NISQUALLY ENVIRONMENTAL SAMPLING AND CONSULTING
Post Office Box 1402 Tacoma, Washington 98401 (253) 208-2400 Nisquallyenv@aol.com

Puget Sound Coatings
Hugh Labossier
9220 8th Ave S
Seattle, WA 98108

Dear Mr. Labossier,

Attached, please find the final report for the hexavalent ground water intrusion discovery and subsequent mediation.

Please feel free to contact me if you have any questions.

11/4/10

John Allen
Nisqually Environmental
253-208-2400

Summary

Near the end of June, 2010, Puget Sound Coatings was gathering information to design a treatment system to remove excess zinc from their stormwater. Storm water sample data from this work showed high levels of chromium which was not an expected pollutant from this site. Investigation lead to the supposition that the chromium was entering the storm drain system via seam leaks in a 150 foot long, 5 foot in diameter underground detention pipe on the north side of the property. Discharge from the pipe was observed following several dry days and several leaks at the seams of the pipe were discovered. Testing of the approximately 5 gallons per minute discharge from this pipe showed approximately 3000 ug/l of chromium present, more than 95 percent of which was in the hexavalent state.

Upon notification of management and ecology, action was taken to stop the discharge of this contaminated groundwater to the roadside ditch (and eventually to the Duwamish River) by placing an inflatable plug in the outlet pipe, placing two 21,000 gallon baker tanks on site, and pumping the discharge water from the north west manhole to these tanks for later disposal.

A contractor was hired to temporarily seal the leaks using an inject-able epoxy resin and this was immediately successful in reducing the flow to less than 1 gallon per minute within the first two days. Smaller leaks appeared over the next five days which were addressed with more sealant. Eventually the discharge from the detention pipe was reduced to less than 1 liter per minute. Pumping and storage of the discharge in the baker tanks continued.

Discussions between Robert Wright of Ecology and consultant lead to the conclusion that the ground water was most likely contaminated from other sources. This conclusion was supported by a review of documents submitted to Ecology in January, 1999, a phase one report

completed on the site in 1998, site analysis completed in 1993, soil samples obtained at 4, 5, and 6 feet depths and discussions with Ecology on past cleanups from nearby sites.

With the major seam leaks sealed temporarily, a more permanent repair of the detention pipe was required. Two options were available, replace the pipe or repair the pipe in place. Ecology preferred to minimize disruption of the soils if possible. Cost estimates and evaluations were performed for each and a repair in place was chosen. A contractor with significant experience was chosen to spray a concrete / epoxy mixture on the inside of the pipe, approximately ¾ inch thick, to create a new pipe within the pipe. This was completed in late August of 2010. Subsequent monitoring of the storm water discharge from the site showed no hexavalent chromium.

The contaminated water pumped from the pipe before complete repair was discharged via a pump truck contractor in a registered disposal facility. Pipe sludge and treatment system media was tested per the directions of Allied Waste and disposed of appropriately using their contracted services. Design of the original treatment system for zinc continues.

Discovery

Puget Sound Coatings has an existing storm water treatment system designed by StormwateRx which is not able to meet the permit requirement of less than 117 ug/l for total zinc. The corporation has made the decision to install additional treatment to meet the permit requirements and as such, vendor choice and equipment design has been underway. Part of this work included obtaining 150 gallons of storm water from the site, pre testing it, sending it to a chosen vendor, having them treat the water, and then testing it again. Test results obtained from this process were obtained on July 02, 2010 (attached in the appendix). Later discussions with

the vendor made note of the high chromium values. Chromium had never been a parameter analyzed at the site previously. Review of the data, interviews with company staff indicating that there was no chromium processing occurring on site, inspection of the stormwater system and subsequent discovery of the 5 gallon per minute discharge from the detention pipe lead to the hypothesis that the chromium may be coming from the ground water.

Additional testing of the discharge from the detention pipe showed that discharge had approximately 3000 ug/l of hexavalent chromium present and that the current treatment system had no effect on its removal (data attached). The site had recently bypassed ground water discharge coming from property on the West side of 8th Ave S. This discharge was also tested for chromium and was found to have no hexavalent chromium present (data attached, "new by-pass line").

Initial Actions

Upon understanding that the ground water was contaminated with significant hexavalent chromium, Ecology was notified on July 21st that ground water, which appeared to contain high levels of hexavalent chromium, was leaking into the detention pipe and discharging to surface waters of the state.

Puget Sound Coatings obtained two 21,000 gallon baker tanks and had them on site on July 22nd. Halfon Construction was contracted to plug the outfall and pump the water from the north east manhole to the baker tanks and to temporarily plug the leaks at the seams of the detention pipe. Contaminated water was blocked from entering the surface waters of the state on July 22nd, the water was transferred to the baker tanks for subsequent disposal. Puget Sound

Coatings hired a local tanker and disposal company, Ventilation Power, to dispose of the contaminated water in the baker tanks in their registered disposal facility.

