) from the bottom of plating baths from electroplating operations (reactive and toxic).
- o spent stripping and cleaning bath solutions (F009) from electroplating operations (toxic and reative)
- o spent halogenated solvents used in degreasing, (tetrachloroethylene) and sludges from the recovery of these solvents in degreasing operations.

In general, the treatment of wastewater from electroplating operations usually involves the precipitation of heavy metals from the stream (as metal hydroxide, sulfide, or phosphate) which results in an additional hazardous waste, namely treatment sludges. The available information indicates that the plant is currently storing this material on-site in a variety of storage containers in the vicinity of the wastewater treatment plant. Prior to the January 1984 installation of their wastewater treatment system, it is assumed that AAEC discharged much of their plating wastes into the METRO sewer system (the company was cited on several occasions [10/13/78, 11/30/78, 6/18-20/84] for the illegal disposal of plating bath solutions, via floor runoff into two floor drains located in the main plating area or into the alley catchbasin). At the time of the inspection, the company was discharging these types of spent solutions as "treated effluent" into the sewer system (7).

There were no records kept by the company describing the raw materials and the composition of various solutions used by the plant prior to 1984. Based on general information related to electroplating processes and available data on the current operations utilized by the plant, it may be assumed that the liquid wastes discharged by the plant into the METRO sewer system before 1984 contained mostly inorganics (heavy metals) and some organics in the form of solvents, oil, and greases in higher ratios than currently discharged.

11.0 SITE INSPECTION BY E&E

The inspection of And-All Electro Chrome began on February 28, 1985 at 0930 hours. E&E representatives, accompanied by Mr. David O. Murdock, Washington Department of Ecology (Ecology) and Mr. Barc MacKinnon, And-All Electro Chrome, toured the following areas of the facility (Figure 2): the plating area, the paint shop, the paint/chemical storage area, the chrome shop, the wastewater treatment area, the grinding shop, the machine parts storage area, and the alley way (and catchbasin) behind the shop.

The E&E representatives noted the following:

- o minor spillage of plating solutions was observed under several of the plating tanks;

- o all spillage from the electroplating processes is collected in a floor sump that pumps the spillage into the wastewater treatment system before discharge into METRO;

- o the plant was operating at approximatley 10-20% capacity. Mr. MacKinnon explained that due to their problems with METRO (i.e., during the installation of the wastewater treatment system, AAEC had to refuse work from former customers), AAEC lost much business to competitors which it has not been able to recapture;

- o waste electroplating sludges, paint wastes, and used acids are currently being stored on-site in 5-gallon, 10-gallon and 55-gallon drums; the wastes are not bermed and could be contacted by the employees. Mr. MacKinnon has delayed shipping the wastes due to disposal costs and unavailable funds;

- o one open dumpster (20' x 4' x 5') full of sludge from the wastewater treatment system was observed by the inspectors. Mr. MacKinnon stated that he was allowing the water to evaporate before drumming the sludge and shipping it to an approved storage facility;

- o an approximately one foot by five foot by one-half foot deep gravel lined trench used by the former owner (Anderson) as a "berm" to prevent the overflow of materials from a chemical storage tank (the tank has been removed) was observed adjacent to the south loading dock. Any past/current discharge into this trench from the plating shop and/or from leaking tanks or drums stored near this trench would infiltrate directly into the ground water;

- o the alley catchbasin into which spills from the facility would most likely drain had water in the bottom of it;

- o what appeared to be dried paint sludge wastes were observed in the lot immediately east of AAEC; and

- o there is an occupied residence immediately east of the site.

12.0 SAMPLING PROGRAM RESULTS

12.1 Other Agency Sampling

The alley catchbasin and soils around the plant have been sampled on several occasions [1/5/84 (soils), 8/23, 25/78, and 10/10/78 (catchbasin)] in the past by METRO and the Washington Department of Ecology and were found to be contaminated by cyanides (>1,000 mg/l) and heavy metals (185 mg/kg total chromium, 600 mg/kg copper, 180 mg/kg zinc) (13).

12.2 E&E Sampling

From observations made during the site inspection regarding the facility's history of past dumping and spillage of waste materials at the site, E&E, on May 23, 1985, collected one sediment sample from the catchbasin and several surface and subsurface soil samples from around the plant to determine the possible presence and extent of soil/sediment contamination. Sample locations are shown in Figure 4. Photographs were taken during sample operations (see Appendix A).

The collected composited samples were analyzed by the USEPA Regional Laboratory for heavy metals/chromium (total and hexavalent), total cyanides, and volatile organic compounds.

All samples, including blanks, were collected in accordance with EPA/E&E Standard Operating Procedures that were approved by the USEPA in the May 1985 sampling workplan; refer to the AAEC work plan for details on the sampling procedures used at the site. A summary of the sample documentation is presented in Appendix B.

