Public Health
Seattle & King County

HEALTHY PEOPLE. HEALTHY COMMUNITIES.

Alonzo L. Plough, Ph.D., MPH, *Director*

August 3, 2001

Pacific Coast Investment Co.
801 2nd Avenue, #315
Seattle, WA 98104

Dear Sir or Madam:

Public Health – Seattle & King County has completed the site hazard assessment (SHA) of the Bry's Auto Wrecking site, as required under the Model Toxics Control Act. This site's hazard ranking, an estimation of the potential threat to human health and/or the environment relative to all other Washington state sites assessed at this time, has been determined to be a 3, where 1 represents the highest relative risk and 5 the lowest.

For your information, the Department of Ecology will be publishing the ranking of this, and other recently assessed sites in the August 28, 2001 Special Issue of the Site Register. The site hazard ranking will be used in conjunction with other site-specific considerations in determining Ecology's priority for future actions.

Please contact me at (206) 296-4798 if you have any questions relating to the SHA of your site. If you have any inquiries/comments about the site scoring/ranking process, please call Michael Spencer at (360) 407-7195. For inquiries regarding any further activities at your site now that it is on Ecology's Hazardous Sites List, please call Gail Colburn at (425) 649-7058.

Sincerely,

Yolanda King, R.S.

Yolanda King, R.S.
Health & Environmental Investigator II

YK:sf

cc: Michael Spencer, Washington Department of Ecology
Gail Colburn, Washington Department of Ecology

SITE HAZARD ASSESSMENT
WORKSHEET 1
SUMMARY SCORE SHEET

Site Name/Location (Street, City, County, Section/Township/Range, Facility Site ID):

Bry's Auto Wrecking
Parcel # 766670-3865-0
4025 W Marginal Way SW (previously 4017)
Seattle, WA 98106
King County
T-24N, R-04E, Sec-18
Ecology Facility Site ID: 31119678
Longitude: 122° 20' 25.56"
Latitude: 47° 32' 21.34"
Site assessed for August 29, 2001 update

Site Description (Include management areas, substances of concern, and quantities):

The Bry's Auto Wrecking site occupied the entire 4000 block of West Marginal Way SW between SW Andover Street and SW Dakota Street among residential and commercial properties. The site consists of a couple of houses, a large pole building, and numerous inoperable vehicles stored along the fence primarily in the northern portion of the site. According to the current property owner, Bryan Wilson, the Bry's Auto Wrecking site had been used as an auto wrecking yard since 1960 when most of the contamination occurred prior to him acquiring the property in 1993. A portion of the site had concrete placed in 1995 and a Phase I & II assessment was done in July 2000. Since the beginning of 2001, Bry's Auto Wrecking has relocated to another site and is currently leasing the property to a business named Auto Connection and U-Haul. The Bry's Auto Wrecking site is located in an area with municipal water and sewer systems.

On January 16, 1997, a complaint was made to the Washington State Department of Ecology (Ecology) regarding concrete paving over untreated petroleum contaminated soil while Bry's Auto Wrecking was in operation. Ecology referred the complaint to the King County Water Pollution Control Division, also known as the Metro Response Network (Metro) who has been consulting the business since 1993. Prior to Metro's initial investigation on February 12, 1997, the investigator researched and discovered that this site has been visited multiple times by other agencies such as the Local Hazardous Waste Management Program (LHWMP) on-site consultation team and Seattle Police regarding similar issues.

During Metro's investigation, they discovered large, oil-stained areas that were unpaved throughout the site as indicated in the initial complaint. The property owner, Bryan Wilson, said he had the property tested earlier when he first purchased the site in 1993 and the results did not indicate any contamination, however, Ecology has yet to receive those test results indicating the site as being free from petroleum or metals contamination.

In March and July 1997, two other complaints were called into Ecology regarding draining of fluids from dismantled vehicles onto the soil and the fluids were going into storm drains. When Ecology attempted to refer this business to the King County Water and Land Resources Division, they declined the referral because they have tried to work with the business for the last four years with little progress. Because there was confirmed reports of petroleum contamination in the soil at the Bry's Auto Wrecking site, this site was added onto the Integrated Site Information Systems (ISIS) list by Ecology confirmed for petroleum and suspected for metals contamination on January 7, 1998.