A water curable epoxy resin (Aqua Seal) was obtained from Sealing Systems in Portland, Oregon. along with the equipment needed to inject the material behind the leaks from inside the detention pipe. Halfon was successful in reducing the flow of the discharge from the pipe from 5 gallons per minute to less than 1 gallon per minute within the first 2 days. Smaller leaks appeared high up on the seams as the days progressed which were subsequently sealed in the same manner. It is assumed that as the lower leaks were sealed, the water level increased outside of the detention pipe, exposing the new leaks. Discharge from the pipe was reduced to less than 1 liter per minute within 5 days. The plug in the outfall remained in place and the discharge was pumped to the baker tanks for disposal.

Longer term actions

Discussions with Robert Wright of Ecology at the site during the above process lead to understanding that Ecology would prefer to not disturb the underlying contaminated soil and groundwater if possible, however, if replacement of the detention pipe was the most feasible, they would agree to listen to a plan to do so. Both options were explored and luckily, there was little rainfall during this period.

A vendor was selected to repair the pipe from the inside. The process entailed removing the cover from the detention pipes west manhole, lowering equipment into the pipe that would spray epoxy reinforced concrete, ¾ inches thick, on the inside of the pipe. This process was completed on August 31st, 2010. There has been no observed dry weather discharge from the detention pipe since.

During the above work, soil underneath the asphalt was exposed at the west side of the detention pipe during the removal of the manhole cap to allow for the insertion of the equipment. The opportunity was taken to obtain soil samples at 4, 5, and 6 feet below the asphalt surface (all dry soil, ground water was not reached). These samples were tested for chromium via TCLP and found to have less than 0.007 mg/ kg concentrations of chromium (data attached). Additionally, exposed soil from the south end of the property was tested (landing dock) was testing for chromium as well and found to have less than 0.007 mg/kg of chromium.

The site has an existing storm water treatment system comprised of a large tank filled with layers of sand, activated alumina, and activated charcoal designed to remove heavy metals from the storm water. It was expected that this media, and previous media that had been removed from the system the previous year, would be contaminated with the hexavalent chromium and would need appropriate disposal. The media (and sludge removed from the detention pipe cleaning prior to repair) was tested for RCRA 8 metals. Samples were obtained in a composite manner using a coring device at five sites (data attached). The media that was currently in the treatment system was found to contain 250 ug/l of chromium, 50 ug/l of hexavalent chromium. The stored media from the previous year was found to have 467 ug/l of chromium, 360 ug/l of hexavalent chromium. The pipe sludge was found to have 189 ug/l of chromium and non-detect for hexavalent chromium. All test results were forwarded to Allied Waste and the material removed from the site and was transported by Puget Sound Coatings to Allied Waste for proper disposal. The media in the on site treatment system was replaced with clean sand and washed activated charcoal, the system was then powered on for the next rain event.

At the next significant rain event, on September 20th, 2010, the stormwater was tested for chromium and hexavalent chromium (data attached) and found to have 9 ug/L of chromium, < 10 ug/l of hexavalent chromium, indicating that there are currently no leaks of contaminated ground water into the stormwater conveyance system. The current agreement with Robert Wright of Ecology is to continue to test for chromium for at least a year to assure the repairs are intact.

Previous Data

Previous to purchase of the property, the owner performed a Phase 1 report, dated March 2, 1998 (relevant sections attached). In this report, GeoEngineers determined that ground water flows towards the north-northeast, and that several sites who where RCRA generators were inferred to be upgradiant (pages 9-11). Of specific interest is Advanced Electroplating who, GeoEngineers state in the report, had several issues with Ecology in 1991. A case in point was the detection of high levels of chromium in the ground water and the statement by the EPA that the contaminated soil was not excavated beneath structural foundations and areas that could not be accessible the excavation equipment. Further, GeoEngineer's report that in a November 11,1997 letter to the EPA, the ground water remained elevated for chromium from MW-1.

Previous to the above report, GeoEngineers performed a site characterization report dated March 19th, 1993. In this report, several near surface grit samples and below surface soil samples were obtained from various locations on site. This work is reported by the owner to have occurred before the site was asphalted. The data from the report shows chromium levels of the deep soil samples to be less than 40 mg/kg, the chromium level of a sample of sand blast grit was found to be 109 mg/kg. The data table from this report is attached.

Due the presence of an UST, ground water sampling was performed in 1998 but only for Kerosene, Diesel, and Heavy oils. Metals were not sampled for in the ground water study. None of the parameters listed above were detected (data table attached).