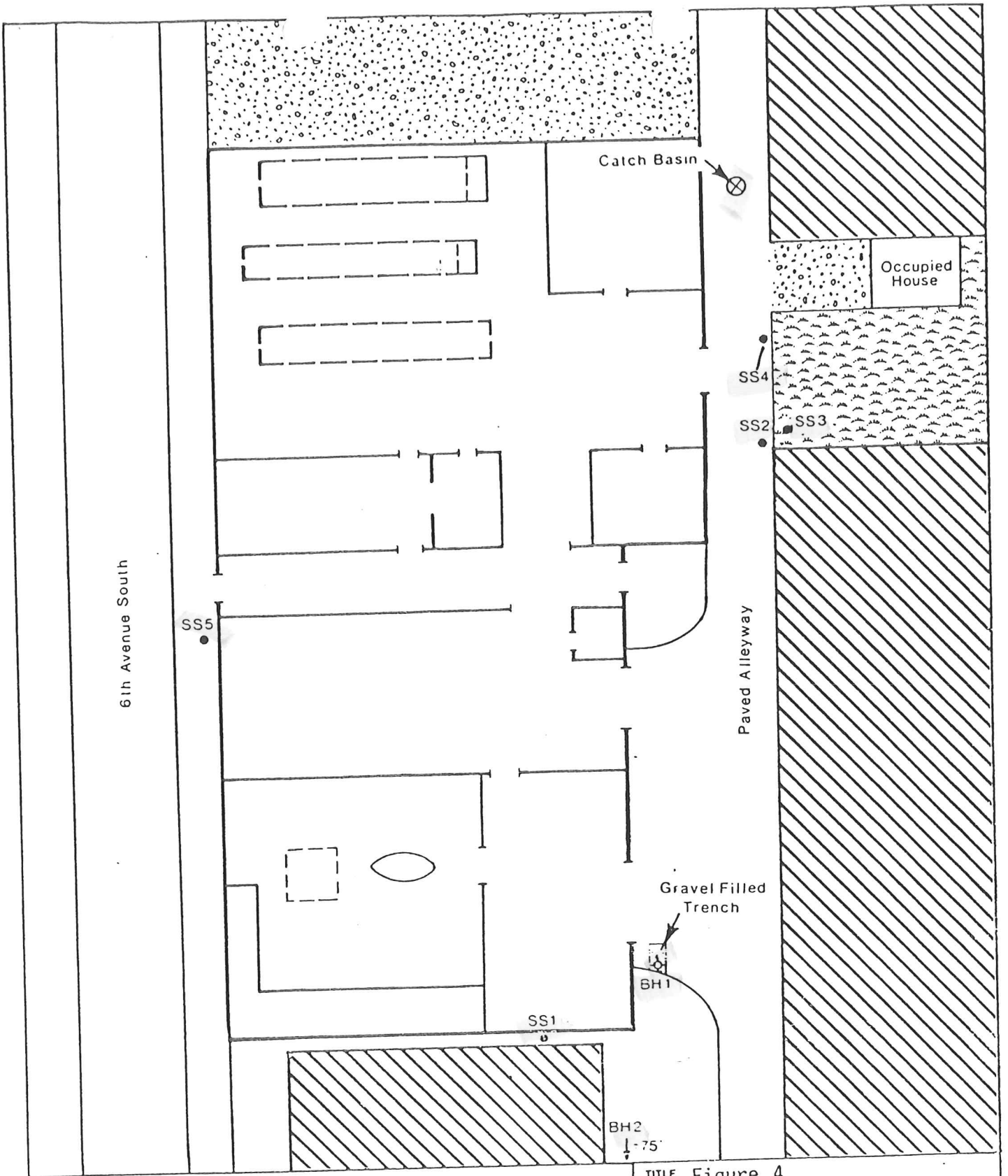
12.3 Results and Discussion

12.3.1 Heavy Metals

Analytical results of quantifiable heavy metals in samples collected from the And-All Electro Chrome (AAEC) site are shown in Tables 2 and 3.

Generally, the analytical results (Table 2) show higher concentrations of heavy metals in the composite samples collected from borehole no. 1 (on-site) than from borehole no. 2 (located about 75' south of borehole no. 1 in a backyard residence; Figure 4). This is to be expected if the company disposed of plating and painting wastes into the on-site trench adjacent to the south loading dock. The sample from the 2-foot depth appears to be the most heavily contaminated sample with high levels of cadmium, chromium (total, hexavalent), lead, and zinc. Concentrations for all metals appear, in general, to be decreasing with depth for both the on-site and off-site boreholes.

Relatively high levels of cyanide were detected in borehole no.1, and to a lesser degree, in borehole no. 2. The levels detected in borehole no. 1 may have resulted from facility's apparent discharge of cyanide stripper solution into the trench; the levels detected in the off-site borehole cannot be explained at this time, but may be due to past off-site dumping.



LEGEND

- Gravel
- Building
- Grass
- BH1 — Bore Hole Location and Number
- SS2 — Soil Sample Location and Number

TITLE. Figure 4
Sample Location Map
And All Electro Chrome
Seattle, Washington

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Date 4/9/85 Drawn by DP Scale not to scale

TABLE 2

CONCENTRATIONS OF HEAVY METALS DETECTED FROM BOREHOLE SAMPLES
COLLECTED AT AND-ALL ELECTRO CHROME, SEATTLE, WASHINGTON

BOREHOLE 1 (ON-SITE)	SELECTED HEAVY METALS (Concentration in MG/KG)													
DEPTH	Antimony	Arsenic	Beryllium	Cadmium	Chromium (Total)	Chromium (Hexavalent)	Copper	Cyanide	Lead	Mercury	Nickel	Selenium	Silver	Zinc
Surface	1.0	2.0	U	55.0	468.0	2.4	80.2	86.2	390.0	0.052	74.2	0.40	0.03	660.0
2-foot	0.60	5.60	U	376.0	2159.0	4.3	49.0	275.0	491.0	0.029	21.6	0.20	0.02	950.0
5-foot	0.10	2.60	U	44.0	1451.0	0.60	51.4	65.1	134.0	0.013	10.7	0.20	0.10	140.0
BOREHOLE 2 (BACKGROUND)														
DEPTH														
Surface	U	4.5	0.17	0.60	29.10	0.10	33.90	2.80	14.10	0.047	46.30	0.50	0.05	60.0
2-foot	U	3.3	U	0.37	11.90	0.10	18.60	42.30	28.50	0.126	17.0	0.40	0.03	130.0
5-foot	U	2.0	U	0.13	7.70	0.30	12.50	119.0	4.8	0.017	8.60	0.40	0.01	37.0

U - denotes undetected

TABLE 3

CONCENTRATIONS OF HEAVY METALS DETECTED FROM SEDIMENT/SURFACE SOIL SAMPLES
COLLECTED AT AND-ALL ELECTRO CHROME, SEATTLE, WASHINGTON

