

FULCRUM

ENVIRONMENTAL CONSULTING, INC.

TRANSMITTAL OR FAN TRANSMISSION MEMO

. To	Name: Company:	Debbie Charlor	From	Name: Date:	Dave Enos
Re	Proj. Name: Proj. No.:			Pages to Follow:	
Via	☐ Mail			Overnight	
		(Address) (Name) Original will / will not follow (Circle one) Number 456-5056			(Address) Carrier (Circle one): FedEx UPS Airborne Other
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		Spokane Office (509) 459- Yakima Office (509) 574- Wenatchee Office (509) 664-	9220 Fax:	(509)459 (509)575	9-9219 5-8453
	Suntair Exec	Building 107 South Cedar Strutive Suites 105 South Thirdnes & Loan Building 15-B P	Street Vak	e, WA 992 ima, WA 9 Wenatche	0001 0000





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Date:		5-6-98		SMITTAL			08	PARTME	NT OF E	ECOLOGY AL OFFICE
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If material is not received as listed, please call sender immediately.



February 26, 1997

Norman Harrison Harrison Properties 2040 SW 98th Avenue Portland, OR 97225

RE:

Project Update- Preliminary Site Assessment

Vestal Jobbers @ 902 North Dyer Road, Spokane, Washington

LCI Project No. 960181

Dear Mr. Harrison:

Leppo Consultants, Inc. has been requested by Rob Carper to provide a project update regarding our environmental services to-date at the above-referenced project site. The following information summarizes our activities and findings relating to the preliminary assessment of petroleum hydrocarbon and toxic metal soil contamination.

LCI personnel visited the site on December 10, 1996 to conduct soil sampling of the open excavation left from the most recent remedial event completed by Blue Ridge & Associates at the former underground storage tank (UST) area. LCI field observations noted obvious petroleum staining and odors on the excavation sidewalls and bottom. The affected soil appeared to begin at approximately 5 ft. below ground surface (BGS) and extend to the excavation bottom at 13 ft. BGS. Various underground piping was noted on the east and south sidewalls. A drywell was also partially exposed in the northwest corner of the excavation. The soil beneath this drywell also appeared affected. Other site drywells were not examined.

Soil samples were collected with the aid of a backhoe. Soil samples were collected using decontaminated stainless steel hand tools or gloved hand from the backhoe bucket. The sampling devices were decontaminated between sampling events by the following sequence: 1) tap water rinse, 2) alconox and tap water wash, 3) tap water rinse. Soil samples were collected by LCI personnel and placed in laboratory-provided glass containers with teflon lids. The soil samples selected for chemical analysis were labeled, dated, and managed under Chain-of-custody protocol. Samples were placed in an iced cooler (4 degrees Celsius) and transported to North Creek Analytical (North Creek) of Spokane, Washington. Five (5) soil samples were selected for diesel and heavy oil range Total Petroleum Hydrocarbons (WTPH-D Extended), Total Chromium, and Toxicity Characteristics Leaching Procedure (TCLP) for Chromium analyses using State of Washington analytical protocols. The following sample matrix and results were recorded:

Vestal Jobbers - UST Remedial Excavation
Analytical Results (12/10/96)

Sample Number	Sample Location	WTPH-D Extended	Total Chromium	TCLP Chromium
VJBC13	bottom @ 13 ft.	674	161	-
VJNSW7	north sidewall @ 7 ft.	11260	176	
VJESW8	east sidewall @ 8 ft.	1106	381	-
VJWSW10	west sidewall @ 10 ft.	1860	435	0.0148
VJSSW6	south sidewall @ 6 ft.	3452	348	-
	MTCA Method A	200	100	-
	MTCA Industrial	200	500	-

Note: All results reported in parts per million (ppm) or mk/kg.

Norman Harrison Page 2 February 26, 1997

The cleanup levels presented in the table above are for the Washington Department of Ecology (WDOE) Model Toxics Control Act (MTCA) Method A and Method A - Industrial standards. The Industrial cleanup levels are predicated on the site zoning and other factors defined by the MTCA. The use of the Industrial cleanup level would also require WDOE approval as we understand the requirement. Other cleanup methods may be employed for the site, including the Method B Cleanup Levels, which would require additional review and WDOE acceptance. We would be glad to discuss these optional cleanup levels at your request.

The TCLP Chromium analysis was completed to assess the potential for toxic chromium concentrations using the Dangerous Waste Regulations. Concentrations of TCLP Chromium above 5 ppm would designate the affected soil as a hazardous waste.

In addition to the analyses mentioned above, a semi-volatile parameter was completed to assess for the presence of polynuclear aromatic hydrocarbons (PAHs). PAHs are components of the suspected petroleum hydrocarbon contaminant, which has been reported as a diesel-range product. The sixteen (16) individual PAH chemical components are noted as carcinogenic, and are often used in assessing health risks and other cleanup factors to maintain regulatory compliance. The PAH Method A and Method A Industrial Cleanup Levels are 1.0 and 10 ppm, respectively. The following seven (7) PAH chemicals were identified from sample VJNSW7:

Polynuclear Aromatic Hydrocarbons Sample VJNSW7

Saniple Volvow /							
PAH Chemical	Concentration (ppm)						
acenaphthene	12.7						
anthracene	7.3						
fluoranthene	6.73						
fluorene	12.4						
naphthalene	17.8						
phenanthrene	55.6						
pyrene	9.34						
Total	121.87						

Based on the provided information and field observations, a second sampling event was completed on the adjacent south parcel, south of the fence and property line adjacent to the former UST area. This additional assessment was completed on January 22, 1997 to determine the presence or absence of adjacent property impact (as opposed to a full investigation of the vertical and horizontal extent of contamination). A test pit or trench was excavated to the east into the subject property. The test trench was completed to a length of 48 ft. and a depth range of 7 to 12 ft. BGS. Field observations noted petroleum odors and staining beginning at approximately 7 ft. BGS and extending downward into the soil profile to the excavation limits. In addition, a drywell located approximately 75 ft. south of the property line was also sampled.

Five (5) soil samples were selected for Hydrocarbon Identification (HCID), Total Chromium, Hexavalent Chromium, and Toxicity Characteristics Leaching Procedure (TCLP) for Chromium analyses using State of Washington analytical protocols. The following sample matrix and results were recorded:

Adjacent Property - Test Pit Samples
Analytical Results (1/11/97)

Sample Number	Sample Location	HCID	Total Chromium	Hexavalent Chromium	TCLP Chromium
TIA	6 ft. from property line @ 2.6 ft. BGS	gas ND diesel 157 oil ND	82.4	-	-
T1B	6 ft. from property line @ 7.6 ft. BGS	gas ND diesel 1210 oil 515	252	-	- :
T1C	30 ft. from property line @ 9 ft. BGS	gas 29.8 diesel 7210 oil 1910	1280	ND	0.139
T1D	48 ft. from property line @ 12 ft. BGS	gas ND diesel ND oil ND	38	-	_
DW ·	drywell, adjacent property - southwest corner	gas ND diesel 382 oil 2000	78.7	-	-
	Method A	gas 100 diesel 200 oil 200	100	<u>-</u> .	
	Method A Industrial	gas 100 diesel 200 oil 200	500	-	

Notes: All results reported in parts per million (ppm) or mk/kg.

ND - Not detected at laboratory method reporting limits.

The hexavalent chromium analysis was completed to assess for the potential presence of the carcinogenic form of chromium metal (as opposed to the trivalent chromium species). The presence of hexavalent chromium is important in determining health risks and possible lower chromium cleanup levels. Hexavalent chromium was not detected according to the independent laboratory report.

In summarizing the preliminary site assessment findings, it appears that diesel and oil range compounds are the predominate petroleum hydrocarbons found above the referenced MTCA cleanup levels. PAHs may be found in concentrations above the noted cleanup levels. In addition, total chromium is also present in varying concentrations, with cleanup level exceedances in several samples.

During our meeting with WDOE personnel on January 10, 1997, they requested that pertinent technical data regarding the site conditions be forwarded to them for informational purposes. LCI and Rob's Demolition recommends a copy of this letter be forwarded to Debbie Charloe of the Eastern Regional Office. We would be glad to send her a copy of this correspondence on your behalf if you so desire.

Norman Harrison Page 4 February 26, 1997

Please do not hesitate to contact us to discuss any questions or further site environmental activities.

Respectfully,

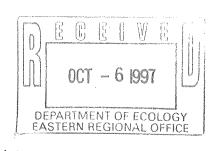
LEPPO CONSULTANTS, INC.

Jeffrey E. Leppo

Senior Environmental Scientist

jl:vestal 1.ltr

cc: Rob Carper



HARRISON PROPERTIES, INC.

2040 SW 98th Ave Portland, Or 97225 Ph (503)292-1060 Fax (503)292-6659 17430 SW 63rd Ave Lake Oswego, Or 97035 Ph (503)636-3670 Fax 697-9614

10/1/97

STATE OF WASHINGTON
Dept. of Ecology
4601 N. Monroe, Suite 202
Spokane, Washington 99205-1295
Attn: Debbie Charole

Dear Debbie,

Received you letter of Sept. 15th, it does not show that I removed over 100 tons of Earth at the 902 North Dyer Rd site. The 100 tons was all that could be removed without doing damage to the building.

If you remember I had trouble with Blue Ridge, they would not give me the information I wanted and did not tell me the truth on what they did with the earth removed. I let them go and retained Robis Demolition to finish the job.

Sincerely,

Norman F. Harrison

Morman & Harrison



FILE COPY

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

4601 N. Monroe, Suite 202 • Spokane, Washington 99205-1295 • (509) 456-2926

September 15, 1997 .

Mr. Rick Vestal Vestal Jobber Manufacturing Company 902 North Dyer Road Spokane, WA 99212-1007

Dear Mr. Vestal:

RE: SITE STATUS FOR 902 NORTH DYER ROAD, SPOKANE, WASHINGTON

This letter is a follow up to our August 22, 1997 meeting regarding the cleanup status for the above referenced property. It is our understanding that you are the current owner/operator of this property/facility. As stated in previous correspondence, it is Ecology's understanding that Mr. Norman Harrison, the previous owner/operator of this property/facility, has assumed responsibility for any environmental problems from activities that occurred during his ownership of this site. According to the Model Toxics Control Act (MTCA) [Chapter 70.105D Revised Code of Washington (RCW)], any past or present relationship with a contaminated site may be considered a "potentially liable person." Potentially liable persons are strictly, jointly and severally liable for the cleanup of the site according to state and federal laws.

On May 5, 1992, the Department of Ecology (Ecology) was notified that an underground storage tank was to be removed May 6, 1992, at the above referenced property. When Ecology personnel arrived on site the morning of May 6, 1992, tank removal activities, initiated by Mr. Harrison, were in progress. These activities were found to be out of compliance with the requirements under the Underground Storage Tank Regulations [Chapter 173-360 Washington Administrative Code (WAC)]. At that time, Mr. Harrison was informed to discontinue any activities related to the tank removal until these requirements were adhered to. The tank was removed June 2, 1993, by a licensed decommissioner and registered site assessor per the requirements.

An initial investigation was also performed May 6, 1992, due to visible staining of the soils observed in the tank excavation indicating that contamination was present. Based on available information and the results of this investigation, Ecology determined that additional remedial action/cleanup is required at this site and added it to Ecology's database of known and suspected contaminated sites. Following the initial investigation, Ecology sent an Early Notice Letter to your father, Mr. Ralph Vestal (now deceased), and Mr. Harrison on June 11, 1992, to notify them of Ecology's decision and the

Mr. Rick Vestal Vestal Jobber Manufacturing Company September 15, 1997 Page 2

requirements in state law which must be adhered to. This letter also documented the notification to Ecology that Mr. Harrison plans to conduct an independent investigation/cleanup at the site.

Under the Model Toxics Control Act, persons have the opportunity to investigate and clean up their site without Ecology assistance or approval. These "independent remedial actions/cleanups" are done at the potentially liable person's own risk and Ecology may take or require additional remedial actions at these sites at any time (Chapter 173-340-120 (8)(b)). It is Ecology's commitment to work cooperatively with responsible parties on an informal basis to accomplish prompt and effective cleanups. In previous correspondence, Mr. Harrison was informed of Ecology's role and the regulatory requirements which must be adhered to when performing an independent remedial action/cleanup as defined in MTCA.

Our office is in receipt of the following independent investigation reports regarding the activities performed at this site:

"Results of Underground Storage Tank Sampling and Engineering Services," Gifford Consultants, Inc., January 8, 1992

"Site Assessment Report," Blue Ridge Associates, Inc., August 17, 1993 "Phase II Assessment," Columbia Environmental Sciences, Inc., June 26, 1997

The Spokane County Health Department performed a site hazard assessment (SHA) at this site in January 1996 as part of the cleanup process required under MTCA. The purpose of the SHA is to gather preliminary environmental data about a site to determine if a release has occurred and to enable Ecology to evaluate the potential threat to human health and the environment posed by the release, relative to other Washington State sites. If further action is required, the information obtained during the SHA allows Ecology to rank the site following the Washington Ranking Method (WARM) and places it on the Hazardous Sites List. This list of ranked sites helps Ecology determine which sites should be worked on first. As stated in the January 30, 1996 letter sent to your father from the Spokane County Health Department, this site was ranked and received a hazard ranking score of 3 which is used in conjunction with other site-specific considerations in determining Ecology's priority for future actions.

Ecology recognizes the independent investigation activities that have occurred on this site. Based on my informal review of the reports and the results of the SHA, soil contaminated with diesel and chromium exceeding the Model Toxics Control Act Method A Cleanup Levels has been confirmed on this site but the extent and degree of contamination has not been determined. The next step in the cleanup process is to conduct a Remedial Investigation/Feasibility Study to characterize the site so a cleanup action plan can be developed. The actual cleanup begins when the cleanup action plan is

Mr. Rick Vestal Vestal Jobber Manufacturing Company September 15, 1997 Page 3

implemented. As stated previously, the cleanup can be done independently of Ecology's oversight but must be done before Ecology is ready to take action.

The site owner, operator or potentially liable person may request that the site be removed from the Hazardous Sites List by using Ecology's fee based review process. Under this process the final cleanup report is submitted to Ecology for a formal review to determine if the cleanup meets the MTCA requirements at the site. In addition, a public review and comment period will be provided for any site Ecology proposes to remove from the Hazardous Sites List.