Discussion

As the event was discovered during the dry season and an approximate 5 gallon per minute discharge from the detention pipe was observed and leaks from the seams of the detection pipe were discovered, it is clear that the source of the hexavalent chromium is from the ground water and not the site operations. This is supported by the subsequent stormwater analysis taken after repair of the detention pipe leaks which showed a non detectable value for hexavalent chromium.

Ground water from the property north west of the site obtained from the by-pass line installed by Puget Sound Coatings showed no chromium indicating that the drainage and runoff from that area is not contaminated.

Soil testing performed at 4, 5, and 6 feet when the soil near the detention pipe was exposed indicates that the underlying soil, above the ground water is not contaminated with chromium. Soil testing performed at near surface showing no chromium supports the conclusion that the site is not a generator of chromium pollutants.

Previous Phase 1 work performed by Geo Engineers suggests that the ground water flow to the north north-east could carry known chromium contamination from the Advanced Electroplating site located south of Puget Sound Coatings. Previous site assessment work performed by Geo Engineers suggests that the soil was not contaminated with chromium before the site was reported to be covered with asphalt before purchase by the current owner.

The above information supports the opinion that the groundwater entering the detention pipe was not contaminated from Puget Sound Coatings operations but rather may be a product of a known chromium ground water contamination problem off site to the south or south-west.

Conclusion

The detention pipe has been repaired by internally coating it with ¾ inch of epoxy reinforced concrete and there is no current evidence that the ground water is entering the storm water conveyance system. Stormwater analysis shows no hexavalent chromium in the storm water.

Careful monitoring of the stormwater conveyance system via the addition of chromium to the parameters analyzed in the quarterly stormwater monitoring should provide reasonable notice of possible future infiltrations of ground water to the stormwater system.

11/4/10

John Allen M.S.

Nisqually Environmental

Attachments

1. PSC ST Out (07/02/10) Test data from treatment system design
2. PSC ST In (07/02/10) Test data from treatment system design
3. PSC (07/19/10) Test data from output of detention pipe and output of treatment system
4. New bypass line (07/21/10) Data from bypass line
5. Solid (08/25/10) Data from soil samples near west side of detention pipe
6. PSC (07/20/10) Data from near surface soil sample at south landing dock
7. PSC Current Aquip (07/26/10) Data from media in current stormwater treatment system
8. PSC Stored Media (07/26/10) Data from media stored on site from stormwater treatment system
9. PSC Det Pipe Sludge (07/26/10) Data from pipe sludge
10. Ground Water Condition (03/02/1998) Excerpts from Geo Engineers Phase 1 report (3 pages, 9-11)
11. Table 2, Data from site analysis performed by Geo Engineers
12. Table 1, Data from site ground water testing by Geo Engineers
13. Site Map

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07/02/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC ST Out
Client ID: IN
Sample Matrix: Aqueous
Date Sampled: 06/25/2010
Date Received: 06/29/2010
Spectra Project: 2010060690
Spectra Number: 1

Analyte	Result	Units	Method
Turbidity	0.7	NTU	EPA 180.1
Aluminum	43.8	µg/L	EPA 200.8
Arsenic	< 0.5	µg/L	EPA 200.8
Barium	< 0.5	µg/L	EPA 200.8
Boron	348	µg/L	EPA 200.8
Calcium	7.1	µg/L	EPA 200.8
Chromium	794	µg/L	EPA 200.8
Copper	1.0	µg/L	EPA 200.8
Iron	12	µg/L	EPA 200.8
Lead	< 0.5	µg/L	EPA 200.8
Magnesium	20	µg/L	EPA 200.8
Manganese	< 0.5	µg/L	EPA 200.8
Molybdenum	< 0.5	µg/L	EPA 200.8
Nickel	< 0.5	µg/L	EPA 200.8
Potassium	115	µg/L	EPA 200.8
Sodium	28900	µg/L	EPA 200.8
Vanadium	< 0.5	µg/L	EPA 200.8
Zinc	4.6	µg/L	EPA 200.8
Total Suspended Solids	0.67	mg/L	SM 2540-D

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Steve Hibbs, Laboratory Manager
as/scj

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07/02/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC ST Out
Client ID: OUT
Sample Matrix: Aqueous
Date Sampled: 06/25/2010
Date Received: 06/29/2010
Spectra Project: 2010060690
Spectra Number: 2