A site hazard assessment (SHA) visit was conducted by Yolanda King and Carsten Thomsen of the Public Health - Seattle & King County (PHSKC) on March 22, 2001. Although no one was present at the site during the visit, permission was granted by Mr. Wilson to access the property. Some areas of stained soil were observed such as a low spot adjacent to the southwestern pole of the pole building and nearby a large dumpster where an oil bucket appeared to had been spilled in the southern portion of the 4000 block off of West Marginal Way SW. The central portion of the block has been paved over with gravel on top. There was a distinctive odor of petroleum products in the northern gravel portion of the site nearby a trailer.

According to Mr. Wilson, he hired a consultant, Dan Whitman from Whitman Environmental, to perform Phase I and II studies on the site. When I contacted Mr. Whitman regarding his findings, he indicated that the services were not paid for in full so he did not want to relinquish any of the results. However, Mr. Whitman did mention that he discovered mostly shallow contamination less than five feet deep due to the clay and thin, concrete slabs on the property. He also mentioned there was typically clean soil once the depth reached greater than eighteen inches.

On April 18, 2001, Yolanda King and Carsten Thomsen from PHSKC retrieved four samples from the Bry's Auto Wrecking site. All four soil samples were tested for metals and Northwest Total Petroleum Hydrocarbons Diesel Extended (NWTPH-Dx). The first sample, BRY #1, was taken nearby a spilled oil bucket resulting in a pool of oil at the southern tip of the site facing towards SW Dakota Street. A low spot on the property next to the southwest pole of the pole building was where the second sample, BRY #3, was collected. The third sample, BRY #4, was retrieved at the base of the gravel slope located in the northern portion of the site. Adjacent to a trailer located also in the northern portion of the site where a strong petroleum odor was detected was the location of the final soil sample, BRY #5. All four samples were collected at a four to six-inch depths with the exception of BRY #3 which was retrieved at surface to three inches due to its location as what appeared to be a frequent dumping area for petroleum products.

According to the following chart below, the numbers shown indicate the soil sample BRY #3 had contaminants above the Model Toxics Control Act (MTCA) Method A Cleanup levels in ppm (parts per million).

	Cadmium (ppm)	Diesel Fuel (ppm)	Heavy Oil (ppm)
BRY #3	11	5500	19000
MTCA Method A Cleanup Level	2.0	2000	2000

On the basis of this SHA, completed by the PHSKC's Environmental Health division, this site will be scored for the surface water, air and groundwater routes.

Special Considerations (Include limitations in site file data or data which cannot be accommodated in the model, but which are important in evaluating the risk associated with the site, or any other factor(s) over-riding a decision of no further action for the site): N/A

ROUTE SCORES:

Surface Water/Human Health: 18.2

Surface Water/Environmental: 36.5

Air/Human Health: 21.0

Air/Environmental: 25.3

Ground Water/Human Health: 25.3

OVERALL RANK: 3

WORKSHEET 2
ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE

List those substances to be considered for scoring: Source: 2,3

NWTPH-Diesel, Cadmium, Heavy oil

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above MTCA Method A cleanup levels.

List those management units to be considered for scoring: Source: 3

Surface soil contamination.

Explain basis for choice of unit to be used in scoring. Source: 3

Surface soil is exposed to weather with no containment.

2. AIR ROUTE

List those substances to be considered for scoring: Source: 2,3

NWTPH-Diesel, Cadmium

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above MTCA Method A cleanup levels.

List those management units to be considered for scoring: Source: 3

Surface soil contamination.

Explain basis for choice of unit to be used in scoring. Source: 3

Surface soil is exposed to weather with no containment.

3. GROUND WATER ROUTE

List those substances to be considered for scoring: Source: 2,3

NWTPH-Diesel, Cadmium, Heavy oil

Explain basis for choice of substance(s) to be used in scoring.

All of the above substance concentrations are above MTCA Method A cleanup levels.

List those management units to be considered for scoring: Source: 3

Surface soil contamination.

Explain basis for choice of unit to be used in scoring.

Surface soil is exposed to weather with no contamination.