If you have any questions regarding this letter please contact me at (509) 456-2834.

Sincerely,

Debbie Charloe

L.U.S.T. Site Manager Toxics Cleanup Program

Debbii Charlos

DC:mg

cc: Norman Harrison

8/22/97 Mr Rick Vestal submitted

SUMMARY OF ANALYTICAL RESULTS Vestal Jobbers / PN 960181 Sample Date 12/10/96

Sample No.	Sample Location	Total Chromium	WPTH-D Ext.	Semi-Vol (8270)
VJBC13	bottom center @ 13 ft. BGS	161	diesel 570 heavy oil 104	NS
VJNSW7	north sidewall @ 7 ft. BGS	176	diesel 10,700 heavy oil 560	acenaphthene 12.7 anthracene 7.30 dibenzofuran 6.69 fluoranthene 6.73 fluorene 12.4 2-methylnaphth 162 naphthtalene 17.8 phenanthrene 55.6 pyrene 9.34
VJESW8	east sidewall @ 8 ft. BGS	381	diesel 865 heavy oil 241	NS
VJWSW10	west sidewall @ 10 ft. BGS	435	diesel 1860 heavy oil ND	NS
VJSSW6	south sidewall @ 6 ft, BGS	348	diesel 2930 heavy oil 522	NS

Cr Cleanup Levels

Method A: 1.00 ppm

Industrial Soils: 500ppm

Durch Cleamp Levels 200 ppm (All 50ils)

vejobani.sum Leppo Consultants, Inc.

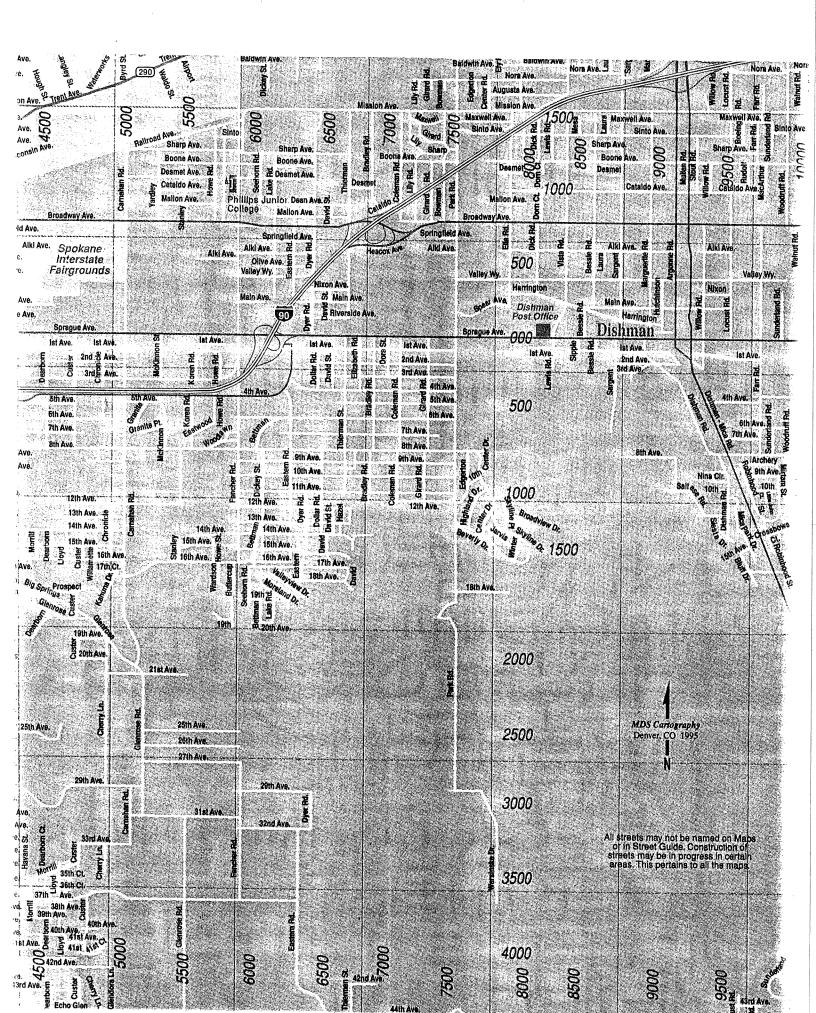
1996 Leppo Report

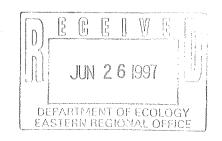
Table 2: Sample results for Volatile Organics, TPH-G, and TPH-D

ANALYTE	NH-IAO-BC	NH-IAO-ESW	NH-IAO-WSW	NH-IAO-NSP	NH-IAO-CSP	NH-IAO-SSP
Chloromethane	< 0.1 ppm					
Chloroethane	< 0.1 ppm					
Bromoethane	< 0.1 ppm					
Vinyl Chloride	< 0.1 ppm					
1,1-Dichloroethane	< 0.1 ppm					
1,2-Dichloroethene	< 0.1 ppm					
1,1-Dichloroethene	< 0.1 ppm					
Chloroform	< 0.1 ppm					
1,1,1-Trichloroethane	< 0.1 ppm					
1,2-Dichloroethane	< 0.1 ppm					
Carbon Tetrachloride	< 0.1 ppm					
1,2-Dichloropropane	< 0.1 ppm					
Trichloroethene	< 0.1 ppm					
Bromodichloromethane	< 0.1 ppm					
1,3-Dichloropropene	< 0.1 ppm					
1,1,2-Trichloroethane	< 0.1 ppm					
Dibromochloromethane	< 0.1 ppm					
Tetrachloroethene	< 0.1 ppm					
Chlorobenzene	< 0.1 ppm					
Chloroform	< 0.1 ppm					
Bromoform	< 0.1 ppm					
1,1,2,2-Tetrachloroethane	< 0.1 ppm					
Benzene	0.10 ppm	0.04 ppm	0.03 ppm	0.39 ppm	0.04 ppm	0.03 ppm
Toluene	0.13 ppm	0.06 ppm	0.07 ppm	0.25 ppm	0.05 ppm	0.04 ppm
Ethylbenzene	0.80 ppm	0.32 ppm	0.19 ppm	2.47 ppm	0.22 ppm	0.08 ppm
Xylene (total)	5.1 ppm	· 2.56 ppm	0.40 ppm	16.1 ppm	1.55 ppm	· 0.54 ppm
Styrene	< 0.1 ppm					
1,2-Dichlorobenzene	< 0.1 ppm					
1,3-Dichlorobenzene	< 0.1 ppm					
1,4-Dichlorobenzene	< 0.1 ppm					
TPH - Gasoline	< 25 ppm	< 10 ppm	< 25 ppm	< 25 ppm	< 25 ppm	< 25 ppm
TPH - Diesel	15,100 ppm	10,100 ppm	1,200 ppm	21,800 ppm	5,110 ppm	5,110 ppm

Table 3: Sample results for Priority Pollutant Metals and TCLP

ANALYTE	NH-IAO-BC	NH-IAO-ESW	NH-IAO-WSW	NH-IAO-NSP	NH-IAO-CSP	MU IAO CCD
Lead	19.6 ppm	15.8 ppm	8.5 ppm	8.2 ppm	15.3 ppm	
Arsenic	17.3 ppm	16.8 ppm	15.9 ppm	9.0 ppm	16.7 ppm	13.6 ppm
Beryllium	0.13 ppm	0.16 ppm	0.02 ppm	0.32 ppm	0.35 ppm	12.8 ppm
Cadmium	0.40 ppm	0.55 ppm	0.20 ppm	0.15 ppm	0.60 ppm	0.36 ppm
Chromium	210 ppm	174 ppm	17.2 ppm	60.3 ppm		0.35 ppm
Mercury	< 0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	0.08 ppm <0.01 ppm
Selenium	< 0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm	<0.01 ppm
Silver	0.95 ppm	0.88 ppm	0.81 ppm		0.68 ppm	0.85 ppm
Copper	18.4 ppm	17.1 ppm	11.0 ppm	10.4 ppm	17.8 ppm	13.8 ppm
Nickel	9.4 ppm	7.8 ppm	7.5 ppm		8.7 ppm	7.5 ppm
Zinc	185 ppm	138 ppm	46.0 ppm	60.0 ppm		89.6 ppm
Thallium	4.7 ppm	2.2 ppm	3.1 ppm		3.9 ppm	2.9 ppm
Antimony	<0.01 ppm	0.15 ppm	0.3 ppm		4.3 ppm	1.5 ppm
TCLP Lead	<0.05 ppm	<0.05 ppm	< 0.05 ppm	<0.05 ppm	<0.05 ppm	< 0.05 ppm
TCLP Arsenic	<0.05 ppm					
TCLP Barium	<0.5 ppm					
TCLP Cadmium	<0.01 ppm					
TCLP Chromium	< 0.05 ppm					
TCLP Mercury	<0.001 ppm					
TCLP Selenium	<0.01 ppm					
TCLP Silver	<0.01 ppm					





STATE OF WASHINGTON

SS

DECLARATION OF ROBERT L. ERIKSON, M.S.

COUNTY OF BENTON

Affidavit of Robert L. Erikson, M.S. June 11, 1997 Page 1 of 12

I, ROBERT L. ERIKSON, hereby declare as follows:

1. I am over the age of eighteen (18) years, am competent to testify as a witness to matters stated herein, and make this declaration based upon my own personal knowledge in support of the position of Vestal Jobber Manufacturing, Inc.

A. Qualifications as an Environmental Expert

- 2. I am a Principal in the environmental consulting firm Columbia Environmental Sciences, Inc. (CESI).
- 3. I have eighteen years professional experience in environmental consulting. My technical contributions have been in the areas of hazardous-waste site assessment, remedial investigation and feasibility studies, geochemistry and hydrogeology. I have served clients in both public and private sectors. Many of my site-specific investigations have been conducted in Washington State. Some examples of my technical contributions, clients, and sites are:
 - a. analysis of distribution patterns of organic contamination in soils and groundwater, remedial design, and clean-up; USAA Insurance Company; Mercer Island, Washington.
 - b. field characterization and measurement of organic contaminants in soil; Pacific Industrial Supply; Kennewick, Washington.
 - c. measurement and analysis of chlorinated solvent patterns in groundwater; Taco Time Northwest; Everett, Washington.
 - d. analysis of organics, metals, and radionuclide contamination patterns in soil and groundwater; U.S. Department of Energy; Hanford Site, Washington.
 - e. characterization of metal contamination for feasibility study of soil clean-up; U.S. Environmental Protection Agency; Montclair and Glen Ridge Superfund Sites, New Jersey.
 - f. characterization and risk assessment of organic contamination in soils and groundwater; FMC Corporation, Kemmerer, Wyoming.

- g. measurement and analysis of metal and radionuclide contamination in soils and groundwater and remedial action; U.S. Department of Defense, Aberdeen Proving Ground, Maryland.
- analysis of vadose zone and groundwater transport of chemicals in support of performance assessment studies; U.S. Department of Energy and U.S. Nuclear Regulatory Commission; Hanford Site, Washington.
- i. analysis of distribution patterns of organic contaminants in soil and groundwater; Lilyblad Petroleum, Inc.; Tacoma, Washington.
- j. timing of releases and environmental impacts of organic contaminants; Lilyblad Petroleum, Inc.; Tacoma, Washington.
- k. analysis of distribution patterns of metal, radionuclide, and organic contaminants in soil and groundwater; EMF Superfund Site; Pocatello, Idaho.
- 4. In addition to my individual contributions, my fifteen-year project management and three-year line management experience have involved review and evaluation of the technical contributions from a wide cross section of the environmental field. I have also served as peer reviewer for several national technical journals, including Soil Science Society of America Journal, Geochimica et Cosmochimica Acta, and Geophysical Research Letters.
- 5. My recent accomplishments include:
 - a. service as project manager, task manager, and principal scientist for over 20 environmental investigations during the last five years. These include the projects listed in 3a through 3k; environmental assessments for Vestal Jobber Manufacturing, Inc., the City of Richland, BC Northwest, First Savings Bank of Washington, The Richland Church of the Nazarene, and Environmental Compliance Audits for the U.S. Air Force.
 - b. assessment of environmental impacts of hazardous waste sites (FMC Corporation, J.R. Simplot, Lilyblad Petroleum, Inc., USAA Insurance Company), mines and mill tailings piles (U.S. Nuclear Regulatory Commission), fly-ash disposal facilities (Electric Power Research Institute, Tennessee Valley Authority), and contaminated soil and groundwater studies (the City of Richland,

- Pacific Industrial Supply, Aberdeen Proving Ground).
- c. performance assessment for high-level, low-level, and mixed hazardous radioactive waste sites for the U.S. Department of Energy and the U.S. Nuclear Regulatory Commission at sites across the DOE complex.
- d. development and application of groundwater fate and transport codes, including MINTEQ, PHREEQE, FASTCHEM™, FOWL™, VLEACH.
- e. evaluation of site characterization data and remedial alternatives for contaminated sites in Washington State. (USAA Insurance Company, Taco Time Northwest, Lilyblad Petroleum, Inc.)
- 6. I have contributed to over 50 publications in peer-reviewed literature, reports to government and commercial clients, and presentations to scientific organizations.
- 7. I obtained my M.S. in Geochemistry and Mineralogy at The Pennsylvania State University in 1979. The emphasis of my curriculum included aqueous and high-temperature geochemistry, thermodynamics, phase equilibria, spectroscopy, and petrology. My thesis topic was an experimental and theoretical analysis of the thermodynamics of melting of feldspars. I obtained my B.A. in Geology from the State University of New York, Brockport in 1974. My coursework included mineralogy, petrology, geochemistry, paleontology, structural geology, stratigraphy, and field work. My continuing education training includes Hazardous Waste Site Worker Training, (OSHA Certification).

B. Engagement on this Matter

- 8. CESI was retained in this matter by Vestal Jobber Manufacturing, Inc. I was assigned to this project as the lead technical contributor.
- 9. Neither I, nor CESI, have any conflict of interest in this matter.
- 10. CESI was asked to perform a Phase I Environmental Site Assessment of Vestal

Jobber Manufacturing, Inc. property to evaluate current environmental conditions on the subject property.

- 11. Based on the findings of the Phase I Assessment, I was asked to review certain information (listed below) and form an independent technically-based expert opinion, if possible, with respect to these questions:
 - a. What was the most likely time of release that led to the observed contamination?
 - b. Is it likely that Vestal Jobber Manufacturing, Inc. contributed significantly to the nature and amount of contamination at the site?