Analyte	Result	Units	Method
Turbidity	0.6	NTU	EPA 180.1
Aluminum	42.7	µg/L	EPA 200.8
Arsenic	< 0.5	µg/L	EPA 200.8
Barium	< 0.5	µg/L	EPA 200.8
Boron	323	µg/L	EPA 200.8
Calcium	6.4	µg/L	EPA 200.8
Chromium	794	µg/L	EPA 200.8
Copper	0.8	µg/L	EPA 200.8
Iron	11.8	µg/L	EPA 200.8
Lead	< 0.5	µg/L	EPA 200.8
Magnesium	16.7	µg/L	EPA 200.8
Manganese	< 0.5	µg/L	EPA 200.8
Molybdenum	< 0.5	µg/L	EPA 200.8
Nickel	< 0.5	µg/L	EPA 200.8
Potassium	120	µg/L	EPA 200.8
Sodium	29100	µg/L	EPA 200.8
Vanadium	< 0.5	µg/L	EPA 200.8
Zinc	4.4	µg/L	EPA 200.8
Total Suspended Solids	<0.50	mg/L	SM 2540-D

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PRELIMINARY

07/19/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC
Sample Matrix: Aqueous
Date Sampled: 07/19/2010
Date Received: 07/19/2010
Spectra Project: 2010070312
Rush

Client ID	Spectra #	Analyte	Result	Units	Method
Detention Pipe	1	Hexavalent Chromium	3100	ug/L	SM3500-CR-D
Aquip	2	Hexavalent Chromium	3500	ug/L	SM3500-CR-D

PRELIMINARY

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07/21/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC
Client ID: New bypass line
Sample Matrix: Aqueous
Date Sampled: 07/20/2010
Date Received: 07/20/2010
Spectra Project: 2010070335
Spectra Number: 1
Rush

Analyte	Result	Units	Method
Chromium	2.7	µg/L	EPA 200.8
Hexavalent Chromium	<10	ug/L	SM3500-CR-D

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a6/sgh

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08/25/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC
Sample Matrix: Solid
Date Sampled: 08/24/2010
Date Received: 08/24/2010
Spectra Project: 2010080457
Rush

Client ID	Spectra #	Analyte	Result	Units	Method
West Side 5 Feet	1	TCLP Chromium	< 0.007	mg/L	SW846 6010B
West Side 6 Feet	2	TCLP Chromium	< 0.007	mg/L	SW846 6010B
West Side 4 Feet	3	TCLP Chromium	< 0.007	mg/L	SW846 6010B

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07/20/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC
Date Received: 07/19/2010
Spectra Project: 2010070312
Rush

Client ID	Spectra #	Analyte	Result	Units	Method	Matrix	Date Sampled
Landing Dock	3	TCLP Chromium	< 0.007	mg/L	SW846 6010B	Solid	07/19/2010
Landing Dock	3	TCLP Hex. Chromium	<0.01	mg/L	SW846 7196A	Solid	07/19/2010

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07/26/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC Current Aquip
Client ID: NSW Comp
Sample Matrix: Solid
Date Sampled: 07/23/2010
Date Received: 07/23/2010
Spectra Project: 2010070400
Spectra Number: 4
Rush

Analyte	Result	Units	Method
TCLP Arsenic	< 0.05	mg/L	SW846 6010B
TCLP Barium	0.21	mg/L	SW846 6010B
TCLP Cadmium	< 0.003	mg/L	SW846 6010B
TCLP Chromium	0.25	mg/L	SW846 6010B
TCLP Lead	< 0.04	mg/L	SW846 6010B
TCLP Selenium	< 0.08	mg/L	SW846 6010B
TCLP Silver	< 0.007	mg/L	SW846 6010B
TCLP Hex. Chromium	0.050	mg/L	SW846 7196A
TCLP Mercury	0.0003	mg/L	SW846 7470A
PCB	<0.01	mg/Kg	SW846 8082A
pH	6.20	pH Units	SW846 9045

Surrogate	% Recovery	Method
Decachlorobiphenyl	96	SW846 8082A

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07/26/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC Stored Media
Client ID: Grab 01
Sample Matrix: Solid
Date Sampled: 07/23/2010
Date Received: 07/23/2010
Spectra Project: 2010070402
Spectra Number: 1
Rush

Analyte	Result	Units	Method
TCLP Arsenic	< 0.05	mg/L	SW846 6010B
TCLP Barium	0.258	mg/L	SW846 6010B
TCLP Cadmium	< 0.003	mg/L	SW846 6010B
TCLP Chromium	0.467	mg/L	SW846 6010B
TCLP Lead	< 0.04	mg/L	SW846 6010B
TCLP Selenium	< 0.08	mg/L	SW846 6010B
TCLP Silver	< 0.007	mg/L	SW846 6010B
TCLP Hex. Chromium	0.360	mg/L	SW846 7196A
TCLP Mercury	< 0.0002	mg/L	SW846 7470A
PCB	<0.01	mg/Kg	SW846 8082A
pH	6.11	pH Units	SW846 9045