LOCATION	SELECTED HEAVY METALS (Concentration In MG/KG)													
	Antimony	Arsenic	Beryllium	Cadmium	Chromium (Total)	Chromium (Hexavalent)	Copper	Cyanide	Lead	Mercury	Nickel	Selenium	Silver	Zinc
SS5 (background)	U	4.4	0.09	0.36	39.3	9.8	19.8	0.13	10.4	0.028	31.0	0.50	0.08	41.0
SS1	0.3	17.3	0.09	12.7	145.0	1.8	65.9	7.0	488.0	0.177	28.4	0.60	0.32	350.0
SS2	21.2	2.1	U	64.0	14170.0	14.4	505.0	155.0	64950.0	0.216	136.0	0.10	1.84	950.0
SS3	3.2	8.4	U	39.0	1908.0	1.7	106.0	83.8	2873.0	0.092	35.0	0.30	1.26	500.0
SS4	2.9	16.2	0.3	188.0	957.0	0.5	289.0	68.4	2860.0	0.345	157.0	0.40	0.42	1980.0
Catchbasin (Sediment)	11.1	11.1	U	448.0	3275.0	9.2	581.0	233.0	3054.0	0.173	206.0	0.80	0.96	4720.0

U - denotes undetected

TABLE 6

CONCENTRATIONS OF TENTATIVELY IDENTIFIED VOLATILE ORGANIC COMPOUNDS

DETECTED IN SOIL/SEDIMENT SAMPLES

COLLECTED AT AND-ALL ELECTRO CHROME, SEATTLE, WA

SAMPLE LOCATION	TENTATIVELY IDENTIFIED VOLATILE ORGANIC COMPOUNDS (Concentration in ug/kg)			
	Propyl benzene	1-ethyl-2-methyl-benzene	1,2,3-trimethyl-benzene	1,1,2,2-trichloro-1,2,2-trifluoro-ethane
Borehole No.1 (2')	250.0J	430.0J	270.0J	N/D
Catchbasin	58.0J	100.0J	46.0J	N/D
Soil Sample #2	N/D	N/D	N/D	1.3J
Soil Sample #4	N/D	N/D	N/D	4.8J

J - Estimated Concentration
N/D - Not Detected

13.0 CONCLUSIONS

Based on Ecology and Environment, Inc.'s (E&E) site inspection of the And-All Electro Chrome site, and after reviewing the collected sample data, it is concluded that:

- the analytical results clearly demonstrate that the on-site borehole and surface soil samples (1-4) are contaminated with heavy metals and volatile organic compounds associated with electroplating/painting operations; and

- in general, both the background samples (borehole no. 2 and surface soil sample no. 5) showed similar concentrations of inorganic and organic priority pollutants.

REFERENCES

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2. Ecology and Environment, Inc. (E&E), 1985, And-All Electro Chrome, Inc. site inspection.

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8. Seattle Water Department, 1984, The Seattle Water System, Office of Conservation, 821 Second Avenue, Seattle, Washington 98104.

9. National Oceanic and Atmospheric Administration (NOAA), 1983, Local Climatological Data Sheet, Seattle, Washington, National Climatic Data Center, Asheville, North Carolina.

10. U.S. Department of Commerce (DOC), 1973, Precipitation Frequency Atlas of the Western United States, U.S. Superintendent of Documents, #0317-00163.

11. _____, 1968, Climatic Atlas of the United States, National Climatic Data Center, Asheville, North Carolina.

12. U.S. Government Printing Office (GPO), 1981, Hazardous Waste and Consolidated Permit Regulations, USEPA, Hazardous Waste Management System.

13. Washington Department of Ecology, 1985, And-All Electro Chrome, Inc. site file.

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

PHOTO IDENTIFICATION SHEET

TYPE OF CAMERA: Canon AE-1/3289855
TYPE OF FILM: ED 135-20/KR 135-20

TDD NO.: R10-8502-08
SITE NAME: And-All Electric Chrome (AAEC)

Frame No.	Roll No.	Date	Time	Taken By	Witnessed By	Description of Photo
22	2	5/23/85	1215	T.Tobin	Craig	Collecting a surface soil sample from Borehole #1 (dir. SW)
23	2	5/23/85	1230	T.Tobin	Craig	Drilling Borehole #1 (dir. SE)
24	2	5/23/85	1231	T.Tobin	Craig	See above (dir. SW)
25	2	5/23/85	1245	T.Tobin	Craig	Cleaning out soil auger at Borehole #1 (dir. NW)
26	2	5/23/85	1250	T.Tobin	Craig	Collecting deep sample at Borehole #1 (dir. NW)
28	2	5/23/85	1325	T.Tobin	Craig	Drilling Borehole #2 (dir. SW)
29	2	5/23/85	1325	T.Tobin	Craig	See above
30	2	5/23/85	1330	T.Tobin	Craig	Collecting sample from Borehole #2 (dir. SW)

PHOTO IDENTIFICATION SHEET

TYPE OF CAMERA: Canon AE-1/3289855
TYPE OF FILM: ED 135-20/KR 135-20

TDD NO.: R10-8502-08
SITE NAME: And-All Electric Chrome (AAEC)

Frame No.	Roll No.	Date	Time	Taken By	Witnessed By	Description of Photo
1	2	5/23/85	1054	T.Tobin	Craig	Craig & Brooks collecting a sediment sample from AAEC's alley catchbasin (dir. N)
2	2	5/23/85	1054	T.Tobin	Craig	See above
3	2	5/23/85	1054	T.Tobin	Craig	See above
4	2	5/23/85	1058	T.Tobin	Craig	Compositing catchbasin sample (dir. SW)
5	2	5/23/85	1106	T.Tobin	Craig	Collecting soil sample #1 south of AAEC plant (dir. W)
6	2	5/23/85	1106	T.Tobin	Craig	See above
7	2	5/23/85	1108	T.Tobin	Craig	Filling sample jars with soil from location #1 (dir.W)
8	2	5/23/85	1115	T.Tobin	Craig	Collecting soil sample #2 east of AAEC plant (dir. S)
9	2	5/23/85	1115	T.Tobin	Craig	See above
10	2	5/23/85	1119	T.Tobin	Craig	Possible chromium waste at soil sample #2 location (dir. NE)
11	2	5/23/85	1129	T.Tobin	Craig	Collecting soil sample #4 at AAEC (dir. SW)
12	2	5/23/85	1129	T.Tobin	Craig	See above
13	2	5/23/85	1131	T.Tobin	Craig	Filling sample jars at location #4 (dir. SE)
14	2	5/23/85	1135	T.Tobin	Craig	Area where soil sample #3 was collected - possible old paint sludges in evidence
15	2	5/23/85	1135	T.Tobin	Craig	See above
16	2	5/23/85	1139	T.Tobin	Craig	See above
17	2	5/23/85	1146	T.Tobin	Craig	Collecting soil sample #5 along west side of Shop (dir. SE)
18	2	5/23/85	1146	T.Tobin	Craig	See above
19	2	5/23/85	1146	T.Tobin	Craig	Compositing soil sample #5 (dir. SE)
20	2	5/23/85				Overexposed
21	2	5/23/85	1215	T.Tobin	Craig	Collecting surface sample from Borehole #4 (on-site)