C. Work Activities

- 12. I reviewed the following documents regarding the subject property archived in files at the Department of Ecology (WDOE), Eastern Regional Office, in Spokane, Washington:
 - a. An assessment report by Gifford and Associates for sampling the contents of an underground storage tank found on Vestal Property and other engineering services, dated January, 1992.
 - b. An early notice letter dated June 11, 1992 from Debbie Charloe (WDOE) to Mr. Ralph Vestal, then the owner of Vestal Jobber Mfg., Inc., that WDOE planned to add the property to the State's known or contaminated sites database. The same letter was sent to Mr. Norman Harrison, the former property owner, who directed the UST removal.
 - c. Letter dated June 15, 1992 from Lynn Maser (WDOE) to Mr. Norman F. Harrison, previous owner of the 902 N Dyer property, regarding the recent WDOE investigation of the UST. The letter confirmed the responsibility of Mr. Harrison in dealing with the environmental problems with the property. The environmental problems listed included not following Federal RCRA and UST regulations and State Dangerous Waste regulations for the UST removal.
 - d. Letter dated October 27, 1992 from Mr. Robert McKanna, Attorney, to Mr. Harrison, former property owner, requesting Mr. Harrison complete the UST removal in a timely fashion.

- e. Letter dated April 5, 1993 from Mr. Jim Greeves (WDOE) to Mr. Ralph Vestal, then owner of Vestal about the closure of the UST. The UST file could not be closed because closure and assessment checklists were not submitted within 30 days of decommissioning by Mr. Harrison. The same letter was also sent to Mr. Harrison.
- f. A UST Site Assessment Report dated August 17, 1993 by Blue Ridge Associates confirming the removal of the UST (1,270 gallons).
- g. A document dated September 14, 1993 stating the property with the address of 902 N. Dyer is entered into the State's Site Register.
- h. A letter dated August 16, 1995 from Michael Spencer (WDOE) to Mr. Ralph Vestal stating that a Site Hazard Assessment (SHA) for the property will be performed by the Department of Health.
- i. A letter dated January 30, 1996 from Mr. Michael LaScuola (Department of Health) to Ralph Vestal stating the Site Hazard Assessment (SHA) had been completed. The site received a hazard ranking of 3 (out of 5, where 1 is the highest ranking).
- j. A letter dated May 30, 1996 from Ms. Debbie Charloe (WDOE) to Mr. Harrison confirming the hazard ranking of the site. WDOE did not assume that no further remedial action would have to be conducted.
- 13. I interviewed the following personnel as part of a Phase I Environmental Assessment of the subject property:
 - a. Mr. Rick Vestal, a key site manager for Vestal Jobber Mfg., Inc.
 - b. Mr. Ken Hoffman, a key site manager for Vestal Jobber Mfg., Inc.
 - c. Mr. Greg Thomas, a current employee of Vestal Jobber Manufacturing, Inc.
 - d. Mr. Dave Rae, who leases the attached property at 904 N. Dyer, the owner of Accucon Screw Conveyor.
 - e. Mr. Don McGilvray, who previously occupied the attached property at 904 N.Dyer.
 - f. Mr. Wesley J. Fiala, a former key site manager for the property when it was owned by Atlas Industrial Coatings.

- g. Ms. Debbie Charloe, an official with the Department of Ecology, Eastern Regional Office.
- h. Mr. Michael LaScuola, an official with the Department of Health.
- 14. I participated in a reconnaissance of the site for a Phase I Environmental Assessment escorted by Mr. Rick Vestal, the Vestal Jobber Mfg. Inc. site manager.
- 15. I formed my expert opinion related to two issues:
 - a. What was the most likely time of release that led to the observed contamination?
 - b. Is it likely that Vestal Jobber Manufacturing, Inc. contributed significantly to the nature and amount of contamination at the site?

D. Expert Opinion

- 16. In my opinion, based on my review of the documents listed above, the interviews with individuals knowledgeable about the property's history, my reconnaissance of the site, and my analyses:
 - a. More likely than not, the time of release that led to the observed contamination at the site occurred prior to 1988.
 - b. More likely than not, Vestal Jobber Manufacturing, Inc. did not contribute significantly to the nature and amount of contamination at the site.

E. Basis for Expert Opinion

- 17. In forming my opinion for 16a, I considered the following:
 - a. The building modifications completed in 1988 that eliminated the possibility of indoor spills that could contaminate the property.
 - i. In 1988, the building was modified prior to sale by cementing shut a floor drain system that could transport liquids spilled inside the building. Because

the conduit to the outside was removed, it is my opinion that, more likely than not, it is not possible that observed contamination outside of the building occurred after 1988.

- ii. Prior to 1988, the floor drain system was actively used to direct petroleum overflow from the industrial process and flush the liquid outside into a dry well located beneath the loading dock. The cover to the dry well was removed during a site reconnaissance and soils were stained and smelled of petroleum product. It is my opinion, that more likely than not, the present observed contamination of this drywell is the direct result of its use to capture waste discharges prior to 1988.
- b. The installation, use, and removal of the USTs that contained diesel solvent used in past industrial processes.
 - i. The underground storage tanks were emplaced in the early 1980s and were used to contain an industrial waste stream generated at the facility prior to 1988. The UST was not in use after 1988. In my opinion, more likely than not, leaks from the tank occurred during its use as a waste storage unit, prior to 1988.
 - ii. The tank was known in 1986 to contain a sludge with high levels of chromium metal, one of the contaminants found later to be present in soils around the tank. In my opinion, more likely than not, chromium known to be present in the tank sludge in 1986 was also present in soil around the tank while the tank was in use, prior to 1988.
 - iii. The tank was discovered accidentally in July of 1991 and was removed in 1993. At the time of removal, soils were found to be contaminated indicating the tank had leaked but the tank still contained most of its liquid contents. Given that the tank had not been used (either filled or drained) for 3 years, and that soils in the excavation were heavily contaminated, it is my opinion that the tank had to be leaking for an extended period of time during its use prior to 1988.
- c. The treatment, storage, and disposal history used on the property before and after 1988.
 - i. From 1988 to the present, the facility has been used as a specialty machine shop. The treatment program for the petroleum products used since 1988 is recycling, as all mineral oil and metal products are recycled off of the property.

Storage of all petroleum liquids includes indoor storage on spill-proof pallets to contain product spillage. Since 1988, there has been no disposal of petroleum products on the property: all products used in the current industrial process are recycled.

- ii. Prior to 1988, the facility was used by Atlas Industrial Coatings to remove silicone from baking pans and to replate metal surfaces with tin. Overflow of used diesel petroleum solvent was either flushed outside of the building (without treatment) into a dry well or was directed to an underground tank that was later confirmed to have leaked.
- *lii.* It is my opinion that, more likely than not, the treatment, storage and disposal practices at the facility prior to 1988 caused the soil contamination known to be present on the property.
- d. The pattern of contamination in particular areas is consistent with below ground releases of petroleum product that have not been used at the property from 1988 to the present.
 - i. A second excavation was completed in 1996 south of the UST excavation to remove a buried pipe. According to individuals present on the site at that time, petroleum stained soils were encountered between the depths of 7 to 18 feet below the ground surface. Because soils were uncontaminated above 7 feet, the source of the petroleum had to be from below ground level, either from the UST or an underground pipe. Because there have no discharges either to the tank or to any burled pipe from 1988 to the present, it is my opinion that the contamination present in this location occurred from a below-ground release prior to 1988.
- e. For these reasons, my opinion is that, more likely than not, the time of release that led to the observed contamination at the site occurred prior to 1988.
- 18. In forming my opinion for 16b, I considered the following:
 - a. The characteristics of industrial processes used on the property while Vestal Jobber Manufacturing, Inc. was the owner and the volumes of petroleum products used.
 - i. During the period Vestal has owned the property (1988-present), they have

- operated a specialty machine shop. Vestal's operation involves the fabrication of machined metal parts using computerized equipment.
- ii. The Vestal operation requires small volumes of machining and cutting mineral oils for lubrication and as a coolant. Less than 100 gallons of machining oils are stored on the site at a time.
- b. The manner in which petroleum products are used and stored on the property by Vestal Jobber Manufacturing, Inc.
 - i. Lubricating and cooling oils are enclosed inside of each leakproof machine. Of the approximately 100 gallons of machining oils that are stored on the site, all petroleum products are stored in drums inside of the facility on spill-proof pallets. The mineral oils need to be changed out of each lathe periodically which is done by liquid transfer from each machine to the 55-gallon recycling drums reserved for this purpose. Any leakage from the recycling drums is contained.
- c. The manner in which petroleum products are used and the disposal practices of Vestal Jobber Manufacturing, Inc.
 - i. Vestal does not dispose of petroleum liquids on the property. All machining oils are periodically picked up and recycled by Harbor Oil off of Vestal property.
 - ii. Vestal did not install any USTs nor did they ever use any USTs for waste disposal during their ownership of the property. All machining oils have been recycled off of the site.
 - iii. Vestal never used diesel petroleum product during their industrial operations at any time in their history. The contents of the UST found on the property were predominately diesel petroleum product.
- d. The condition and design of the building at the time of purchase of the property by Vestal in November, 1988.
 - i. Since Vestal has owned the property, no modifications to the building have been made.
 - ii. Modifications to the building had been made by the previous owner (AIC) prior to the property transfer. The modifications included cementing-in a series of floor drains within the building. Because the floor drain system was cemented shut, there is no conduit from inside the building to the outside that

could transfer any petroleum products outdoors that could result in any environmental contamination.

- e. The characteristics of industrial processes used on the property while Atlas Industrial Coatings (AIC) was the owner and the volumes of petroleum products used.
 - *i*. During the period prior to November, 1988, the property was owned and operated by Atlas Industrial Coatings (AIC). AIC's industrial operation involved the removal of silicone coatings from metallic surfaces (baking pans) and the replating of metal surfaces with tin.
 - ii. AIC stored and used hazardous substances and petroleum products as solvents in their industrial operation. The solvents used include caustic soda (sodium hydroxide), caustic potash (potassium hydroxide), diesel solvent (TPH-Diesel), and hexylene glycol.
- f. The manner in which petroleum products were used and stored on the property by Atlas Industrial Coatings.
 - i. AIC's industrial process on the property utilized diesel solvent contained in a series of open, gas-fired vats located inside of the current building. There was no leak prevention beneath the vats: product overflow was directed into a series of floor drains.
- g. The manner in which petroleum products are used and the disposal practices of Atlas Industrial Coatings (AIC).
 - i. AIC used diesel petroleum product during their industrial operations to remove silicone from baking pans.
 - ii. AIC did dispose of petroleum liquids (diesel) on the property. Used diesel solvent was directed into underground storage tanks located outside of the building. The contents of the UST found on the property were predominately diesel petroleum product.
 - iii. Overflow from the industrial vats used in AIC's operation was collected in a floor drain and flushed without treatment into a dry well located on the west side of the building near the loading dock.
 - iv. A trailer truck incident occurred during AIC's ownership of the building in which a pipe broke on the truck which contained diesel fuel. The truck was

parked above the dry well on the north side of the property and was allowed to leak petroleum product directly into the dry well.

- h. The nature and extent of contamination on the property is related to leaky underground storage tanks that Vestal Jobber Manufacturing, Inc. did not use.
 - i. The nature and known extent of contamination on the property involves the removal of underground storage tanks that were discovered in July, 1991 and were used by AIC to contain waste diesel solvent from their industrial operation. The USTs were never used by Vestal during their ownership of the property.
 - ii. Excavations to remove the USTs and piping confirmed that the tanks had leaked and that levels of Total Petroleum Hydrocarbons as Diesel (TPH-D) and chromium were found in soils around the tank above clean-up levels established under the Model Toxics Control Act (MTCA).
 - iii. The contents of the UST were confirmed in 1992 as being 70% TPH-D #2, 15% TPH-D #1 plus sludge and aqueous solution. The sludge in the tank had been analyzed previously in 1986 by AIC and was confirmed to contain 231 ppm chromium at that time. During the UST removal in 1993, the soils around the tank were confirmed to be contaminated with both chromium and TPH. The chromium later found as soil contamination was known to be in the UST in 1986, 2 years before Vestal purchased the property.
- i. For these reasons, my opinion is that, more likely than not, Vestal Jobber Manufacturing, Inc. did not contribute significantly to the nature and amount of contamination at the site.
- 19. If called upon to testify under oath in a matter of law, my oral testimony would be substantially the same as that set forth in this affidavit.

Dated this 11th day of June, 1997

Robert L. Erikson

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Phase II Assessment: Scope and Cost Estimates

INTRODUCTION

This report addresses the need for a Phase II Assessment of the 902 N. Dyer property. Based on previous investigations and reviews by the Departments of Health and Ecology, the site has received a hazard ranking and is listed on the Washington Site Register (Washington Toxics) awaiting remedial action. Prior to remedial action, Ecology has requested that the site be investigated to determine the nature and extent of contamination on the site.

This report includes the scope of services required and an estimate of the cost to perform a Phase II Assessment of the property. A Phase II Assessment is designed to investigate the nature and and extent of contamination on the property that could cause any environmental concern and thus requires the collection and chemical analysis of environmental samples. The investigation requires a strategy outlining where on the property samples are to be collected, specifying what chemicals to measure, and delineating those areas requiring cleanup. These items are discussed below in terms of a remedial investigation strategy.

PHASE II REMEDIAL INVESTIGATION

A Phase II remedial investigation is designed to determine the "nature" and "extent of contamination". The "nature" of the contamination basically means what chemicals were used on the site, how did the releases occur, and what media (soil, groundwater) are contaminated. The "extent of contamination" refers to delineating both the lateral and vertical extent of chemicals in the contaminated media for the purpose of identifying only those areas requiring cleanup. A Phase II investigation has a few parts to it:

- Use background information for the site that can help identify areas that may be contaminated.
- Design a "sampling and analysis protocol" that clearly identifies where to sample, what media to sample, and what chemicals to measure.
- A cost/benefit analysis that identifies the trade-offs between the regulatory requirements to get the site de-listed against the total cost to do the work.

A well designed investigation will focus in on the areas and media needing cleanup and will eliminate areas that require no further action.