Surrogate	% Recovery	Method
Decachlorobiphenyl	91	SW846 8082A

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07/26/2010

Nisqually Environmental
PO Box 1402
Tacoma, WA 98401
Attn: John Allen

P.O.#: *
Project: PSC Det. Pipe Sludge
Client ID: Grab 01
Sample Matrix: Solid
Date Sampled: 07/23/2010
Date Received: 07/23/2010
Spectra Project: 2010070401
Spectra Number: 1
Rush

Analyte	Result	Units	Method
TCLP Arsenic	< 0.05	mg/L	SW846 6010B
TCLP Barium	2.32	mg/L	SW846 6010B
TCLP Cadmium	< 0.003	mg/L	SW846 6010B
TCLP Chromium	0.189	mg/L	SW846 6010B
TCLP Lead	0.09	mg/L	SW846 6010B
TCLP Selenium	< 0.08	mg/L	SW846 6010B
TCLP Silver	< 0.007	mg/L	SW846 6010B
TCLP Hex. Chromium	<0.01	mg/L	SW846 7196A
TCLP Mercury	0.0002	mg/L	SW846 7470A
PCB AR1260	0.13	mg/Kg	SW846 8082A
pH	6.90	pH Units	SW846 9045

Surrogate	% Recovery	Method
Decachlorobiphenyl	90	SW846 8082A

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3.3 GROUND WATER CONDITIONS

Based on our previous explorations at the site, ground water was observed at approximately 11 feet below the ground surface. Ground water levels fluctuate with seasonal precipitation in the area. The inferred direction of shallow ground water flow in the site vicinity generally is to the north-northeast, toward the Duwamish River. The site is located approximately 3/4 mile west of the river.

4.0 ENVIRONMENTAL RECORDS REVIEW

GeoEngineers reviewed pertinent environmental records (regulatory lists) for those facilities that currently or previously have occupied properties within an ASTM-specified distance from the subject site. The information reviewed was provided by a subcontracted regulatory list search service, Environmental Data Resources (EDR). The EDR report is presented in Appendix B. The report includes details regarding the listed facilities identified and maps showing the locations of the listed facilities.

Those facilities found within the specified distances from the subject site were evaluated for potential impact to the subject site. The listed facilities either are located 1/4 mile or greater from the site or are located at an inferred down- or cross-gradient location relative to the site, with the following exceptions:

- Advanced Electroplating, Inc. is located approximately one block south of the site. This property is listed on the C&SCS list, the RCRA list as a large quantity generator, the registered UST list (does not appear on the LUST list), and the CERCLIS list for no further remedial action planned. Additionally, Advanced Electroplating has an existing violation regarding generator compliance. The property is at an inferred upgradient location relative to the site.
- Selland Auto Transport, Inc. is located approximately one block southwest of the site. This property is listed as a RCRA small quantity generator. Oil is recycled at this site according to the EDR report (Appendix B). Selland Auto Transport also is listed on the Registered UST list. The property does not appear on Ecology's LUST list. The property is at an inferred upgradient location relative to the site.
- Allied Body Works, Inc. is located approximately one block southwest of the site. This property is listed as a RCRA small quantity generator. The site is at an inferred upgradient location relative to the site.
- Terres & Sommers, Inc. is located approximately one block southwest of the site. This property is listed as a RCRA small quantity generator. Terres & Sommers is at an inferred upgradient location relative to the subject site.
- Fruehauf Trailer Corporation is located immediately south of the PacRim property. The Freuhauf property is listed on the Registered UST list. However, the property does not exist on Ecology's LUST list. We understand that activities on this property are similar to

the PSC operations and likely generate paint and coating waste. The Freuhauf property appears to be at an inferred upgradient location relative to the subject site.

Of the upgradient sites listed above, only Advanced Electroplating is listed with Ecology as having confirmed soil and/or ground water contamination.

5.0 ECOLOGY/EPA FILE REVIEW

5.1 GENERAL

An Ecology and/or EPA file review for the properties mentioned in Section 4.0 was completed by a GeoEngineers representative on January 5 and 13, 1998. A summary of the files and our opinions regarding impacts to the Sebco property are outlined below.

5.2 ADVANCED ELECTROPLATING INC. (9585 8TH AVENUE SOUTH)

The Advanced Electroplating Inc. (AEI)(currently known as Advanced Companies Inc.) is located approximately 400 feet upgradient (southwest) of the subject site. The following summary is based on our review of the Ecology and EPA files and our January 12, 1998 conversation with Thor Cutler, an EPA project manager that managed a cleanup at the AEI site in 1995.

We understand that AEI electroplated metal for automobile parts from approximately 1964 to 1992.