APPENDIX B

SAMPLE DOCUMENTATION

TABLE 4

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS DETECTED FROM BOREHOLE SAMPLES
COLLECTED AT AND-ALL ELECTRO CHROME, SEATTLE, WASHINGTON

BOREHOLE 1 (ON-SITE)	VOLATILE ORGANIC COMPOUNDS (VOC) (Concentration in UG/KG)																
DEPTH	Acetone	Benzene	Bromo-methane	Chloro-methane	1,1-Dichlo-roethane	1,1-Dichlo-roethylene	1,1,2-Trichlo-roethylene	1,1,2-Trichlo-roethane	O-xylene	Ethyl-benzene	Styrene	Methyl Isobutyl Ketone	Tetrachlo-roethyl	Toluene	1,1,2-Trans dlethylene	1,1,2,2-Tetrachlo-roethane	Unknown
Surface	110.0	1.3J	19.0J	U	2.4J	1.0J	7500.0	U	32.0	4.40J	7.3J	11.0J	7400.0	15.0	2.5J	U	4.3J
2-foot	U	U	22.0J	U	2.2J	4.6J	1.3E	5.9J	390.0	74.0	U	U	1.6E	26.0	4.6J	U	400.0
5-foot	U	U	U	U	U	U	25.0	U	U	U	U	U	U	U	U	U	U
BOREHOLE 2 (GROUND)																	
DEPTH																	
Surface	U	1.2J	29.0J	400.0J	U	U	10.0J	U	U	U	U	U	10.0J	1.0J	U	U	U
2-foot	U	U	U	152.0J	U	1.0J	1.0J	U	U	U	U	U	U	U	U	U	U
5-foot (no VOC detected at this depth)																	

J - denotes estimated concentration
U - denotes undetected
E - denotes 10^4 power

TABLE 5

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS DETECTED FROM SEDIMENT/SURFACE SOIL SAMPLES
COLLECTED AT AND-ALL ELECTRO CHROME, SEATTLE, WASHINGTON

LOCATION	VOLATILE ORGANIC COMPOUNDS (VOC) (Concentration In UG/KG)																
	Acetone	Benzene	Bromo-methane	Chloro-methane	1,1-Dichlo-roethane	1,1-Dichlo-roethylene	1,1,2-Trichlo-roethylene	1,1,2-Trichlo-roethane	O-xylene	Ethyl-benzene	Styrene	Methyl Isobutyl Ketone	Tetrachl roethyle	Toluene	1,2-Trans ethylene	1,1,2,2-Tetrachlo-roethane	Unknown
SS5 (Background)	U	U	U	U	U	U	U	U	U	U	U	U	10.0J	U	U	U	U
SS1	U	U	U	93.0J	U	U	110.0	U	13.0J	2.1J	1.5J	U	2.6J	1.6J	U	U	U
SS2	U	U	U	U	U	U	280.0	140.0	3.8J	1.0J	1.0J	U	27.0J	1.0J	U	43.0	1.0J
SS3	U	U	U	U	U	U	7.1E	U	4500.0	520.0	U	U	1.5E	30.0	U	U	U
SS4	U	U	U	U	U	U	140.0	U	U	U	U	U	150.0	U	U	U	U
C asin (ent)	U	9.4J	120.0J	200.0J	1.5J	18.0	4.6E	U	1.4E	1700.0	600.0	87.0	2500.0	1100.0	7.0J	U	900.0

J - denotes estimated concentration
U - denotes undetected
E - denotes 10^4 power

Compared with the background surface soil sample (SS5, Figure 4), relatively elevated heavy metal levels were detected in the on-site surface soil samples (SS1-4, Table 3). High levels of cadmium, chromium (total), copper, lead, and zinc were detected in samples 2-4 compared to the background sample; these sample locations were in suspected paint sludge disposal areas which may account for the metal levels being greater than the background levels by a magnitude of ten.

The on-site catchbasin sediment sample (Table 3) is also contaminated with heavy metals, particularly cadmium, chromium, lead, and zinc. AAEC was cited by METRO in the past for the illegal/accidental disposal of plating wastes into the catchbasin and the heavy metals detected in the catchbasin sample may be the result of past waste disposal. Recent (since 1983) disposal of plating wastes into the alley catchbasin may also account for some of these metal levels.

12.3.2 Priority Pollutant Volatile Organics

Table 4 shows the concentration of volatile organic compounds from the priority pollutant list that were detected in the composited samples from borehole no. 1 and no. 2 collected during the AAEC investigation (Figure 4). The highest concentration of pollutants were found in the borehole no. 1 samples from the 2-foot level and may be indicative of past disposal practices of degreasing solutions (e.g., trichloroethylene and tetrachloroethylene) and waste solvents associated with painting practices. Except for the levels of chloromethane in the samples collected from borehole no. 2 (background), only trace amounts of volatile organic compounds were identified in the background sample. The level of chloromethane detected in the off-site borehole cannot be explained at this time, but may be due to past disposal practices.

The analytical results in Table 5 indicate that the same types of pollutants (e.g., trichloroethylene, o-xylene, ethylbenzene, tetrachloroethylene, and toluene) used at the AAEC facility in the plating shop (solvent degreasers) and in the painting operation (paint solvents, thinner) were found in the catchbasin and, to a lesser degree, in surface soil samples 1-4 (Figure 4). The background surface soil sample (SS5) is relatively free of volatile organic contaminants.

Tentatively identified volatile organic compounds detected in the soil/sediment samples are listed in Table 6.