SITE BACKGROUND INFORMATION

The results of the Phase I Assessment and previous site investigations were used to guide the design of the Phase II investigation. The site hazard ranking for the property lists soil contamination and the potential for groundwater contamination that need to be the focus of the investigation. We have identified several areas on (and off) the property that will require investigation (see Figure 1). Justification for investigating these areas includes:

- Previous investigations of the site have dealt with the excavation and removal of two (2) underground storage tanks (USTs) that were confirmed to have leaked. Soils in the excavation were confirmed to contain levels of TPH-Diesel (D) and metals (i.e., chromium) at levels above MTCA clean-up levels. Because contamination was left in place, the former UST excavation (Figure 1, #4) is one of the areas to investigate.
- The former tenant (AIC) used a building floor drain system to flush overflow from their industrial process outside of the building and into the west drywell below the loading dock so this drywell (Figure, #2) needs to be investigated.
- The other drywells may also have been used for waste disposal and require investigation (Figure 1, #1,3,&9). The drywell to the north (#1)was thought to have received petroleum product from a trailer truck incident according to Mr. Don McGilvray. The drywell furthest west (#3) may have petroleum in it according to Mr. Rick Vestal.
- It is unknown whether the previous tenant used the remainder of the floor drain system for waste discharge so this area needs to be investigated (Figure 1, # 6,7,&8). The area of investigation includes an approximate area defined by the exit pipe (#7) around the building where the flexible pipe exists, all the way along the south part of the building.
- The second excavation south of the property (Figure 1, #5) that was dug to remove a pipe is reported to have contaminated soil left in place and needs to be investigated.
- The last area requiring investigation is the area around the septic drain field (Figure 1, #10) because the previous tenant may have disposed of waste into the septic system. Because this area overlaps with the former UST and buried pipe excavations, it will be encountered during investigation of these 2 areas and does not need to be investigated separately.

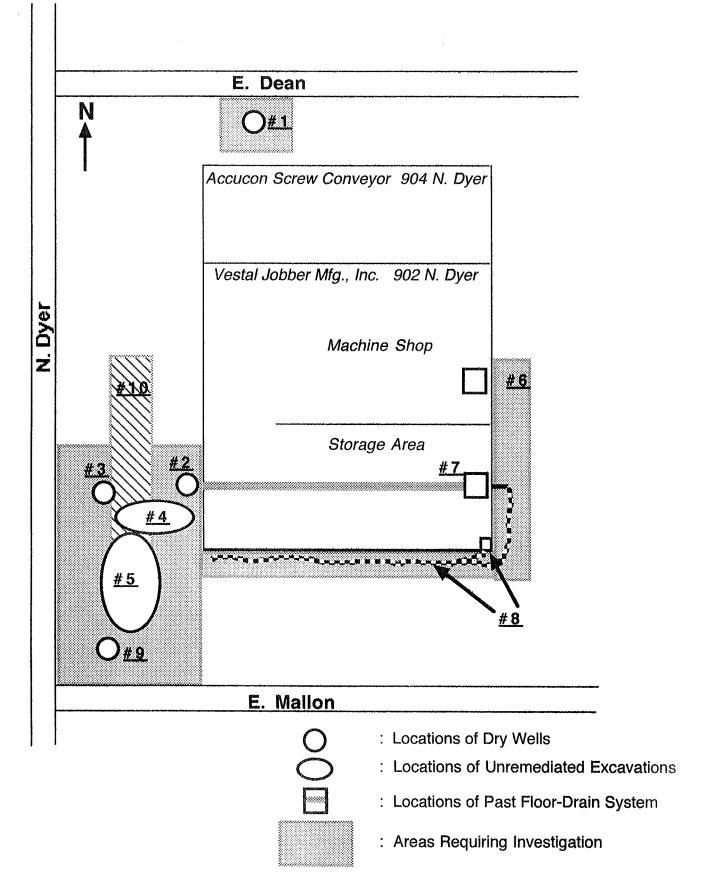


FIGURE 1: Schematic Diagram (Not-to-Scale) Showing the Areas Needing Environmental Investigation To Determine the Nature and Extent of Contamination. The numbers refer to the known locations of environmental conditions on the property from the Phase I investigation.

SCOPE OF THE INVESTIGATION

From the background information obtained in the Phase I we know the following about the nature and extent of contamination about the site:

- The potential sources (areas that received waste) include the former UST and pipe excavations, all the drywells, possibly the septic field, and the area defined by the location of the floor drain piping system.
- Soils and groundwater are the media requiring investigation so that a "subsurface" investigation is a requirement. The nature of the contamination appears to be restricted to petroleum diesel (TPH-D) and metals, particularly chromium. We also know that Atlas Industrial Coatings used both sodium and potassium hydroxide which are caustics (high pH). The use of the caustics could only be a problem for groundwater if enough was dumped to cause drastic pH changes (>10). Considering the nature of the Spokane aquifer (very high groundwater flow), the dilution occurring is probably so large that the effects of caustic discharges would not be noticeable. However, because the previous tenants may have used non-petroleum solvents, we will test for the presence of chlorinated solvents only in the locations that we know received waste discharge.
- The lateral extent of the soil contamination is not well known. The lateral extent of contamination beyond the boundaries of the UST excavation and the buried pipe excavation is unknown. Investigation of the lateral extent of contamination using deep drilling is expensive. Instead of determining the lateral extent of contamination during the Phase II investigation, we propose to do this just prior to initiating clean-up if clean-up becomes necessary.
- The vertical extent of soil contamination is not well known. The deepest excavation is the buried pipe excavation which showed soil contamination down to 18 feet below ground surface. The vertical extent of contamination is more important than the lateral extent because it will tell us if groundwater is contaminated and if the deep soil contamination can be excavated or not. If it cannot be excavated, we would propose to cap the surface area above the contaminated zones. Doing so would limit the investigation of the lateral extent (a cost savings) and would eliminate vertical infiltration of water that could push contamination to the water table.
- The impact of soils contamination to the groundwater table is unknown. We will initially assume that groundwater is not impacted. This assumption will be tested in the field during the drilling of deep boreholes. The deep boreholes will only be advanced to the water table if the soil is shown to be contaminated to the water table. If this turns out to be the case, groundwater monitoring wells will have to be installed to investigate site impacts to groundwater. If we can show that the soil contamination stops short of the water table, drilling will be stopped at this point and the boreholes will be backfilled and not completed as monitoring wells.

STRATEGY OF THE INVESTIGATION

The investigation will involve both shallow soil sampling (< 5 feet) and deep soil sampling (depths to the water table). Shallow soil sampling will be used in those areas that have not yet been explored (Figure 1, #'s 2,3,6,7,8, 9) and will be completed first to determine if any of these areas are contaminated. These areas include 3 of the dry wells and the area around the east and south sides of the building where the former floor drain system exited the building and were connected to the discharge pipe. (The locations include areas immediately below any of the floor drains and pipes that exit the building and along the building where the pipe may have leaked.) These shallow borings will be augered by hand to depths of about 5 feet.

A few of the areas are already known to have deep soil contamination and the depth of the contamination needs to be determined. We suggest a compromise to limit the cost of drilling too many deep borings because we need a drilling rig contractor to perform the work. We suggest that the deep soil borings be limited to those areas known to be contaminated at depth (the old UST and pipe excavations). We propose that monitoring wells be placed here only if soil samples show contamination goes to the water table. In this case, the deep boreholes can then be completed as monitoring wells to measure the groundwater quality. In this way, we can use the same boring to determine the vertical extent of contamination in soil and also get groundwater quality measurements. If we determine in the field during the drilling that soil contamination stops short of the water table, we would stop drilling here and not install monitoring wells.

Sampling and Analysis Protocol

Figure 2 shows the drilling locations for the shallow and deep boreholes. Soil sampling events only need to be done once. The type of chemical analysis methods we propose include a mixture of field screening methods and laboratory measurements that need to be sent to a certified analytical laboratory. These analyses include:

- WTPH-D (petroleum diesel), either by a field screening kit or by lab measurement if the field measurement is positive for TPH.
- Total metals (to detect chromium) which is a laboratory measurement. This measurement would only be performed for soil samples that showed TPH contamination was present.
- Volatile organics (chlorinated solvents) which is a laboratory measurement.
 We chose to restrict these measurements to areas that have not been previously investigated and that have received a waste stream. These areas include the 3 dry wells on the property (Figure 1, Areas #1,2, & 3).

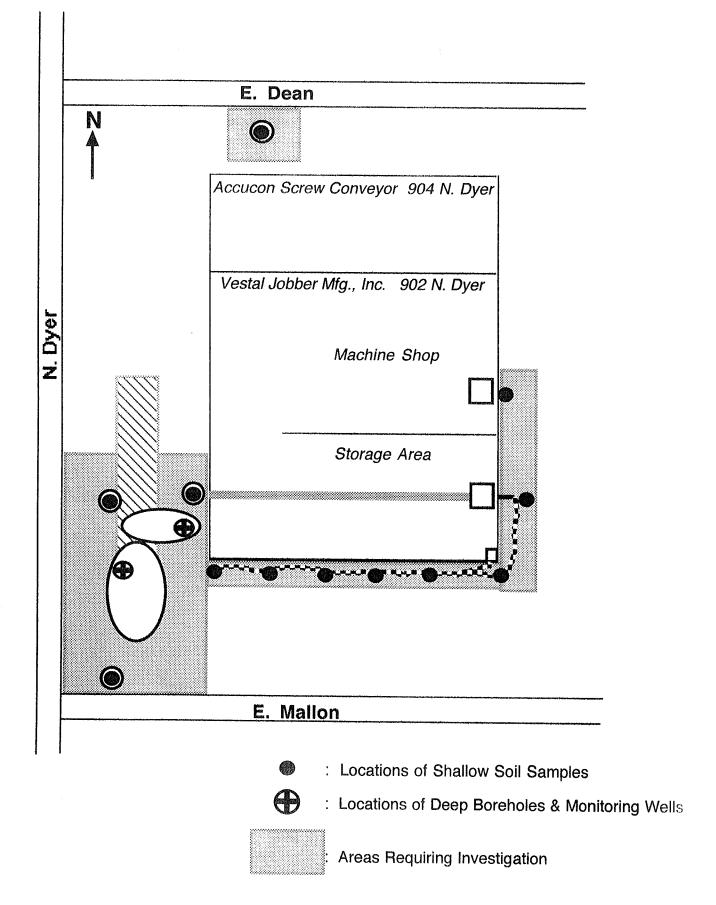


FIGURE 2: Schematic Diagram (Not-to-Scale) Showing the Locations For Sampling Soil and Installation of Groundwater Monitoring Wells.

• Soil samples will be collected from the shallow holes at depths near the surface and at 3 and 5 feet, for a total of 3 samples per location. The locations include areas immediately below any of the floor drains and pipes that exit the building and along the building where the pipe may have leaked. The other four locations include each of the drywells. For these 12 shallow soil locations, the type of chemical analyses we propose are as follows:

WTPH-D: Field screen all 36 soil samples and send only the samples that indicate TPH to the laboratory for confirmation. For the purposes of costing, we assumed one-third (12) of the samples would test positive in the field.

<u>Metals</u>: Samples would be sent to the laboratory only if TPH was detected. We expect this will occur in the 3 drywells on the property for a total of 9 samples.

<u>Volatile Organics</u>: Would only be tested for in two of the drywells (Figure 1, Areas #2 & 3) for a total of 2 samples.

• Soil samples from the two (2) deep borings will be collected at 5 foot intervals for the first 20 feet, and then every 10 feet to the water table, if necessary. We expect the depth to water to be about 60 feet, so our cost for the work (see below) is based on drilling these holes to 75 feet below the ground surface. Note that this estimate will be lower if the contamination stops before the water table is reached. For these two boreholes, our protocol calls for:

<u>WTPH-D</u>: Field screen all 20 soil samples. For the purposes of costing, we assumed that the soil contamination has not reached the water table and we will only need to send 4 samples to the laboratory for confirmation. These samples are "interface" samples that show where the contamination started and stopped.

Metals: Only the contaminated "interface" samples would be sent to the laboratory where TPH was confirmed for a total of 2 samples.

Volatile Organics: None

• Should the two deep boreholes be completed as groundwater monitoring wells, a groundwater sampling protocol will be required and we included one for the purposes of costing out the Phase II work.

For groundwater sampling events, we will initially measure groundwater elevation levels and analyze for WTPH-D, metals, and chlorinated solvents only once. Should we not detect any one of these chemicals in groundwater, they will be dropped from the sampling and analysis protocol in future sampling. Should any of these chemicals be detected, groundwater samples should be collected quarterly during the investigative, clean-up, and closure stages of the project. For the purposes of costing,

the first groundwater sampling event would include collecting and analyzing 6 groundwater samples.

COST ANALYSIS

We determined approximate baseline costs that will affect the total cost of the Phase II investigation based on the sampling strategy discussed above. The costs include:

- · cost of the chemical analysis of the environmental samples
- · cost for disposal of contaminated soil and groundwater
- · CESI labor cost per hour for 5 investigative purposes:
 - Project Coordination: design formal sampling and analysis plan, coordinate subcontractors and utility location identification, and obtain access agreements
 - collect shallow soil samples,
 - supervise the collection of deep soil samples and install monitoring wells,
 - develop the wells upon completion,
 - sample the groundwater wells
 - prepare Project Report
- Costs for well drilling and installation that include all costs for materials, equipment and labor for a subcontractor.

A summary of these costs per item are listed below in Table 1. An approximate total cost for the investigation including labor hour estimates and rates are listed in Table 2.