Ecology completed several inspections of the AEI site between 1987 and 1992. During these inspections Ecology found multiple chemical and hazardous waste storage and maintenance violations. Additionally, the file indicated that a METRO wastewater discharge permit (#7221) was violated in 1992 because of high concentrations of copper and nickel in the wastewater.

Dangerous waste forms in the Ecology file indicated that AEI generated 1-1-1 trichloroethane (TCA) and wastewater and sludge contaminated with copper, nickel, chromium and zinc.

A "Site Hazard and Assessment Summary Report" dated July 1991 located in the Ecology file indicated that ground water samples obtained from one monitoring well (MW-1) onsite had high concentrations of chromium, zinc, TCE, cyanide and low (acidic) pH that exceeded regulatory cleanup levels.

Thor Cutler of the EPA provided us the following two reports completed by Ecology & Environment Inc. (E&E) that summarize cleanup activities and follow-up ground water monitoring of MW-1. The reports are; "Advanced Electroplating Removal Report TDD: 96-01-0010" dated July 1997 and a letter describing preliminary ground water monitoring results dated November 11, 1997.

The EPA completed a cleanup action at AEI in 1995. The following was removed from the site and transported to chemical waste management's hazardous waste landfill located in Arlington, Oregon according to the E&E report: 3,000 gallons of cyanide liquid waste, 27,555 gallons of acid liquids, 7,700 gallons of base liquids, 12,600 gallons of wastewater, 1,400

gallons of flammable liquids, 15 gallons of gasoline and water, 80 cubic yards of cyanide sludge, 40 cubic yards of acid sludge, three 55-gallon drums of heavy metal sludge, 140 55-gallon drums of base sludge, three tons of non-hazardous waste debris, approximately 2,000 tons of soil containing mixtures of the hazardous chemicals listed above, 150 tons of chromium-contaminated soil, and miscellaneous volumes of hydrogen peroxide, bases, sodium sulfide, sodium nitrite, paints and labpack wastes. Additionally, 1,365 tons of soil contaminated with volatile organic compounds (VOCs) was treated onsite prior to offsite disposal.

The EPA indicated that contaminated soil was not excavated beneath structural foundations and areas that could not be accessed by excavation equipment.

Thor Cutler indicated that the storm drains were removed and replaced on the site during the remedial action. He speculated that contaminants likely migrated offsite through the storm drains. He also speculated that contaminant migration may have been to the south and east (toward South 96th Street) within the storm drain. He indicated that Hamm Creek is directed into a storm drain beneath 96th Avenue. He did not have any information regarding the original pathway of Hamm Creek. He also indicated that the ground water flow direction in this area has not been evaluated because only one monitoring well (MW-1) exists on the AEI site.

E&E's November 11, 1997 letter to EPA indicates that concentrations of TCE, 1-1-1-TCA and chromium, as well as other contaminants, remain elevated in the ground water sample obtained from MW-1. Thor Cutler indicated that no further assessment is being conducted at the site by the EPA at this time.

5.3 SELLEND AUTO TRANSPORT (615 SOUTH 96TH STREET)

We observed the following in the Ecology file:

- A 1989 complaint indicating that wash water containing hydrofluoric acid, antifreeze and paint stripper was pumped into a storm drain (a similar complaint was also filed in 1992).
- Ecology visited the property in 1989 and observed that the property was a truck repair facility that utilized 3 USTs for storing oil, gasoline and diesel fuel.
- An oil/water separator and wash rack berm were approved by METRO in 1992.
- Ecology visited the site in 1992 and reported that an 8,000 to 20,000 gallon UST used to store wash rack water is located in front of the office building.

5.4 ALLIED BODY WORKS (625 SOUTH 96TH STREET)

The Ecology file indicates the following:

- An Ecology inspection report dated 1993 indicates that the facility distributes auto and truck parts, manufactures flat beds, and assembles van bodies.
- The facility uses solvent sinks. Spent solvents are removed by an outside recycling service.
- An oil/water separator is located near the production building and is tied into Val-Vue Sanitary System according to the file.
- A 200-gallon waste oil UST is located outside the production building (actual location not identified).