WORKSHEET 3
SURFACE WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1.NWTPH-Diesel	20	6	490 (rat)	5	0.04	3	ND	-	-
2.Cadmium	5.0	8	225	5	0.0005	5	B1	ND	-
3.NWTPH-Heavy Oil	ND	-	ND	-	2.0	1	ND	ND	-

*Potency Factor

Source: 2
Highest Value: 8 (Max.=10)

+2 Bonus Points? yes
Final Toxicity Value: 10 (Max.=12)

1.2 Environmental Toxicity

( ) Freshwater
(x) Marine

Substance	Acute Water Quality Criteria (ug/l)	Value
1.NWTPH-Diesel	2350	2
2.Cadmium	43	6
3.NWTPH-Heavy Oil	ND	-

Non-human Mammalian Acute Toxicity (mg/kg) ____ Value ____

Source: 2 **Value: 6** (Max.=10)

1.3 Substance Quantity: unknown - use default Source: 3 **Value: 1** (Max.=10)
Explain basis: stained soil surrounding southwest pole

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 3 **Value: 10** (Max.=10)
Explain basis: spill/discharge with no run-on/runoff control

2.2 Surface Soil Permeability: clay/silt-sand mix Source: 3 **Value: 5** (Max.=7)

2.3 Total Annual Precipitation: 34.8 inches Source: 5 **Value: 3** (Max.=5)

2.4 Max. 2-Yr/24-hour Precipitation: 1-2 inches Source: 5 **Value: 2** (Max.=5)

2.5 Flood Plain: not in flood plain Source: 6 **Value: 0** (Max.=2)

2.6 Terrain Slope: < 2% Source: 6 **Value: 1** (Max.=5)

WORKSHEET 3 (CONTINUED)
SURFACE WATER ROUTE

3.0 TARGETS

3.1 Distance to Surface Water: > 1,000 - 2,500 feet Source: 6 **Value: 7** (Max.=10)

3.2 Population Served within 2 miles (See WARM Scoring Manual Regarding Direction): pop.= 0 = 0 Source: 8 **Value: 0** (Max.=75)

3.3 Area Irrigated within 2 miles 0.75 (√no. acres) = (Refer to note in 3.2.): 0.75(√0)= 0.75(0)= 0 Source: 8 **Value: 0** (Max.=30)

3.4 Distance to Nearest Fishery Resource: >1000-2500 ft Source: 6 **Value: 9** (Max.=12)

3.5 Distance to, and Name(s) of, Nearest Sensitive Environment(s) Duwamish Wtrwy as State designated habitat for endangered species > 1,000-2,500 feet Source: 6 **Value: 9** (Max.=12)

4.0 RELEASE

Explain basis for scoring a release to surface water: none confirmed Source: 3 **Value: 0** (Max.=5)

WORKSHEET 4
AIR ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Introduction (WARM Scoring Manual)

1.2 Human Toxicity

Substance	Air Standard (ug/m^3)	Val.	Acute Toxicity (mg/m^3)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcinogenicity WOE	PF*	Val.
1.NWTPH-Diesel	166.5	4	ND	-	ND	-	ND	-	-
2.Cadmium	.00056	10	25	10	ND	-	B1	6.1	6

*Potency Factor

Source: 2
Highest Value: 10 (Max.=10)

+2 Bonus Points? yes
Final Toxicity Value: 12 (Max.=12)

1.3 Mobility (Use numbers to refer to above listed substances)

1.3.1 Gaseous Mobility
Vapor Pressure(s) (mmHg): 1= 8.2E-2; 2= n/a
Source: 1
Value: 3 (Max.=4)

1.3.2 Particulate Mobility
Soil type: silty clay loam
Erodibility: 38
Climatic Factor: 1-10
Source: 3
Value: 1 (Max.=4)

1.4 Highest Human Health Toxicity/Mobility Matrix Value (from Table A-7) equals **Final Matrix Value: 6 (vapor)** (Max.=24)

1.5 Environmental Toxicity/Mobility Source: 1

Substance	Non-human Mammalian Acute Inhal. Toxicity (mg/m^3)	Value	Mobility (mmHg)	Value	(Table A-7) Matrix Value
1.NWTPH-Diesel	No data				
2.Cadmium	25 (rat)	10	0.0E+00	1	5