TABLE 1. Baseline Costs For Phase II Investigation

SAMPLE ANALYSIS COSTS		
	GROUNDWATER	SOIL
	\$ per sample	\$ per sample
WTPH-D (Lab Measurement)	\$82	\$82
WTPH-D (Field Screen)		\$25
Metals	\$230	\$230
Chlorinated solvents	\$230	\$230
WASTE DISPOSAL COSTS		
	\$ per drum	\$ per drum
Non-hazardous (TPH only)	\$50	\$40
Hazardous (contains metals or chlorinated compounds)	\$600	\$150
MONITORING WELL INSTALLATION		
MONTONING WELL INSTALLATION	\$ per foot	
Cost includes labor, equipment, mobilization, and monitoring well		
installation costs	\$115	

Table 2. Estimated Cost for the Phase II Investigation

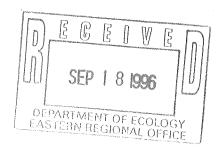
TASK	Non-Labor Cost	CESI Labor Hours	Hourly Labor Rate	ltem Cost	Total Cost Per Task If Haz-Waste
	···		Naco		TIAZ-WASLE
Project Coordination		80	\$91	\$7280	
			Ψ91	Ψ1 Z Q U	\$7280
	1		*		V1200
Shallow Soils Investigation		64	\$65	\$4160	
	Analytical: WTPH-D (Field)			\$900	·
	Analytical: WTPH-D (Lab)			\$984	
	Analytical: Metals			\$2070	
	Analytical: Volatiles			\$460	
	Supplies			\$920	
					\$9494
Dan Callah					
Deep Soils Investigation		60	\$91	\$5460	
	Analytical: WTPH-D (Field)			\$1640	
	Analytical: WTPH-D (Lab)			\$328	******************************
	Analytical: Metals			\$460	
	Analytical: Volatiles			\$0	
•••••	Drilling Costs			\$21160	
	Waste Disposal if Non-Haz			\$349	
	Waste Disposal if Haz			\$1310	
					\$30358
Well Completion					
weii Completion	M. D. D.	24	\$65	\$1560	
	Waste Disposal if Non-Haz			\$115	
	Waste Disposal if Haz			\$1380	
					\$3055
Groundwater Sampling					
Groundwater Sampling	Analytical WEDLE (L. L.)	16	\$65	\$1040	
	Analytical: WTPH-D (Lab)			\$164	
•••••	Analytical: Metals			\$460	
	Analytical: Volatiles			\$460	
	Waste Disposal if Non-Haz			\$115	
	Waste Disposal if Haz			\$1380	
	Mob/Demob Cost/Supplies			\$200	
					\$3704
Reporting		00	d o r	Ar	
		80	\$65	\$5200	
					\$5200
Fotal Cost (If Non-Haz Waste)	¢E2040				
Total Cost (If Haz Waste)	\$53046 \$58976	<u>.</u>			

SUMMARY OF ANALYTICAL RESULTS Vestal Jobbers / PN 960181 Sample Date 12/10/96

Sample No.	Sample Location	Total Chromium	WPTH-D Ext.	Semi-Vol (8270)
VJBC13	bottom center @ 13 ft. BGS	161	diesel 570 heavy oil 104	NS
VJNSW7	north sidewall @ 7 ft. BGS	176	diesel 10,700 heavy oil 560	acenaphthene 12.7 anthracene 7.30 dibenzofuran 6.69 fluoranthene 6.73 fluorene 12.4 2-methylnaphth 162 naphthtalene 17.8 phenanthrene 55.6 pyrene 9.34
VJESW8	east sidewall @ 8 ft. BGS	381	diesel 865 heavy oil 241	NS
VJWSW10	west sidewall @ 10 ft. BGS	435	diesel 1860 heavy oil ND	NS
VJSSW6	south sidewall @ 6 ft. BGS	348	diesel 2930 heavy oil 522	NS

HARRISON PROPERTIES, INC.

2040 SW 98th Avenue Portland, OR. 97225 Phone/Fax (503)292-1060 17430 SW 63rd Avenue Lake Oswego, OR. 97035 Phone (503)636-3670



9/13/96

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
4601 N. Monroe, Suite 202
Spokane, Washington 99205

Dear Debbie Pharloe

I have contacted Blue Ridge Association, they did the Site Assessment for me in July 1993.

I have hired them to do the sampling and get this Site cleaned.

Sincere1v

NORMAN F. HARRISON

7-18-96 102m-1/2m Meeting with Mr. Morman Harrison Westal Jobber Manufacturing discussed ranking process - what the score offans for this site - Ecology's role if he proceeds with formal process sites - plans to be here in six weeks to proceed with cleanup discussed what needs to be done · hire an cenveronmental consultant to determine the ceptent of contamination - characterize the site with recommendations for cleanup. ·Ohe plans to run backhoe · plans to consult with the consultant working on his site in Oregon Reminded him (that he is conducting an independent cleanup. That Ecology does not do oversight on independent cleanups therefore does not approve or disapprove cleanup actions. But we'are available to provide informal technocal assistance/

HARRISON PROPERTIES, INC.

2040 S.W. 98th Ave Portland, Or 97225

Phone(503)292-1060

17430 S.W. 63rd Ave Lake Oswego, Or 97035 Fax (503)292-6659

6/12/96

DEPARTMENT OF ECOLOGY 4601 N. Monroe, Suite 202 Spokane, Wash 99205-1295

Attn: Debbie Charloe

Dear Debbie,

Regarding you letter of May 30th, I had intended to be in Spokane before this but unfortunately I have had some health problems. I had Surgery in January and then again in May. I should be able to travel by mid July so will come to Spokane then.

I will call you and make an appointment about July 15th.

Sincerely,
Morman & Harrison

Norman F. Harrison

FILE COPY

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

4601 N. Monroe, Suite 202 • Spokane, Washington 99205-1295 • (509) 456-2926

May 30, 1996

CERTIFIED MAIL: Z 196 423 496

Mr. Norman F. Harrison Harrison Properties 2040 SW 98th Avenue Portland, OR 97225

Dear Mr. Harrison:

RE:

THE VESTAL JOBBER MANUFACTURING COMPANY PROPERTY LOCATED AT NORTH 902 DYER ROAD, SPOKANE, SPOKANE COUNTY, WASHINGTON

In August of 1995, you were sent a copy of the letter sent to Mr. Ralph Vestal regarding the site hazard assessment to be conducted by the Spokane County Health District at the above referenced property. A site hazard assessment is a study to evaluate preliminary data regarding the potential threat of a site to human health and the environment, relative to other Washington State sites. I have enclosed a copy of the completed site hazard assessment of this property for your information. I have also enclosed focus sheets describing Site Hazard Assessments, the Washington Ranking Method and the Hazardous Sites List for your review and reference.

As stated in previous correspondence, it is the Department of Ecology's (Ecology) understanding that you are the previous owner of this property and have assumed responsibility, both verbally and reportedly in written documents, for any environmental problems from activities that occurred during your ownership of this property/facility. Your active role in the removal of the underground storage tanks demonstrates your acceptance of liability for the current contamination problem which requires cleanup. Ecology appreciates the investigation activities that have occurred on this site as an independent remedial action as defined in WAC 173-340-200. Because of the independent nature of the investigation, Ecology's role on this site has been strictly informal. Ecology has a strong commitment to working cooperatively with persons to accomplish prompt and effective cleanups. However, there is no assurance that Ecology will not conduct, or require that you conduct, additional remedial actions at this site at any time.

• Complete items 1 and 2 for additional services. • Complete items 3, an & b. • Print your name and a bass on the reverse of this form return this card to you. • Attach this form to the front of the mailpiece, or on the does not permit. • Write "Return Receipt Requested" on the mailpiece below 5. • The Return Receipt will show to whom the article was delivered.	back if space 1. Addressee's Address the article number. 2. Restricted Delivery
3. Article Addressed to: Mr. Norman F. Harrison Harrison Properties 2040 SW 98th Ave Portland OR 97225	4a. Article Number 7. 196, 423 496 4b. Service Type Insured Registered ISP COD Registered ISP COD Return Receipt for Merchandise 7. Date of Delivery
5 Signature (Addressee) 6. Signature (Agent)	8. Addressee's Address (Only if requeste and fee is paid)

Official Business

PENALTY FOR PRIVATE USE TO AVOID PAYMENT OF POSTAGE, \$300

Print your name, address and ZIP Code here

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
N. 4601 MONROE, SUITE 202
SPOKANE, WA 99205-1295

Mr. Norman F. Harrison May 30, 1996 Page 2

accomplish prompt and effective cleanups. However, there is no assurance that Ecology will not conduct, or require that you conduct, additional remedial actions at this site at any time.

Our office is in receipt of the following independent investigation reports regarding the activities performed at the above referenced property:

"Results of Underground Storage Tank Sampling and Engineering Services", Gifford Consultants, Inc./January 8, 1992
"Site Assessment Report", Blue Ridge Associates, Inc./August 17, 1993

According to these reports, soil contaminated with diesel and chromium exceeding the Model Toxics Control Act Method A Cleanup Levels has been confirmed on this site but the extent and degree of contamination has not been determined. Due to the elevated levels of diesel and chromium in the soil on this site, further action is necessary to assure adequate protection of human health and the environment. Ecology is available to provide informal guidance to help facilitate continued work at this site. Please advise me of your actions and intentions regarding the assessment and cleanup of this site within thirty (30) days of receipt of this letter. If you have any questions or comments regarding this letter or the requirements under the Model Toxics Control Act, please contact me at (509) 456-2834.

Sincerely,

Debbie Charloe

L.U.S.T. Site Manager Toxics Cleanup Program

DC:mg

Enclosures

c: Ralph Vestal, Vestal Jobbers Manufacturing Company

Charloe



SPOKANE COUNTY HEALTH DISTRICT

January 30, 1996

Mr. Ralph Vestal Vestal Jobber Manufacturing Company N. 902 Dyer Rd. Spokane, Wa. 99212-1007

Regarding: Washington State Model Toxics Control Act Site Hazard Assessment

Dear Mr, Vestal

The Spokane County Health District has completed the site hazard assessment (SHA) of the Vestal Jobber Manufacturing Co. site, as required under the Model Toxics Control Act (MTCA) 173-340 WAC. This site's hazard ranking, pursuant to the directives contained in MTCA WAC 173-340 section 320 and the "Washington Ranking Method Scoring Manual," has scored a hazard ranking of 3. The purpose of hazard ranking is to estimate, based on the information compiled during the site hazard assessment, the relative potential risk posed by the site to human health and the environment.

For your information, The Washington State Department of Ecology (Ecology) will be publishing the ranking of this and other recently assessed sites in the February 20th 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 Michael LaScuola at (509) 324-1574 if you have any questions relating to the SHA of your site.

If you have any inquires/comments about the site scoring/ranking process, please call Michael Spencer at (206) 407-7195.

For inquires regarding any further activities at your site now that it is on Ecology's Hazardous Sites List, please call Patti Carter at (509) 456-6167.

Sincerely,

Michael F. LaScuola

Environmental Health Specialist

WORKSHEET 1 SUMMARY SCORE SHEET

Note: This document currently has no provision for sediment route scoring.

Site Name/Location (Street, City, County, Section/Township/Range). VESTAL JOBBER MFG. CO. NW1/4 of Sec 13, Tnshp 25, Rng 43. N. 902 DYER RD. SPOKANE, WASH. 99212

Site Description (Include management areas, substances of concern, and quantities): Vestal Jobbers Mfg. Co. is a custom manufacturing operation established in 1988 and is comprised of a milling, fabrication, and general machine shop. Information from Ecology files stated that an underground storage tank (UST) was discovered about July 1991 by the current property owner (Vestal). Subsequent sampling, UST decommissioning, and site assessment revealed that the UST had leaked into surrounding soils. Contaminants of diesel and chromium exceeding Model Toxics Control Act standards were confirmed in these soils.

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):

To date the Washington Department of Ecology (Ecology) has not received any information indicating that the contaminated soils have been remediated to acceptable levels. A phone conversation with Mr. Rick Vestal on December 7, 1995 revealed that the area of tank removal was lined with plastic and filled with soil. Contaminants were discovered during UST decommissioning and are located in subsurface soils. Site hazard assessment concludes that the contaminants do not present a hazard by airborne or surface water pathways.

NOOTH DOOMED!			
Surface Water/Human Health:	_NA	Surface Water/Environ.:	_NA
Air/Human Health:	_NA	Air/Environmental:	NA
Ground Water/Human Health:	_49.1		•
Pov 3/10/93		OVERALL RANK:	3

POTTER SCORES.

WORKSHEET 2 ROUTE DOCUMENTATION

1. SURFACE WATER ROUTE NO	ot Applicable.	
List those substances to be o	considered for scoring:	Source: 1
Explain basis for choice of s	substance(s) to be <u>used</u> in scor	ing.
List those management units t	to be <u>considered</u> for scoring:	Source:
Explain basis for choice of u	unit to be <u>used</u> in scoring.	Source:
	,	
2. AIR ROUTE Not	Applicable.	
List those substances to be c	considered for scoring:	Source: 1
Explain basis for choice of s	substance(s) to be <u>used</u> in scor:	ing.
List those management units t	co be <u>considered</u> for scoring:	Source:
Explain bagin for choice of a	unit to be used in scoring	

WORKSHEET 2 (CONTINUED) ROUTE DOCUMENTATION

3. GROUND WATER ROUTE

List	those	substances	to	be	considered	for	scoring:	Source:_	1
TPH-I	DIESEL								-
CHRO	MUIN								

Explain basis for choice of substance(s) to be <u>used</u> in scoring. Contaminants exceed MTCA standard in soil.

TPH-Diesel levels were reported up to 21,800 ppm exceeding the 200 ppm MTCA standard.

Chromium levels were reported up to 210 ppm exceeding the 100 ppm MTCA standard.

List those management units to be <u>considered</u> for scoring: Source: 1 Contaminated subsurface soil/ ground water only.

Explain basis for choice of unit to be <u>used</u> in scoring. Contaminants were discovered during UST decommissioning and are located in subsurface soils. Site hazard assessment concludes that the contaminants do not present a hazard by airborne or surface water pathways.