AND-ALL ELECTRO CHROME
CASE NO. FI R10-8502-08
SAMPLE LOCATION: Borehole #1 (On-site)

PROJECT CODE: TEC 206A ACCOUNT: TFA10PUZZ

Location Number	Lab Sample Number	Analysis Requested	Assumed Concen.	Date/Time Sampled	Sample Containers	Sample Type	Means of Preserv.	STORET Station Number	Destination	Federal Express Air Bill Number
AA-BHA	85210625	HEAVY METALS/ CR+6	Low	5/23/85 1140	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1140	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1140	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
AA-BHB	85210626	HEAVY METALS/ CR+6	Low	5/23/85 1140	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1140	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1140	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
AA-BHC	85210627	HEAVY METALS/ CR+6	Low	5/23/85 1140	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1140	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A

AND-ALL ELECTRO CHROME PROJECT CODE: TEC 206A ACCOUNT: TFA 10PUZZ
CASE NO. FI R10-8502-08
SAMPLE LOCATION: Borehole #2 (Off-site Bkg)

Location Number	Lab Sample Number	Analysis Requested	Assumed Concen.	Date/Time Sampled	Sample Containers	Sample Type	Means of Preserv.	STORET Station Number	Destination	Federal Express Air Bill Number
AA-BG-BHA	85210628	HEAVY METALS/ CR+6	Low	5/23/85 1145	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1145	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1145	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
AA-BG-BHB	85210629	HEAVY METALS/ CR+6	Low	5/23/85 1145	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1145	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1145	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
AA-BG-BHC	85210630	HEAVY METALS/ CR+6	Low	5/23/85 1145	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1145	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1145	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A

NID-ALL ELECTRO CHROME
ASE NO. FI R10-8502-08
AMPLE LOCATION: Catchbasin

PROJECT CODE: TEC 206A ACCOUNT: TFA10PUZZ

Location Number	Lab Sample Number	Analysis Requested	Assumed Concen.	Date/Time Sampled	Sample Containers	Sample Type	Means of Preserv.	STORET Station Number	Destination	Federal Express Air Bill Number
AA-CB	85210631	HEAVY METALS/ CR+6	Low	5/23/85 1045	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1045	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1045	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A

JD-ALL ELECTRO CHROME
ASL NO. FI RIO-8502-08
AMPLE LOCATION: Soil Samples

PROJECT CODE: TEC 206A ACCOUNT: TFA10PUZZ

Location Number	Lab Sample Number	Analysis Requested	Assumed Concen.	Date/Time Sampled	Sample Containers	Sample Type	Means of Preserv.	STORET Station Number	Destination	Federal Express Air Bill Number
A-SS1	85210632	HEAVY METALS/ CR+6	Low	5/23/85 1100	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1100	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1100	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
A-SS2	85210633	HEAVY METALS/ CR+6	Low	5/23/85 1110	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1110	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1110	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
A-SS3	85210634	HEAVY METALS/ CR+6	Low	5/23/85 1120	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1120	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1120	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
A-SS4	85210635	HEAVY METALS/ CR+6	Low	5/23/85 1130	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1130	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1130	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A
A-SS5	85210636	HEAVY METALS/ CR+6	Low	5/23/85 1130+5	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		CYANIDE	Low	5/23/85 1130+5	8-OZ WIDE MOUTH JAR	GRAB	N/A	N/A	USEPA LABORATORY	N/A
		VOA'S	Low	5/23/85 1130+5	2 40-ml VIALS	GRAB	N/A	N/A	USEPA LABORATORY	N/A

APPENDIX C

SITE INSPECTION FORM
(Form 2070-13)

South Seattle Quandrangle, Washington-King County
Sec. 29, T. 24 N., R. 4 E.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
And-All Electro Chrome, Inc.	6332 6th Avenue South				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Seattle	WA	98108	King	033	07

09 COORDINATES		10 TYPE OF OWNERSHIP (Check one)
LATITUDE	LONGITUDE	☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
47 ° 32 ' 44.0 "	122 ° 19 ' 09.0 "	☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
02 / 28 / 85 (MONTH DAY YEAR)	☒ ACTIVE ☐ INACTIVE	1969 (BEGINNING YEAR) / 1985 (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☒ B. EPA CONTRACTOR Ecology & Environment (Name of firm) ☒ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☒ E. STATE ☐ F. STATE CONTRACTOR _____ (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Thomas A. Tobin	FIT Team	E&E	(206) 624-9537
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Louis A. Craig	FIT Team	E&E	(206) 624-9537
David O. Murdock	H.W. Field Representative	WDOE	(206) 885-1900
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Barc MacKinnon	President	6332 6th Avenue South	(206) 763-2377
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	0935-1200	Cloudy and cool

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
James Pankanin	U.S. Environmental Protection Agency	206 442-8561 ( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Thomas A. Tobin	EPA	E&E	206/624-9537	08/31/85 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

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

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

- TONS
- CUBIC YARDS
- NO OF DRUMS 60

03 WASTE CHARACTERISTICS (Check all that apply)

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

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS	Unknown	DR	Cyanide
ACD	ACIDS	30-40	DR	Muriatic Acid
BAS	BASES			
MES	HEAVY METALS	10-20	DR	Sludges-plating wastes containing Cu, Zn, Cd, Cr, Ni, Pb

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

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Cadmium Compounds	Unknown	Sewer Discharge	.3	mg/l
MES	Chromium Compounds	Unknown	Sewer Discharge	6	mg/l
MES	Copper Compounds	Unknown	Sewer Discharge	.3	mg/l
MES	Nickel Compounds	Unknown	Sewer Discharge	6	mg/l
MES	Lead Compounds	Unknown	Sewer Discharge	.3	mg/l
IOC	Cyanide Compounds (used before 1983)	Unknown	Sewer Discharge	Unknown	mg/l

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	Chromic Acid	7738-94-5	FDS		
FDS	Sodium Cyanide	143-33-9	FDS		
FDS	Sodium Hydroxide	1310-73-2	FDS		
FDS	Sulfuric Acid	7664-93-9	FDS		

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

USEPA Site File, E&E Site Inspection (02/28/85), USEPA Form 2070-12 (Preliminary Hazardous Waste Site Inspection Report)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: WA	02 SITE NUMBER: WAD 042476788

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No known/observed contamination. Depth to groundwater is approximately 10-15 feet. Soil is permeable sand and gravel. There is no use of ground water for drinking water supplies within a 3-mile radius of the site. The potential for ground water contamination is very high.