TABLE 2
SUMMARY OF METALS CHEMICAL ANALYTICAL DATA[1]
TEST PIT AND SURFACE SAMPLES

Sample Number	SG-1	SG-2	TP-1-1	TP-2-1	TP-3-1	TP-9-1	TP-11-1	MTCA Method A Soil Cleanup Level Residential (mg/kg)	MTCA Method A Cleanup Level Industrial (mg/kg)
Date Sampled	11/26/91	11/26/91	11/26/91	11/26/91	11/26/91	11/26/91	11/26/91		
Depth of Sample	surface	surface	7.5	8.0	7.5	5.0	7.4		
EPA Priority Metals (EPA Method 6010)									
Antimony	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.25	--	--
Arsenic	1.40	0.90	1.70	3.00	1.20	4.20	2.60	20	200
Beryllium	<0.50	<0.50	<0.50	<0.50	0.81	<0.50	0.71	--	--
Cadmium	0.90	0.62	0.71	<0.50	0.94	1.50	0.83	2.0	10
Chromium	109	<10	31	29	36	39	32	100	500
Copper	27	17	10.20	12	13	33	12	--	--
Lead	14	<7.5	<7.5	<7.5	<7.5	247	<7.5	250	1,000
Mercury	0.10	<0.025	0.031	0.05	0.038	2.40	0.075	1.0	1.0
Nickel	124	<20	44	46	51	51	44	--	--
Selenium	<0.25	<0.25	<0.25	<0.25	<0.25	0.78	1.30	--	--
Silver	<0.50	<0.50	<0.50	<0.50	<0.50	0.84	<0.50	--	--
Thallium	<0.50	<0.05	<0.050	<0.050	<0.050	<0.05	<0.050	--	--
Zinc	427	34	29	27	30	225	26	--	--

Notes:

[1] Samples analyzed by North Creek Analytical Inc.

All results represented in milligrams per kilogram.

Test pit and sandblast grit samples were reported on a wet weight basis. The results shown in this table may differ from the results reported in Appendix B because they have been converted to a dry weight basis for regulatory compliance.

TABLE 1
SUMMARY OF GROUND WATER CHEMICAL ANALYTICAL RESULTS
Puget Sound Coatings Property
SEATTLE, WASHINGTON

Well[1]	Date Sampled	Depth to Water[2] (feet)	Kerosene- / Jet fuel-range Hydrocarbons[3] (mg/l)	Diesel-range Hydrocarbons[3] (mg/l)	Heavy Oil-range Hydrocarbons[3] (mg/l)
TW-1	10/24/98	6.8	<0.20	<0.20	<0.50
MTCA Method A Cleanup Level			1.0[4]		

Notes:

[1] Approximate well location is shown in Figure 2.

[2] Depth to water was measured relative to well casing rim.

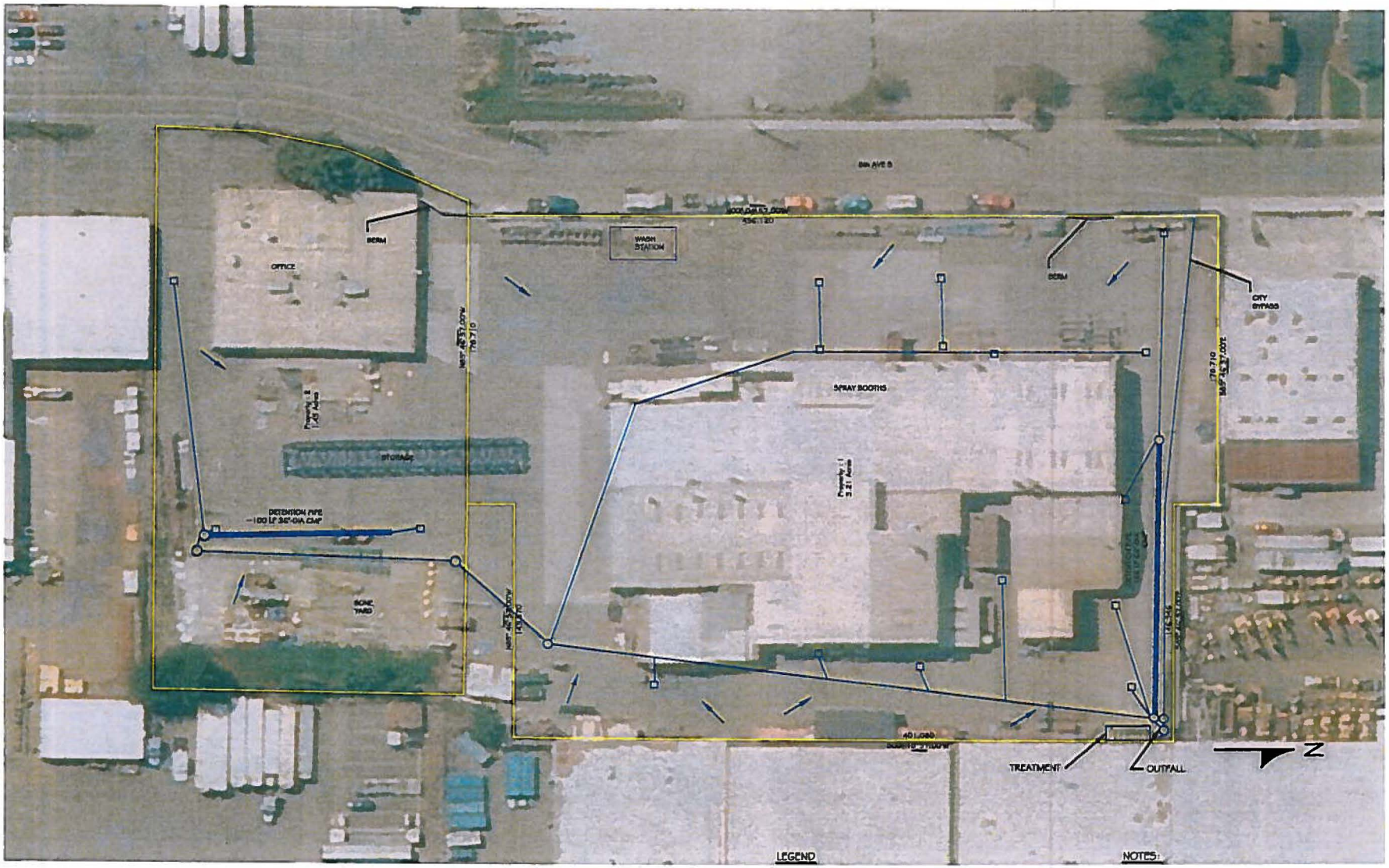
[3] Analyzed by EPA Method NWTPH-Dx with a silicic acid/silica gel cleanup.