WORKSHEET 6 GROUND WATER ROUTE

1.0 SUBSTANCE CHARACTERISTICS

1.1 Human Toxicity

1. T	stance PH-DIESEL Chromium	Drinking Water Standard (ug/1) Val. 20 6 100 6	Tox		(mg/kg/ 0.00	city <u>day)</u> <u>Val.</u>	9 <u>WOE</u> **	**	У
*Pot	ency Factor					Highest 2 Bonus H inal Toxi	oints	: 6 ? 2	- - 8
1.2	OR	e numbers to $ns: 2. = >1 I$ $g/1): 1. = 1s$	X = 1			stances) Source:_	2	Value:	1
1.3	Substance Quantity Explain basis: Est. 61 cu/yd; Total quantity of affected soil is unknown extent of contamination is not known Estimations of volume derived from site assessment report and table GW-7 WARM Scoring Manual.							.ue: <u>5</u>	
2.0	MIGRATION PO	TENTIAL							
2.1	Containment Explain basi	s: <u>Spills Di</u>	scharqes	and Conta	minated	Source:	3	Value:	10
2.2	Net Precipit	ation:		7.2 inch	ies	Source:	4	Value:	1
2.3	Subsurface H	ydraulic Cond	ductivity	:_ > 10-5	to 10-3	Source:	5	Value:	3
2.4	Vertical Dep	th to Ground	Water:	42	feet	Source:	1 & 6	Valu	ie: <u>6</u>

WORKSHEET 6 (CONTINUED) GROUND WATER ROUTE

3.0	TARGETS	
3.1	Ground Water Usage: FED DESIGNATED AQUIFER	
3.2	Distance to Nearest Drinking Water Well: <600 ft	Max.=10) Source: 1 & 6 Value: 5 (Max.=5)
3.3	Population Served within 2 Miles: $\frac{\sqrt{pop.=\sqrt{40,250}}}{=200}$	Source: 6 & 8 Value: 100 (Max.=100)
3.4	Area Irrigated by (Groundwater) Wells within 2 miles: $0.75\sqrt{\text{no.acres}} = 4900$ $0.75\sqrt{} = 0.75 (70) = 52$	
4.0	RELEASE Explain basis for scoring a release to ground water: NONE	Source: 1 Value: 0 (Max.=5)

SOURCES USED IN SCORING

- 1. SITE ASSESSMENT REPORT VESTAL JOBBER MFG CO. BLUE RIDGE ASSOCIATES, INC. AUGUST 17, 1993
- 2. TOXICOLOGY DATABASE WARM
- 3. WARM SCORING MANUAL
- 4. WASHINGTON CLIMATE, SPOKANE CO. WSU DEPT. OF AGRICULTURE
- 5. SOIL SURVEY OF SPOKANE CO. WASHINGTON, USDA SOIL CONSERVATION SVC.
- 6. WASHINGTON DEPT. OF ECOLOGY, WELL LOGS.
- 7. AQUIFER SENSITIVE AREA OVERLAY ZONE MAP, SPOKANE CO. WASHINGTON
- 8. WASHINGTON DEPT. OF HEALTH DRINKING WATER INFORMATION NETWORK
- 9. WRIS WASHINGTON DEPARTMENT OF ECOLOGY



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600 (206) 407-6000 • TDD Only (Hearing Impaired) (206) 407-6006

August 16, 1995

Mr. Ralph Vestal Vestal Jobber Manufacturing Company N. 902 Dyer Road Spokane, WA 99212-1007

Subject: Site Hazard Assessment - Vestal Jobber Manufacturing Co.

Dear Mr. Vestal:

The Department of Ecology (Ecology) will be conducting a site hazard assessment (SHA) of Vestal Jobber Manufacturing Co., N. 902 Dyer Road, Spokane, under the Model Toxics Control Act (MTCA), Chapter 173-340-320 WAC. This assessment will be performed by Michael LaScuola, Spokane County Health District. He will contact you in the near future to arrange a suitable time for a site visit.

The purpose of an SHA is to gather information on past/present waste management activities, along with other basic site-specific environmental data, in order to score the site following the Washington Ranking Method (WARM) Scoring Manual guidelines. Potential/actual threats to human health and the environment are evaluated for each applicable migration route, with a resultant "hazard ranking" for the site determined.

Sites are ranked on a scale of one to five, with one representing the highest level of concern, and five the lowest, relative to all other assessed/ranked sites in the state. The level of relative concern may be such that a recommendation of "No Further Action" (NFA) is made, and your site will then be removed from Ecology's Site Information System (SIS) list.

For your information, Ecology will publish a notice in an upcoming issue of the <u>Site Register</u> that an SHA is scheduled for this site. This notice may evoke media inquiries. Likewise, the outcome of the SHA, either as a ranked site or a determination as NFA, will be published in the Site Register.

In addition to any required field work, the following information will considered in scoring this site:

Ecology Eastern Regional Office Site Files

DEPARTMENT OF ECOLOG

Mr. Ralph Vestal August 16, 1995 Page 2

You are requested to submit any additional environmental information regarding this site to:

Mr. Michael LaScuola Spokane County Health District West 1101 College Avenue Spokane, WA 99201-2095

Additional data could include any environmental assessments or laboratory analyses which have been conducted regarding this site and which have not previously been submitted to Ecology. Every attempt will be made to obtain the most recent and accurate data for scoring your site. If you have better information or comments on the adequacy of the data we already have, please let us know as soon as possible. The final site rank and eventual site priority will be based primarily on the information used in the scoring. Your active participation in the assessment and scoring process is important to insure that only the best data available is used.

Fact sheets describing Site Hazard Assessments, the Washington Ranking Method and the Hazardous Sites List are enclosed for your information. If you have any questions please call me at (360) 407-7195 or Michael LaScuola at (509) 324-1574.

Sincerely,

Michael J. Spencer

Site Hazard Assessments Toxics Cleanup Program

MJS:ms Enclósures

cc: Michael LaScuola, Spokane County Health District
Patty Carter, Ecology Toxics Cleanup Program, ERO
Norman F. Harrison, Portland

SPOKANE COUNTY / EASTERN REGION Cont.)

Vestal Jobber Manufacturing Company V. 902 Deyer Road, Spokane 99212

INDEPENDENT INTERIM CLEANUP REPORT

received on this leaking underground storage tank site 8/19/93 indicated release of metals and petroleum product to the soil.*

Γitle: Site Assessment Report.

Contact: Debbie Charloe (509) 456-2834

Washington State Dept. of Transportation - Mayfair Pit

N. 2714 Mayfair St., Spokane 99207

Ecology has **PROPOSED** to remove this site from he Hazardous Sites List. The recommendation for removal from the list is based on review of reports nvestigating the extent and nature of contamination it the site, analytical conclusions, and the results of confirmational samples collected by Ecology. The soil and ground water were contaminated with solvents. Current Ranking = 5 on the Hazardous Sites List.**

Relevant documents and Ecology's analytical results and conclusion that the site be removed from the Hazardous Sites List are available for review at the Department of Ecology, Eastern Regional Office, N. 4601 Monroe, Suite 100, Spokane 99205-1295.

Written comments should be sent to Patti Carter at the address mentioned above.

Comment Period: 8/27/93 - 9/25/93

Contact: Patti Carter (509) 456-6167

THURSTON COUNTY / SW REGION

Black Lake Grocery 4409 Black Lake Blvd., Olympia 98512

Ecology has PROPOSED an AGREED ORDER with Mr. Man Pak, owner of the site, for INTERIM ACTION at this site. The INTERIM ACTION will consist of removing petroleum-contaminated soils and underground storage tanks no longer in use.

The PROPOSED AGREED ORDER is available for review at the Department of Ecology, Southwest Regional Office, 7272 Cleanwater Lane SW, Tumwater.

Written comments should be sent to Tammy Hall at the address mentioned above.

Comment Period: 8/24/93 - 9/24/93

Contact: Tammy Hall (206) 586-5557

Governor's Mansion

501 13th Ave. SW, Olympia 98504

INDEPENDENT FINAL CLEANUP REPORT

received on this leaking underground storage tank site 8/18/93 indicated release of petroleum product to the soil.*

Title: Site Assessment Report.

Contact: Lynn Gooding (206) 586-5563



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

N. 4601 Monroe, Suite 202 • Spokane, Washington 99205-1295 • (509) 456-2926

September 13, 1993

Mr. Norman F. Harrison Harrison Properties 2040 SW 98th Avenue Portland, OR 97225

Dear Mr. Harrison:

Re: Vestal Jobber Manufacturing, Inc., N. 902 Dyer Road, Spokane, WA

We have received your INTERIM independent cleanup report dated August 17, 1993 conducted at the site listed above. A notice of receipt of your independent cleanup report will be published in Ecology's Site Register as required by WAC 173-340-600(6).

If you have any technical questions about the site, please contact Debbie Charloe at (509) 456-2834.

Sincerely,

David L. Powell

Public Disclosure Officer Toxics Cleanup Program Eastern Regional Office

DLP:adw

TELEPHONE LOG SHEET

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DDRESS/PHONE:	Dura Ridge (1	<u> 2000 (a</u>	tes / hied by Norm
DRESS/PHONE:			
ALL 6: De	how Charlot	TITLE:	Dite Manager
EPRESENTING: _	WASHINGTON STATE D		′ //
DDRESS/PHONE:	EASTERN REGIONAL O	FFICE, SF	POKANE / (509) 456-283

ALL SUMMARY: _			
~	25,000 ppm TPH	diesol	(stock mile)
~	• /		(side wall-West)
loxa	tank had a	hol.	about 21/14
17	, ,		about 2/2/5
. 1	nom the botto		4
		/	astic & covered
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Slu	ge was sam		
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	LUGIAMINI CRINCLE	<u> </u>	OOppm diesel
			10 Chromium
		18	5
DDITIONAL DAT	A ON BACK? YES	[] NO	/ m
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	TO COMPANY	,					
							

NOTES

Zifford Consultants Report

From In Olness

Vestal Jobber Manufacturing Company January 8, 1992 Page 4 E-1279-01

for their disposal.

CONCLUSIONS

The underground storage tank discovered on the property apparently was abandoned in-place. It appears to be full and may contain about 5,000 to 6,000 gallons. The contents include diesel fuel, floating on an aqueous solution, with a semi-solid sludge on the bottom. The fill pipe extends into the tank, so that an accurate measurement of the thickness of the diesel fuel layer on the top is not readily possible.

The laboratory chemical testing indicates the upper layer consists primarily of diesel fuel, but contains no gasoline. The diesel fuel will probably have to be separated from the other liquid for disposal.

It seems that most of the tank contents consist of the aqueous solution. This solution is slightly acidic and has a low nitrate content. Disposal procedures will depend on the results of a more complete chemical characterization. The requirements for acceptance by the Spokane Wastewater Treatment Facility would include analyses for total concentrations of the following ten elements and compounds, plus an analysis for Total Petroleum Hydrocarbons (TPH in water).

	MAXIMUM ALLOWABLE TOTAL
•	CONCENTRATIONS WITHOUT SPECIAL
COMPOUND OR ELEMENT	PROVISIONS (mq/l)
Arsenic	0.1
Cadmium	0.69
Chromium	5.0
Copper	1.4
Cyanide	1.0
Lead	1.3
Mercury	0.2
Nickel	3.98
Silver	0.5
Zinc	8.0

If the aqueous solution shows concentrations less than those above, the Spokane Wastewater Treatment Facility would accept the aqueous solution for disposal, with a prearranged notification. This procedure would require a chain of custody, provided by the licensed septage hauler, and a copy of the laboratory test results, which should accompany the shipment.

The TCLP analyses show that the sludge layer contains chromium.

Ephrata, WA. 98823 (509) 754-5725

Environmental Analysis Report

NCL Report #: WE1102501

Sample #: TS--1

Customer: GIFFORD CONSULTANTS

PO #:

Received: 10/25/91 09:30

Received By: DEBBIE

Sample Source: E127901 ~

Parameter	Results	Date & Time Analyzed	Method
TPH Gasoline Diesel 1 Diesel 2 Other	<150 mg/Kg 150000 mg/Kg 700000 mg/Kg <150 mg/Kg	10/28/91 16:40	8015

RECEIVED

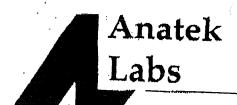
UCT 3 0 1991

GIFFORD CONSULTANTS, INC.

Approved By

BBD

Date 10-28-91



(208) 883-BTEX (2839)

FAX: (208) 882-9246

June 8, 1993

Blue Ridge Associates, Inc.

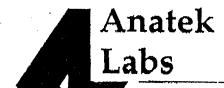
N. 9 Post, Suite # 250 Spokane, WA 99201 Attn: Iain Olness

Items: Results of analysis for samples received 6/3/93. Sample Log-in number is 917.

Project: Harrison Report # 93-0608-BRA

Priority Pollutant Metals by EPA 7000 TCLP Metals by EPA 1311, 7000 Volatile Organics by EPA 8260 Gasoline by WA-TPH-G Diesel by WA-TPH-D

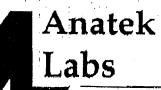
Sample Name NH-IAO-BC	Matrix Soil	Analysis Date 6/7/93	Analyte Lead Arsenic Beryllium Cadmium Chromium Mercury Selenium Silver Copper Nickel Zinc Thallium Antimony	Concentration 19.6 mg/Kg 17.3 mg/Kg 0.13 mg/Kg 0.40 mg/Kg 210 mg/Kg < 0.01 mg/Kg < 0.01 mg/Kg 0.95 mg/Kg 18.4 mg/Kg 9.4 mg/Kg 185 mg/Kg 4.7 mg/Kg < 0.01 mg/Kg
	Soil		TCLP Lead TCLP Arsenic TCLP Barium TCLP Cadmium TCLP Chromium TCLP Mercury TCLP Selenium TCLP Silver	< 0.05 mg/L < 0.05 mg/L < 0.05 mg/L < 0.5 mg/L < 0.01 mg/L < 0.05 mg/L < 0.01 mg/L



(208) 883-**BYF**X (2839)

FAX: (208) 882-9240

Sample Name	Matrix	Analysis Date	Analyte	Concentration
NH-IAO-BC	Soil	6/4/93	Gasoline	< 25 mg/Kg
(continued)		6/4/93	Diesel	
(* *		6/7/93	Chloromethane	~ ~
	•	0/ ///2	Chloroethane	< 0.1 mg/Kg
			Bromomethane	< 0.1 mg/Kg
			Vinyl chloride	< 0.1 mg/Kg
,			1,1_Dichlornethane	< 0.1 mg/Kg
			1,2-Dichloroethene	< 0.1 mg/Kg < 0.1 mg/Kg
	•		1,1-Dichloroethene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			1,1,1-Trichloroethane	< 0.1 mg/Kg
•			1,2-Dichloroethane	< 0.1 mg/Kg
			Carbon tetrachloride	< 0.1 mg/Kg
,			1,2-Dichloropropane	< 0.1 mg/Kg
			Trichloroethene	< 0.1 mg/Kg
			Bromodichloromethane	< 0.1 mg/Kg
			1,3-Dichloropropene	< 0.1 mg/Kg
•			1,1,2 Trichloroethane	< 0.1 mg/Kg
·			Dibromochloromethane	< 0.1 mg/Kg
			Tetrachloroethene	< 0.1 mg/Kg
			Chlorobenzene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			Bromoform	< 0.1 mg/Kg
, ,			1,1,2,2-Tetrachloroethane	< 0.1 mg/Kg
			Benzene	0.10 mg/Kg
•			Toluene	0.13 mg/Kg
			Ethylbenzone	0.80 mg/Kg
			Xylene(Total)	5.1 mg/Kg
•			Styrene	< 0.1 mg/Kg
•			1,2-Dichlorobenzene	< 0.1 mg/Kg
			1,3-Dichlorobenzene	< 0.1 mg/Kg
			1,4-Dichlorobenzene	< 0.1 mg/Kg
				œ. 1 . to