Highest Environmental Toxicity/Mobility Matrix Value (From Table A-7) equals **Final Matrix Value: 5** (Max.=24)

1.6 Substance Quantity: approximately 12 square feet
Source: 3 **Value: 1** (Max.=10)
Explain basis: stained soil around southwest pole

WORKSHEET 4 (CONTINUED)
AIR ROUTE

2.0 MIGRATION POTENTIAL

2.1 Containment: no cover, discharges/spills to ground — Source: 3 — **Value: 10** (Max.=10)

3.0 TARGETS

3.1 Nearest Population: < 1000 feet — Source: 3 — **Value: 10** (Max.=10)

3.2 Distance to, and Name(s) of, Nearest Sensitive Environment(s) > 1,000 - 2,000 feet to Duwamish Waterway — Source: 3 — **Value: 6** (Max.=7)

3.3 Population within 0.5 miles: pop.= $\sqrt{2016}$ = 45 — Source: 3 — **Value: 45** (Max.=75)

4.0 RELEASE

Explain basis for scoring a release to air: No confirmed release — Source: 3 — **Value: 0** (Max.=5)

WORKSHEET 5
GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

Substance	Drinking Water Standard (ug/l)	Val.	Acute Toxicity (mg/kg-bw)	Val.	Chronic Toxicity (mg/kg/day)	Val.	Carcino-genicity WOE	PF*	Val.
1.NWTPH-Diesel	20	6	490	5	0.004	3	ND	-	-
2.Cadmium	5.0	8	225	5	0.0005	5	B1	ND	-
3.NWTPH-Heavy Oil	ND	-	ND	-	2.0	1	ND	ND	-

*Potency Factor

Source: 2
Highest Value: 8 (Max.=10)
+2 Bonus Points? yes
Final Toxicity Value: 10 (Max.=12)

1.2 Mobility (Use numbers to refer to above listed substances)

Cations/Anions: 1= ; 2= 3; 3= N/A Source: 1 **Value: 3** (Max.=3)

OR

Solubility(mg/l): 1= 3E+1; 2= ; 3= .

1.3 Substance Quantity: approximately 1.3 cubic yards Source: 3 **Value: 1** (Max.=10)

Explain basis: 12 sq ft x 3'= 36 cu ft= 1.3 cu yds

2.0 MIGRATION POTENTIAL

2.1 Containment Source: 3 **Value: 10** (Max.=10)
Explain basis: spills/discharges; no containment

2.2 Net Precipitation: 18.7 inches Source: 5 **Value: 2** (Max.=5)

2.3 Subsurface Hydraulic Conductivity: clay silt Source: 3 **Value: 2** (Max.=4)

2.4 Vertical Depth to Ground Water: > 0 - 25 feet Source: 3 **Value: 8** (Max.=8)

WORKSHEET 5 (CONTINUED)
GROUND WATER ROUTE

3.0 TARGETS

3.1 Ground Water Usage: ground water not usable Source: 6 **Value: 1** (Max.=10)

3.2 Distance to Nearest Drinking Water Well: >10,000 ft Source: 7 **Value: 0** (Max.=5)

3.3 Population Served within 2 Miles: √pop.= √0 = 0 Source: 8 **Value: 0** (Max.=50)

3.4 Area Irrigated by (Groundwater) Wells within 2 miles: 0.75 √no.acres = 0.75 √0 = 0.75 (0)= 0 Source: 8 **Value: 0** (Max.=100)

4.0 RELEASE

Explain basis for scoring a release to ground water: none confirmed Source: 3 **Value: 0** (Max.=5)

SOURCES USED IN SCORING

1. Washington Ranking Method Toxicological Database.
2. Analytical Results for Bry's Auto Wrecking, On-Site Environmental Inc., April 19, 2001.
3. Site hazard assessment, Public Health - Seattle & King County, August 2001.
4. National Weather Service Data.
5. Isopluvials of 2-yr., 24hr. precipitation, NOAA atlas 2, vol. IX.
6. Sensitive Areas Coverage, King County Geographic Information System Data
7. Washington State Department of Health Public Water Supply Listing.
8. Washington State Water Use Data.