01 [X] B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No known/observed contamination. The site is less than 2/3 of a mile from the Duwamish River, with an average slope of 2% of intervening terrain. Duwamish River is used for commercial purposes.

01 [X] C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No known/observed/suspected/documented release. Resident population within 1 mile of the site is >10,000.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

No known/suspected/documented fire/explosive condition.

01 [X] E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: 10-15
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

All operations enclosed within site boundary. Observed open container of waste water sludges, several drums containing sulfuric acid during inspection. Primary threat of direct contact would be to on-site workers.

01 [X] F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: 0.5 (ACRES)
02 [X] OBSERVED (DATE: May 1985) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

Soil samples collected from site contaminated with heavy metals and volatile organic compounds.

01 [X] G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [ ] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known or documented. No use of surface water or ground water for drinking water supplies within a 3-mile radius of the site.

01 [X] H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known or documented. Given the toxicity/hazardous nature of the materials used at the facility, there is a potential for exposure to on-site workers if precautions are not observed.

01 [X] I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 [ ] OBSERVED (DATE: _____) [X] POTENTIAL [ ] ALLEGED
04 NARRATIVE DESCRIPTION

None known or observed. Only threat to population would be through direct contact with on-site materials and/or spills behind plant. Primary threat would be to on-site workers.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: WA	02 SITE NUMBER: WAD 042476788

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☑ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No known/observed contamination. Depth to groundwater is approximately 10-15 feet. Soil is permeable sand and gravel. There is no use of ground water for drinking water supplies within a 3-mile radius of the site. The potential for ground water contamination is very high.

01 [X] B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No known/observed contamination. The site is less than 2/3 of a mile from the Duwamish River, with an average slope of 2% of intervening terrain. Duwamish River is used for commercial purposes.

01 [X] C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No known/observed/suspected/documented release. Resident population within 1 mile of the site is >10,000.

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

No known/suspected/documented fire/explosive condition.

01 [X] E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 10-15 — 04 NARRATIVE DESCRIPTION

All operations enclosed within site boundary. Observed open container of waste water sludges, several drums containing sulfuric acid during inspection. Primary threat of direct contact would be to on-site workers.

01 [X] F. CONTAMINATION OF SOIL — 02 [X] OBSERVED (DATE: May 1985) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 0.5 (Acres) — 04 NARRATIVE DESCRIPTION

Soil samples collected from site contaminated with heavy metals and volatile organic compounds.

01 [X] G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None known or documented. No use of surface water or ground water for drinking water supplies within a 3-mile radius of the site.

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

None known or documented. Given the toxicity/hazardous nature of the materials used at the facility, there is a potential for exposure to on-site workers if precautions are not observed.

01 [X] I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None known or observed. Only threat to population would be through direct contact with on-site materials and/or spills behind plant. Primary threat would be to on-site workers.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: WA | 02 SITE NUMBER: WAD 042476788

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No known/observed/documented flora damage.

01 ☒ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include names(s) of species)

No known/observed/documented fauna damage.

01 ☒ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No known/observed/documented food chain contamination.

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES (Spills/Runoff/Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 10-15 — 04 NARRATIVE DESCRIPTION

Inspectors observed several 55 gallon drums of waste being stored in on-site building. As company uses acids and bases in its processes, there is potential for harm from unstable containment of wastes to on-site workers. Also, puddles of green liquid noted on floor beneath pickling tanks.

01 ☒ N. DAMAGE TO OFFSITE PROPERTY — 02 ☒ OBSERVED (DATE: 02/28/85) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Small area in lot directly east of site was stained and contained what appeared to be dry waste paint sludges. Past dumping of sludges by former owner in this area occurred in 1983 but these were removed at USEPA/WDOE request.

01 ☒ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☒ OBSERVED (DATE: 1978-1984) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Leaking drums and spills discharging into catch basin in alley behind facility. Alley catch basin pumped into METRO sewer system. Chronic violations of METRO regulations regarding sewer discharges of metals and cyanides before 1984.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☒ OBSERVED (DATE: 1978) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Some plating solution (<10 gallons) was dumped from a plating tank into alley behind facility on 08/23/78 so that plating tank could be repaired. Cyanide levels in this solution were reported to be >1000 mg/l in alley catch basin.

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

None known.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 10-15

IV. COMMENTS

AAEC appears to have chronic housekeeping/maintenance problem.. Recommend regular inspection and additional effort to remove waste drums from facility before 90 day storage limit is exceeded.

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

USEPA site file.
Ecology & Environment, Inc. Site Inspection (02/28/85).

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☒ A. NPDES	7222	12/06/84	12/06/89	Industry type-Electroplating with chrome, cadmium, cyanide, zinc
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☐ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND	60	55 gallon
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER (Specify) Dumpster	1	

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☒ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

- ☒ A. BUILDINGS ON SITE — One

06 AREA OF SITE

1 acre (Acres)

07 COMMENTS

Waste storage area currently inside main facility adjacent to the waste water treatment area. Wastes not fenced in; access to waste is limited to on-site workers.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Waste storage is marginal, at best. Waste types did not appear to be segregated or marked as to type(s) of wastes. Storage time had exceeded the 90 day limit at the time of the inspection; this matter was discussed with Mr. MacKinnon by the WDOE representative.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES ☒ NO

02 COMMENTS

Wastes currently stored in main facility that is only open during business hours.

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

USEPA Site File.
Ecology & Environment, Inc. Site Inspection (02/28/85).