(208) 883-BTEX (2839)

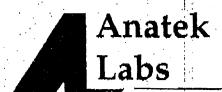
FAX: (208) 882-9246

93-0608-BRA Page 3

Sample Name	Matrix	Analysis Date	Analyte	Concentration
NH-IAO-ESW	Soil	6/4/93	Gasoline	< 10 mg/Kg
•		6/4/93	Diesel	10100 mg/Kg
		6/7/93	Chloromethane	< 0.1 mg/Kg
			Chloroethane	< 0.1 mg/Kg
			Bromomethane	< 0.1 mg/Kg
			Vinyl chloride	< 0.1 mg/Kg
			1,1-Dichloroethane	< 0.1 mg/Kg
:	•		1,2-Dichloroethene	< 0.1 mg/Kg
		•	1,1-Dichloroethene	< 0.1 mg/Kg
1			Chloroform	< 0.1 mg/Kg
			1,1,1-Trichloroethane	< 0.1 mg/Kg
•		* •	1,2-Dichloroethane	< 0.1 mg/Kg
· · · · · · · · · · · · · · · · · · ·			Carbon tetrachloride	< 0.1 mg/Kg
			1,2-Dichloropropane	< 0.1 mg/Kg
		•	Trichloroethene	< 0.1 mg/Kg
			Bromodichloromethane	< 0.1 mg/Kg
			1,3-Dichloropropene	< 0.1 mg/Kg
			1,1,2-Trichloroethane	< 0.1 mg/Kg
		,	Dibromochloromethane	< 0.1 mg/Kg
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•		Tetrachloroethene	< 0.1 mg/Kg
			Chlorobenzene	< 0.1 mg/Kg
	•	*,	Chloroform	< 0.1 mg/Kg
			Bromoform	< 0.1 mg/Kg
			1,1,2,2-Tetrachloroethane	< 0.1 mg/Kg
			Benzene	0.04 mg/Kg
			Toluene	0.06 mg/Kg
			Ethylbenzene	0.32 mg/Kg
	··		Xylene(Total)	2.56 mg/Kg
			Styrene	< 0.1 mg/Kg
			1,2-Dichlorobenzene	< 0.1 mg/Kg
			1,3-Dichlorobenzene	< 0.1 mg/Kg

1,4-Dichlorobenzene

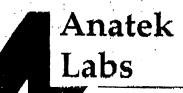
< 0.1 mg/Kg



(208) 883-BTEX (2839)

FAX: (208) 882-9246

Sample Name NH-IAO-ESW	Matrix	Analysis Date 6/7/93	Analyte Lead	Concentration 15.8 mg/Kg
(continued)			Arsenic	16.8 mg/Kg
	11	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Beryllium	0.16 mg/Kg
		1	Cadmium	0.55 mg/Kg
	1 !	d	Chromium	174 mg/Kg
		1	Mercury	< 0.01 mg/Kg
•	i	·, 1	Selenium	< 0.01 mg/Kg
·		· •	Silver	0,88 mg/Kg
	1	r I	Copper	17.1 mg/Kg
			Nickel	7.8 mg/Kg
$\frac{\partial f}{\partial x} = \frac{\partial f}{\partial x} = $.	E	Zinc	138 mg/Kg
Contract to	:	i t	Thallium	2.2 mg/Kg
			Antimony	0.15 mg/Kg
	Soil	6/7/93	TCLP Lead	< 0.05 mg/L
	111		TCLP Arsenic	< 0.05 mg/L
		1	TCLP Barium	< 0.5 mg/L
	<u> </u>		TCLP Cadmium	< 0.01 mg/L
	į :		TCLP Chromium	< 0.05 mg/L
	ļ. .	Marie Company	TCLP Mercury	< 0.001 mg/L
	1	,	TCLP Selenium	< 0.01 mg/L
	. !	. !	TCLP Silver	< 0.01 mg/L

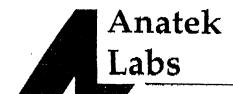


(208) 883-BTEX (2839)

FAX: (208) 882-9246

93-0608-BRA | Page | 5

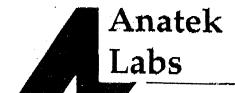
			•
	rix Analysis Date	•	Concentration
NH-IAO-WSW Soi		Gasoline	< 25 mg/Kg
	6/4/93	Diesel	1200 mg/Kg
	6/7/93	Chloromethane	< 0.1 mg/Kg
	•	Chloroethane	< 0.1 mg/Kg
		Bromomethane	< 0.1 mg/Kg
		Vinyl chloride	< 0.1 mg/Kg
		l,1-Dichloroethane	$\leq 0.1 \text{ mg/Kg}$
		1,2-Dichloroethene	< 0.1 mg/Kg
		1,1-Dichloroethene	< 0.1 mg/Kg
		Chloroform	< 0.1 mg/Kg
	•	1,1,1-Trichloroethane	< 0.1 mg/Kg
		1,2-Dichloroethane	< 0.1 mg/Kg
2	•	Carbon tetrachloride	< 0.1 mg/Kg
		1,2-Dichloropropane	< 0.1 mg/Kg
•		Trichloroethene	< 0.1 mg/Kg
		Bromodichloromethane	< 0.1 mg/Kg
		1,3-Dichloropropene	< 0.1 mg/Kg
	"	1,1,2-Trichloroethane	< 0.1 mg/Kg
		Dibromochloromethane	< 0.1 mg/Kg
		Tetrachloroethene	< 0.1 mg/Kg
		Chlorobenzene	< 0.1 mg/Kg
		Chloroform	< 0.1 mg/Kg
· · · · · · · · · · · · · · · · · · ·		Bromoform	< 0.1 mg/Kg
¥ - *		1,1,2,2-Tetrachloroethane	< 0.1 mg/Kg
		Benzene	0,03 mg/Kg
		Toluene	0.07 mg/Kg
		Ethylbenzene	0.19 mg/Kg
		Xylene(Total)	0.40 mg/Kg
		Styrene	< 0.1 mg/Kg
		1,2-Dichlorobenzene	< 0.1 mg/Kg
· .		1,3-Dichlorobenzene	< 0.1 mg/Kg
;		1,4-Dichlorobenzene	< 0.1 mg/Kg



(208) 883-BTEX (2839)

FAX: (208) 882-9246

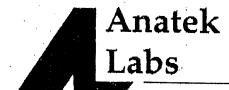
Sample Name NH-IAO-WSW (continued)	Matrix Soil	Analysis Date 6/7/93	Analyte Lead Arsenic Beryllium Cadmium Chromium Mercury Selenium Silver Copper Nickel Zinc Thallium Antimony	0.02 0.20 17.2 < 0.01	ration mg/Kg
	Soil	6/7/93	TCLP Lead TCLP Arsenic TCLP Barium TCLP Cadmium TCLP Chromium TCLP Mercury TCLP Selenium TCLP Silver	< 0.05 < 0.05 < 0.01 < 0.05 < 0.005 < 0.005 < 0.000 < 0.01	



(208) 883-BTEX (2839)

FAX: (208) 882-9246

Sample Name	Matrix	Analysis Date	Amaliuta	O
NH-IAO-NSP	Soil	6/4/93	▼	Concentration
1114-11 IQ-11UI	2011		Gasoline	< 25 mg/Kg
		6/4/93	Diesel	21800 mg/Kg
		6/7/93	Chloromethane	< 0.1 mg/K.g
			Chloroethane	< 0.1 mg/Kg
		1	Bromomethane	< 0.1 mg/Kg
			Vinyl chloride	< 0.1 mg/Kg
			1,1-Dichloroethane	< 0.1 mg/Kg
			1,2-Dichloroethene	< 0.1 mg/Kg
			1,1-Dichloroethene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			1,1,1-Trichloroethane	< 0.1 mg/Kg
			1,2-Dichloroethane	< 0.1 mg/Kg
			Carbon tetrachloride	< 0.1 mg/Kg
			1,2-Dichloropropane	< 0.1 mg/Kg
			Trichloroethene	< 0.1 mg/Kg
· ·			Bromodichloromethane	< 0.1 mg/Kg
			1,3-Dichloropropene	< 0.1 mg/Kg
			1,1,2-Trichloroethane	< 0.1 mg/Kg
			Dibromochloromethane	< 0.1 mg/Kg
•			Tetrachloroethene	< 0.1 mg/Kg
			Chlorobenzene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			Bromoform	< 0.1 mg/Kg
			1,1,2,2-Tetrachloroethane	< 0.1 mg/Kg
			Benzene	0.39 mg/Kg
			Toluene	0.25 mg/Kg
			Ethylbenzene	2.47 mg/Kg
•			Xylene(Total)	16.1 mg/Kg
			Styrene	< 0.1 mg/Kg
			1,2-Dichlorobenzene	< 0.1 mg/Kg
			1,3-Dichlorobenzene	< 0.1 mg/Kg
			1,4-Dichlorobenzene	< 0.1 mg/Kg
			-1: -1011101000100010	- out may va



(208) 883-BTEX (2839)

FAX: (208) 882-9246

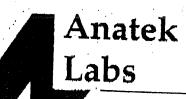
Sample Name		Analysis Date	Analyte	Concentration
NH-IAO-NSP	Soil	6/7/93	Lead	8.2 mg/Kg
(continued)	1		Arsenic	9.0 mg/Kg
			Beryllium	0.32 mg/Kg
	1		Cadmium	0.15 mg/Kg
<i>'</i>			Chromium	60.3 mg/Kg
•			Mercury	< 0.01 mg/Kg
•			Selenium	< 0.01 mg/Kg
4 - 4			Silver	0.82 mg/Kg
•	•		Copper	10.4 mg/Kg
•			Nickel	9.6 mg/Kg
•	e.		Zinc	60.0 mg/Kg
•			Thallium	2.5 mg/Kg
	, i		Antimony	2.8 mg/Kg
	6.4	Cim IOO		, , , , , , , , , , , , , , , , , , ,
•	Soil	6/7/93	TCLP Lead	< 0.05 mg/L
		•	TCLP Arsenic	< 0.05 mg/L
			TCLP Barium	< 0.5 mg/L
			TCLP Cadmium	< 0.01 mg/L
			TCLP Chromium	< 0.05 mg/L
			TCLP Mercury	< 0.001 mg/L
,			TCLP Selenium	< 0.01 mg/L
	•		TCLP Silver	< 0.01 mg/L



(208) 883-BTEX (2839)

FAX: (208) 882-9246

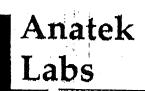
Sample Name	Matrix	Analysis Date	Analyte	Concentration
NH-IAO-CSP	Soil	6/4/93	Gasoline	< 25 mg/Kg
•		6/4/93	Diesel	5110 mg/Kg
		6/7/93	Chloromethane	< 0.1 mg/Kg
·			Chloroethane	< 0.1 mg/Kg
			Bromomethane	< 0.1 mg/Kg
			Vinyl chloride	< 0.1 mg/Kg
			1,1-Dichloroethane	< 0.1 mg/Kg
			1,2-Dichloroethene	< 0.1 mg/Kg
			1,1-Dichloroethene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			1,1,1-Trichloroethane	< 0.1 mg/Kg
			1,2-Dichloroethane	< 0.1 mg/Kg
•			Carbon tetrachloride	< 0.1 mg/Kg
			1,2-Dichloropropane	< 0.1 mg/Kg
•			Trichloroethene	< 0.1 mg/Kg
			Bromodichloromethane	< 0.1 mg/Kg
			1,3-Dichloropropene	< 0.1 mg/Kg
			1,1,2-Trichloroethane	< 0.1 mg/Kg
			Dibromochloromethane	< 0.1 mg/Kg
•			Tetrachloroethene	< 0.1 mg/Kg
•	•		Chlorobenzene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			Bromoform	< 0.1 mg/Kg
			1,1,2,2-Tetrachloroethane	< 0.1 mg/Kg
			Benzene	0.04 mg/K.g
•			Toluene	0.05 mg/Kg
		•	Ethylbenzene	0,22 mg/Kg
4			Xylene(Total)	1.55 mg/Kg
			Styrene.	< 0.1 mg/Kg
			1,2-Dichlorobenzene	< 0.1 mg/Kg
			1,3-Dichlorobenzene	< 0.1 mg/Kg
			1,4-Dichlorobenzene	< 0.1 mg/Kg



(208) 883-BTEX (2839)

FAX: (208) 882-9246

Sample Name NH-IAO-CSP (continued)	Matrix Soil	Analysis Date 6/7/93	Analyte Lead Arsenic	Concentration 15,3 mg/Kg
			Beryllium Cadmium Chromium Mercury Selenium Silver Copper Nickel Zinc Thallium Antimony	16.7 mg/Kg 0.35 mg/Kg 0.60 mg/Kg 0.60 mg/Kg 0.13 mg/Kg < 0.01 mg/Kg < 0.01 mg/Kg 17.8 mg/Kg 17.8 mg/Kg 8.7 mg/Kg 111 mg/Kg 3.9 mg/Kg 4.3 mg/Kg
	Soil		TCLP Lead TCLP Arsenic TCLP Barium TCLP Cadmium TCLP Chromium TCLP Mercury TCLP Selenium	< 0.05 mg/L < 0.05 mg/L < 0.05 mg/L < 0.5 mg/L < 0.01 mg/L < 0.05 mg/L < 0.01 mg/L



(208) 883-BTEX (2839)