[4] The MTCA Method A ground water cleanup level for the sum total of petroleum hydrocarbon concentrations is 1.0 mg/l if carbon ranges are distinctly identified using gas chromatography methods.

mg/l = milligrams per liter.

MTCA = Model Toxics Control Act.

Chemical analyses performed by Transglobal Environmental Geochemistries in Redmond, Washington. Laboratory reports in Attachment B.



LEGEND

- CATCH BASIN
- PROPERTY LINE (APPROX)
- DRAINAGE DIRECTION

PROPERTY 1
1" = 60'

NOTES:

PROPERTY ADDRESS 9220 8TH AVE S
SEATTLE WA 98108

KING COUNTY TAX ID # 2433200215, 3.21 AC
KING COUNTY TAX ID # 5624200190, 1.41 AC

TOTAL AREA TWO LOTS = 4.66 AC

TOTAL SITE AREA (IMPERVIOUS SURFACES) = ASSUME 4.66 AC

Aquarius Environmental

Designed: DB
Drawn: DBK
Checked:

PUGET SOUND COATINGS, SEATTLE WA
Stormwater Improvements

REVISIONS

Rev	Date	Description

SHE

1

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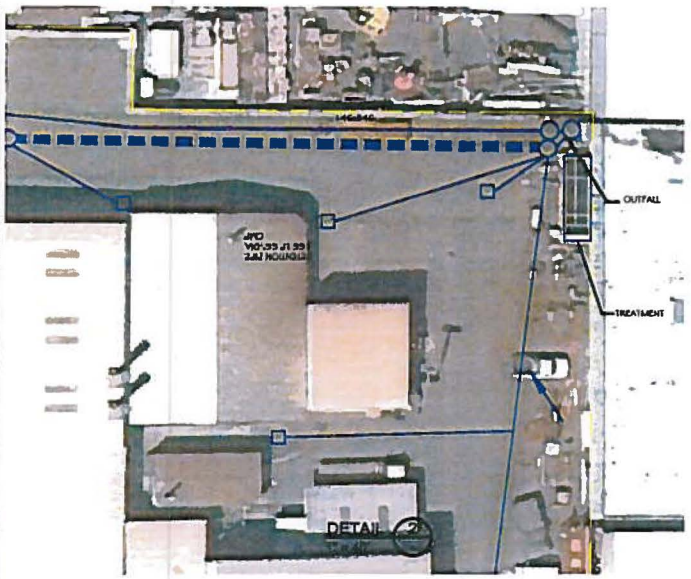

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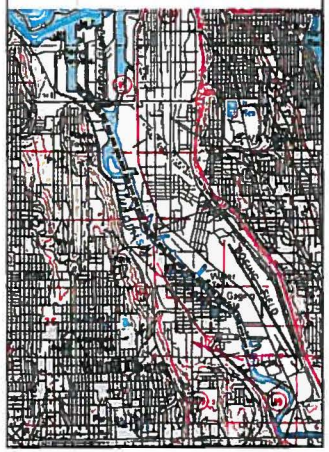
VICINITY MAP



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PUGET SOUND COATINGS, SEATTLE WA

REVISIONS

Rev	Date	Description

SH

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