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☒	B. ☐
NON-COMMUNITY	C. ☐	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐	B. ☐	C. ☒
D. ☐	E. ☐	F. ☐

03 DISTANCE TO SITE

A. >3, 0 (mi)
B. _____ (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☒ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER 0

03 DISTANCE TO NEAREST DRINKING WATER WELL 0 (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
10-15 (ft)	West	N/A (ft)	N/A (gpd)	NA ☐ YES ☐ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

The City of Seattle supplies potable water to this area since there are no potable water wells in the vicinity.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Recharges Duwamish Waterway	☐ YES ☐ NO	COMMENTS:

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☐ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☒ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☒ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Duwamish Waterway	☐	1/4 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 5,954 NO. OF PERSONS	B. >10,000 NO. OF PERSONS	C. >10,000 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION

<1/8 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

>2,632

04 DISTANCE TO NEAREST OFF-SITE BUILDING

<1/8 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Heavily industrialized/commercial area located in south Seattle's Georgetown area.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 042476783

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☐ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☒ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
>94 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE		
		SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
24 (in)	2.0 (in)	1-2 %	West	1-2 %

09 FLOOD POTENTIAL

SITE IS IN 100 YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE N/A OTHER

A. _____ (mi) B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

N/A (mi)

ENDANGERED SPECIES: N/A

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS (PRIME AG LAND N/A)	AG LAND
A. <1/8 (mi)	B. 2.0 (mi)	C. _____ (mi)	D. _____ (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site is located in the relatively flat floodplain area of the Duwamish Waterway which contains a variety of commercial/industrial buildings all around the site. Site slope is approximately 1-2%; terrain slope is approximately 1-2%.

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

USEPA Site File.
Ecology & Environment, Inc. Site Inspection (02-28-85).

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION	
01 STATE: WA	02 SITE NUMBER: WAD 042476788

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL	12	CLP Contract Laboratories	10/85
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	On-site borehole had readings of 30 ppm in borehole headspace.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF: USEPA (Name of organization or individual)

03 MAPS: ☒ YES ☐ NO

04 LOCATION OF MAPS: USEPA

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

12 surface soil and subsurface soil samples were collected from the And-All Electrochrome site on 05/23/85. Heavy metals and volatile organic compounds were detected in the collected samples.

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

USEPA Site File
Ecology & Environment, Inc. Site Inspection (02-28-85)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
S. Blaine Anderson	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
6332 6th Avenue South	3471

05 CITY	06 STATE	07 ZIP CODE
Seattle	WA	98108

01 NAME	02 D+B NUMBER
And-All Electro Chrome	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
6332 6th Avenue South	3471

05 CITY	06 STATE	07 ZIP CODE
Seattle	WA	98108

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER
Unknown	

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER
Superior Industrial Corporation	

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE
6332 6th Avenue South	3471

12 CITY	13 STATE	14 ZIP CODE
Seattle	WA	98108

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER
S. Blaine Anderson	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
---	3471

05 CITY	06 STATE	07 ZIP CODE
Maple Valley	WA	98038

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER
S. Blaine Anderson	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
6332 6th Ave. So.	3471

05 CITY	06 STATE	07 ZIP CODE
Seattle	WA	98108

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

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

Ecology & Environment, Inc. Site Inspection (02-28-85)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
Facility closed down in 1985.	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER
	S. Blaine Anderson

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
And-All Electro Chrome	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
6332 6th Avenue South	3471

05 CITY	06 STATE	07 ZIP CODE
Seattle	WA	98108

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1983- 1985	Superior Industrial Corp.

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER
And-All Electro Chrome	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
6332 6th Avenue South	3471

14 CITY	15 STATE	16 ZIP CODE
Seattle	WA	98108

01 NAME	02 D+B NUMBER
S. Blaine Anderson	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
---	3471

05 CITY	06 STATE	07 ZIP CODE
le Valley	WA	98038

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1969-1983	S. Blaine Anderson

10 NAME	11 D+B NUMBER
S. Blaine Anderson	

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
---	

14 CITY	15 STATE	16 ZIP CODE
Maple Valley	WA	98038

01 NAME	02 D+B NUMBER
Unknown	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
1965(?)-198	Unknown

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results)

Ecology & Environment, Inc. Site Inspection (02-28-85).

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
WA	WAD042476713

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Amalgamated Services, Inc.	-		
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
21318 103rd Pl. S.E.	9900		
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
Kent / WA / 98031			
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Chemical Processors			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
1701 Alexander Avenue	9900		
05 CITY / 06 STATE / 07 ZIP CODE		05 CITY / 06 STATE / 07 ZIP CODE	
Tacoma / WA / 98421			

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

Ecology & Environment, Inc. Site Inspection (02-28-85)

U.S. Postal Service 1985 National Five Digit Zip Code and Post Office Directory.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD1142476788

PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ F. WASTE REPACKAGED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ H. ON SITE BURIAL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

NOT APPLICABLE

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ L. ENCAPSULATION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ N. CUTOFF WALLS — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ O. EMERGENCY DIKING SURFACE WATER DIVERSION — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ P. CUTOFF TRENCHES SUMP — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 042476788

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

NOT APPLICABLE

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION

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

USEPA Site File
Ecology & Environment, Inc. Site Inspection (02-28-85).

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
WA	WAD 042476788

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ENFORCEMENT ACTION ☒ YES ☐ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

And-All Electro Chrome has been cited in the past (10/13/78, 11/30/78, 06/25/84) by the Municipality of Metropolitan Seattle-METRO for several past disposal practices regarding the illegal disposal of hazardous material into either an alley catch basin (which is pumped into the METRO wastewater treatment system) or directly into floor drains that discharged into the METRO waste water treatment system. METRO and the Washington Department of Ecology have also cited And-All for the improper storage of waste materials outside the main plant. To date, And-All has not been fined for these poor housekeeping practices.

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

EPA FORM 2070-13 (7-81)

SITE NAME AND-ALL ELECTROCHROME

T/R/S T-24N-R4E-S29

Section Number	Drinking Water Populations		Area Irrigated (Acres)	
	Ground Water	Surface Water	Ground Water	Surface Water
T24/R3/				
24				
25				
36				
T24/R4E				
16				
17				
18				
19				
20	N/A		N/A	
21				
22				
27				
28				
29				
30				
31				
32				
33				

	R3 (E W)						R4 (E W)					
	6	5	4	3	2	1	6	5	4	3	2	1
	7	8	9	10	11	12	7	8	9	10	11	12
	18	17	16	15	14	13	18	17	16	15	14	13
T 24 N	19	20	21	22	23	24	19	20	21	22	23	24
	30	29	28	27	26	25	30	29	28	27	26	25
	31	32	33	34	35	36	31	32	33	34	35	36
	6	5	4	3	2	1	6	5	4	3	2	1
	7	8	9	10	11	12	7	8	9	10	11	12
	18	17	16	15	14	13	18	17	16	15	14	13
T 23 N	19	20	21	22	23	24	19	20	21	22	23	24
	30	29	28	27	26	25	30	29	28	27	26	25
	31	32	33	34	35	36	31	32	33	34	35	36

Township, Range, and Section Diagram for Determining Well Data Collection Needs

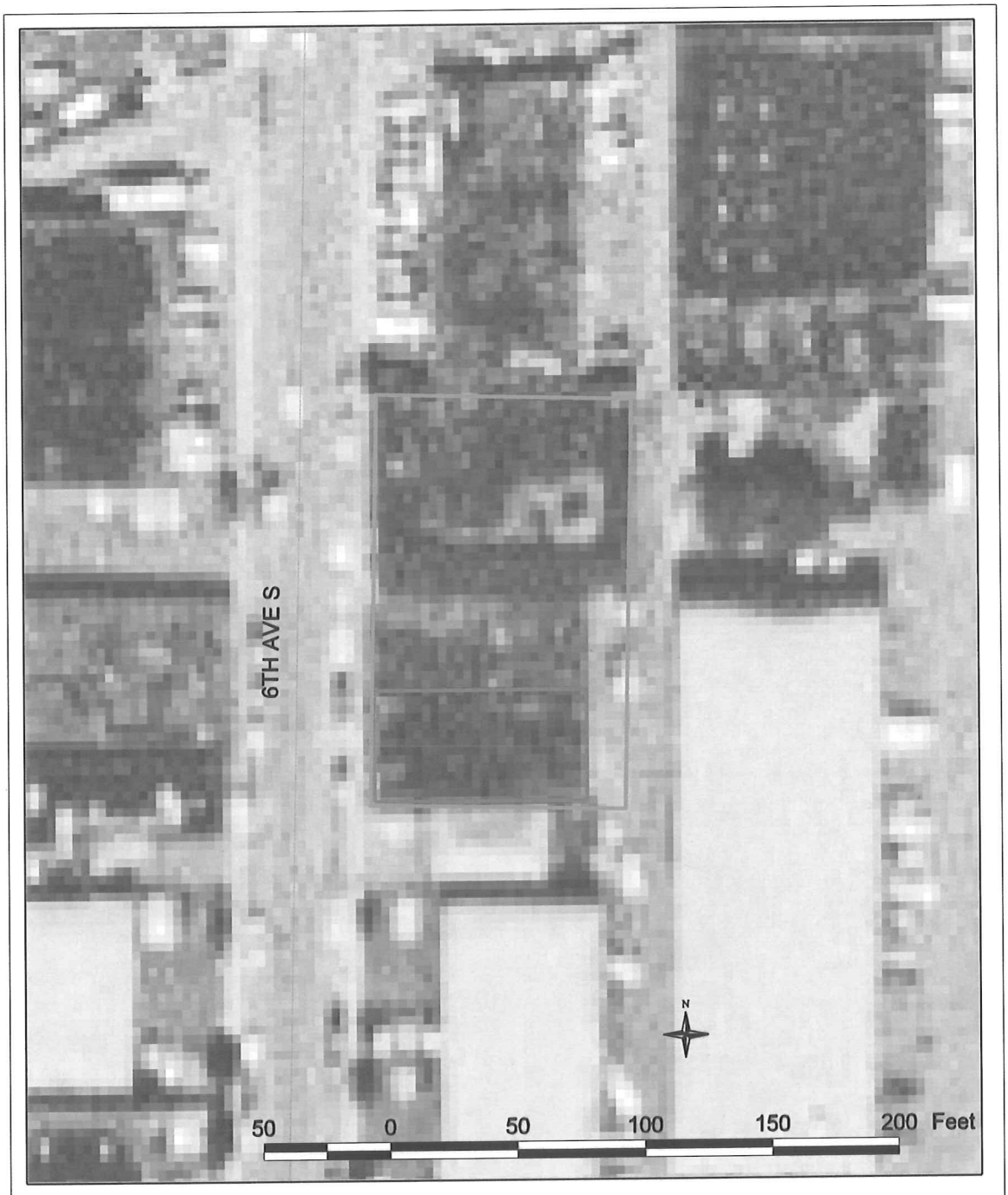
RPCI 536720144503 DOC: 08/30/96 REVALUE ST:CURNT ACTIVE
ANDERSON S BLAINE 605358 MCLAUGHLINS WATER FRONT ADD
20245 SE 192ND 09/17/96
RENTON WA 98058

LOT:11 THRU 14 BLOCK:10 LAST LEGAL IS 1

RY	OY	ST	SC	NC	LEVY	OM-LV	LAND	IMPS	BILLED	PAID	P	A
97		T			0010		160,000	380,000	.00	.00		
96		T			0010		160,000	380,000	6,999.75	3,499.87	H	
95		T			0010		160,000	380,000	6,018.24	6,018.24		
94		T			0010		160,000	380,000	5,898.14	5,898.14		
93		T			0010		160,000	380,000	5,755.05	5,755.05		
									TOTAL DUE:	3,578.26		

YEAR	RECEIVABLE TYPE	LEVY	BILLED AMT	PAID AMT	ACRE	BENEFIT
96	SURFACE WATER	9446	155.52	77.77		
96	CONSERVATION	9430	1.25	.62		
95	SURFACE WATER	9446	155.52	155.52		
95	CONSERVATION	9430	1.25	1.25		
94	SURFACE WATER	9446	146.02	146.02		
94	CONSERVATION	9430	1.25	1.25		

RPCI 536720144503 JUMP CODE: _____ ADDITIONAL DATA P/N



And-all Electrochrome SHA Site
6332 6th Avenue S
Seattle, WA 98108