FAX: (208) 882-9246

Sample Name	Matulu	American in in		
NH-IAO-SSP	Soil	Analysis Date	•	Concentration
1411-1470-22L	2011	6/4/93	Gasoline	< 25 mg/Kg
<i>y</i>	·	6/4/93	Diesel	5110 mg/Kg
		6/7/93	Chloromethane	< 0.1 mg/Kg
•	•	•	Chloroethane	< 0.1 mg/Kg
			Bromomethane	< 0.1 mg/Kg
**	•		Vinyl chloride	< 0.1 mg/Kg
, ,	•		1,1-Dichloroethane	< 0.1 mg/Kg
:• '			1,2-Dichloroethene	< ,0.1 mg/Kg
	, ,		1,1-Dichloroethene	< 0.1 mg/Kg
			Chloroform	< 0.1 mg/Kg
			1,1,1-Trichloroethane	< 0.1 mg/Kg
		•	1,2-Dichloroethane	< 0.1 mg/Kg
	'		Carbon tetrachloride	< 0.1 mg/Kg
· · · · · · · · · · · · · · · · · · ·			1,2-Dichloropropane	< 0.1 mg/Kg
			Trichloroethene	< 0.1 mg/Kg
			Bromodichloromethane	< 0.1 mg/Kg
•			1,3-Dichloropropene	< 0.1 mg/Kg
			1,1,2-Trichloroethane	$< 0.1 \mathrm{mg/Kg}$
•			Dibromochloromethane	< 0.1 mg/Kg
i			Tetrachloroethene	< 0.1 mg/Kg
			Chlorobenzene	< 0.1 mg/Kg
	•		Chloroform	< 0.1 mg/Kg
			Bromoform	< 0.1 mg/Kg
			1,1,2,2-Tetrachloroethane	< 0.1 mg/Kg
			Benzene	0.03 mg/Kg
			Toluene	0.04 mg/Kg
	•		Ethylbenzene	0.08 mg/Kg
			Xylene(Total)	0.54 mg/Kg
	:	•	Styrene	< 0.1 mg/Kg
.	•	•	1,2-Dichlorobenzene	< 0.1 mg/Kg
•			1,3-Diohlorobenzene	< 0.1 mg/Kg
!			1,4-Dichlorobenzene	< 0.1 mg/Kg
•		9	• • • • • • • • • • • • • • • • • • •	AIT HIEN KYE



(208) 883-BTEX (2839)

FAX: (208) 882-9246

93-0608-BRA Page 12

Sample Name NH-IAO-SSP (continued)	Matrix Soil	Analysis Date 6/7/93	Analyte Lead Arsenic	Concentration 13.6 mg/Kg 12.8 mg/Kg
			Beryllium Cadmium Chromium Mercury Selenium Silver	0.36 mg/Kg 0.35 mg/Kg 0.08 mg/Kg < 0.01 mg/Kg < 0.01 mg/Kg 0.85 mg/Kg
	*. *.		Copper Nickel Zinc Thallium Antimony	13.8 mg/Kg 7.5 mg/Kg 89.6 mg/Kg 2.9 mg/Kg 1.5 mg/Kg
	Soil	6/7/93	TCLP Lead TCLP Arsenic TCLP Barium TCLP Cadmium TCLP Chromium TCLP Mercury TCLP Selenium TCLP Silver	< 0.05 mg/L < 0.05 mg/L < 0.5 mg/L < 0.01 mg/L < 0.05 mg/L < 0.001 mg/L < 0.01 mg/L < 0.01 mg/L

Mike Pearson

Laboratory Director

DAILY FIELD NOTES

PROJECT NAME: Vestal Johnson MAG Co. DYER Rd	
PIC: TIME: Arrive at site 9:00 Leave site 11:06	
DATE: 6/2/93	
WEATHER: Overcast rouming 55°	
Norm Harrison, Wayne Polerson	
Equipment:	
Notes: Tank removal (1000 gal waste oil ? tzenk, on end) was	
in progress at the time of our arrival. Petroleum contaminated	
Soil was readily recognized in executated material, dk grey to black	
in color by olefactory senses appears to be diesel? Jome soil was	
clearly saturated to point that product sheen was visible, (suspect solvent	5?
diesel wasteril At 10:31 tank was removed from excavation, with a Fork lift	
FR 11st the tank was allowed to lay partially over to one side	
Production An oily fluid waknown type) ran out of tonk &	
Producto parteny lot surface - quantity estimated at = 5-10gal.	
Touk was then placed Back in uproglet position. Product	
was released from i fitting bole on side of tout approx	
42 from what was bottom of tout (TANK Messerved @ 6th Dia	
6 long). Product pertinaled @ 1/2, after release &	ile aduct love
Released product van across pavement constitute toward bldg into	
what appears to be a dry well in front of loading dock	
Signature Waynersters 6/2/93	



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

N. 4601 Monroe, Suite 202 • Spokane, Washington 99205-1295 • (509) 456-2926

April 5, 1993

CERTIFIED MAIL (P 047 716 254)

Mr. Ralph Vestal Vestal Jobber Manufacturing N. 902 Dyer Road Spokane, WA 99212-1007

Dear Mr. Vestal:

Re: Permanent Closure of Underground Storage Tanks (UST) located at Atlas Industrial Coatings (Vestal Jobber Manufacturing), N. 902 Dyer Road, in Spokane, WA

We received Mr. Harrison's 30-Day Notice of Intent to Close Underground Storage Tanks (UST) dated August 19, 1992. It has been over ninety (90) days since permanent closure was to take place. Because we have not received any closure documentation, our files indicate your tanks are still in use.

WAC 173-360-630 (12)(a) requires the tank service provider to submit the Permanent Closure Checklist and Site Assessment Checklist to Ecology within thirty days following the completion of the decommissioning. To date we have not received either Checklist.

Your UST file can not be closed until Ecology receives the following items signed by a licensed tank service provider: (1) Permanent Closure Checklist for each UST removed, (2) Site Assessment Checklist for each UST, and (3) Site Assessment Report from a Registered Site Assessor.

You are responsible to comply with all of the requirements of Chapter 173-360 WAC, as well as UST removal activities. If we do not hear from you, your tank file will be considered active and will be subject to all regulatory requirements. Failure to comply could result in enforcement action .

Mr. Ralph Vestal Vestal Jobber Manufacturing April 5, 1993 Page 2

If you have any further questions regarding your tank status, please call me at (509) 456-6385.

Sincerely,

Jim Greeves

Underground Storage Tanks Toxic Cleanup Section

cc: Site file, Ecology/Olympia

Jay Torgerson, Rob's Demolitions

Norman Harrison, Harrison Properties

SENDER: • Complete items 1 and/or 2 for additional services. • Complete items 3, and 4a & b. • Print your name and address on the reverse of this form so the return this card to you.	at we can	I also wish to receive the following services (for an extra fee):
· Attach this form to the front of the mailpiece, or on the back	if space	1. Addressee's Address
does not permit. Write "Return Receipt Requested" on the mailpiece below the are. The Return Receipt will show to whom the article was delivered delivered.		2. Restricted Delivery Consult postmaster for fee
3. Article Addressed to:		cle Number
MR RALPH VESTAL	P 04	7 716 254
VESTAL JOBBER MANUFACTURING N 902 DYER ROAD		vice Type stered
SPOKANE WA 99212-1007	10	fied COD coss Mail Return Receipt for Merchandise of Delivery
5. Signature (Addressee)		essee's Address (Only if requeste fee is paid)
6. Signature (Agent)		14 Sec. 1



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

N. 4601 Monroe, Suite 202 • Spokane, Washington 99205-1295 • (509) 456-2926

April 5, 1993

<u>CERTIFIED MAIL</u> (P 047 716 253)

Mr. Norman Harrison Harrison Properties 17430 S.W. 63rd Avenue Lake Oswego, OR 97035

Dear Mr. Harrison

Re: Permanent Closure of Underground Storage Tanks (UST) located at Atlas Industrial Coatings (Vestal Jobber Manufacturing), N. 902 Dyer Road, Spokane, WA

We received your 30-Day Notice of Intent to Close Underground Storage Tanks (UST) dated August 19, 1992. It has been over ninety (90) days since permanent closure was to take place. Because we have not received any closure documentation, our files indicate your tanks are still in use.

WAC 173-360-630 (12)(a) requires the tank service provider to submit the Permanent Closure Checklist and Site Assessment Checklist to Ecology within thirty (30) days following the completion of the decommissioning. To date, we have not received either Checklist.

Your UST file can not be closed until Ecology receives the following items signed by a licensed tank service provider: (1) Permanent Closure Checklist for each UST removed, (2) Site Assessment Checklist for each UST, and (3) Site Assessment Report from a Registered Site Assessor.

You are responsible to comply with all of the requirements of Chapter 173-360 WAC, as well as for UST removal activities. If we do not hear from you, your tank file will be considered active and will be subject to all regulatory requirements. Failure to comply could result in enforcement action.

Mr. Norman Harrison Harrison Properties April 5, 1993 Page 2

If you have any further questions regarding your tank status, please call me at (509) 456-6385.

Sincerely,

Jim Greeves

Underground Storage Tanks Toxic Cleanup Section

cc: Site file, Ecology/Olympia

Jay Torgerson, Rob's Demolitions

Ralph Vestal, Vestal Jobber Manufacturing

Complete items 1 and/or 2 for additional services. Complete items 3, and 4a & b. Print your name and address on the reverse of this for return this card to you. Attach this form to the front of the mailpiece, or on the does not permit. Write "Return Receipt Requested" on the mailpiece below. The Return Receipt will show to whom the article was dedelivered.	ne back if space	2. Intestricted Delivery
3. Article Addressed to: MR NORMAN HARRISON HARRISON PROPERTIES 17430 SW 63RD AVENUE LAKE OSWEGO OR 97035	4a. Arti 4b. Serv Regis Certif Expre	ied COD ss Mail Return Receipt for Merchandise of Delivery
5. Signature (Addressee) 6. Signature (Agent) 7. Signature (Agent) 7. Seorm 3811, December 1991 * U.S.G.P.O.: 19	8. Addre and fe	7-93 ssee's Address (Only if requested e is paid)

NORMAN F. HARRISON

(503) 636-3677 (503) 292-1060 2040 S.W. 98th AVENUE – PORTLAND, OREGON 97225

DEC 16 1992

DEPARTMENT OF ECULOGY

11/12/92

LYNN A. MASER
Dept Of Egology
Eastern Regional Office
N. 4601 Monroe, Suite 100
Spokane, Wa 99205-1295

Dear Mr. Maser,

I am enclosing a Lab report on the material that is in the drums at N. 902 Dyer Rd.

I took this report to Michael Coster at Wastewater Management Dept, City of Spokane and he told me that they could except this material.

I would like permission to have this material disposed of right away befor it freezes and breaks the drums.

Sincerely,

Norman F. Harrison

enc



N. 1403 Greene St., Spokane, WA 99202 [509] 535-5501 P.O. Box 14642, Spokane, WA 99214

DEC 1 6 1992

ANALYTICAL REPORT

Client: Vestal Jobber Manufacturing Inc. N. 9Ø2 Dyer Rd Spokane, WA 99212-1007

Report Number: E-820

Sample ID 7-13-92

Date: December 9, 1992

ppm Cr

Underground Tank Sludge

ø.2

TCLP

Lymn A: Moser.



N. 1403 Greene St., Spokane, WA 99202 [509] 535-5501: P.O. Box 14642, Spokane, WA 99214

ANALYTICAL REPORT

DEPARTMENT OF ECOLOGIEASTERN REGIONAL OFFICE

Gifford Consulting

Client: E. 11616 Montgomery Rd. Suite #4

Spokane, WA 99206

Report Number:

SLUDGE

mg/1mg/1mg/1mg/1mg/1mg/1mg/1mg/1Sample ID Hg As Se Сd РЬ Ba Cr Αg 1Ø-24-91 TS-3&TS-4 Comp. <Ø.Ø1 <ø.øø5 < Ø. Ø1 <ø.ø2 < Ø . 1 < Ø . 1 Ø.8

TCLP Metals

mg/1Sample ID <u>NO_3N</u> pН 10-24-91 TS-2 1.48 6.29 TS-3 6.27 TS-4 6.33

RECEIVED

may 2 0 1991

GIFFORD CONSULTANTS, INC. SPOKANT

Date: November 1.5, 1991

NOTES

uter CONTACT: DATE: (9? drums brove ester 456-4305 VALMO Chromum Harrison

12114/92

Migra

Serving Northwest Industries with Quality & Economical Service

TO: ma Lynn massER

This is Treclar Lab Raport

Sommes of



TO

ANALYTICAL REPORT

Client: Vestal Jobber Manufacturing Inc. N. 9Ø2 Dyer Rd Spokane, WA 99212-1007

<u>Sample ID</u> 7-13-92	ppm Ag	Ba ppm	PPM Cd	ppm Cr	ppm Ni	ppm Cu	PP PPm
Underground Tank Sludge) <1.ø	.25.Ø	Ø.86	25ØØ.Ø	4.3	13.Ø	28. Ø
Sample ID 7-13-92	ppm Zn	ppm Hg	epm eA	ppm Se	ppm Oil and O	Greese	
Underground Tank Sludge) 13ØØ.Ø	Ø.33	<Ø.1	<ø.1	33Ø,2ØØ.Ø	5	
,							

٥F

Sample ID 7-13-92

<u>Flash Point</u>

рΗ

Underground Tank Sludge/ >212.0

6.40

November 2, 1992

NATIONAL CHEM LAB, INC. 103 12th AVE. S.W. EPHRATA, WA 98823 PH.: 509-754-5725 FAX: 509--754-4239

VOLATILE ORGANIC COMPOUNDS EPA METHOD 601/602

CUSTOMER: TRECLEN LABS ADDRESS: N 1403 GREENE ST, SUITE 4

SAMPLE #: E-820 (OIL SAMPLE) CITY, STATE, ZIP: SPOKANE, WA 99202

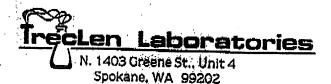
ATTN: JOHN TRECHTER

ANALYST: G. MILLER DEPARTMENT HEAD: B. MAHIOU

LAB NUMBER: WE2083103 DATE OF REPORT: 09/25/92

COMPOUND NAME	SULTS (ug/L)
DICHLORODIFLUOROMETHANE<4	0 W# /T
THEY WANTED THE TOTAL TO	- -,
WATCH TO THE TANK THE	mg/L
TRICHLOROFLUOROMETHANE	mg/L
1,1-DICHLOROETHENE<9	
METHYLENE CHLORIDE.	mg/L
trans-1,2-DICHLOROETHENE<1	5 mg/L
1,1-DICHLOROETHANE) malr
1,1-DICHLOROETHANE<8	mg/L
CHLOROFORM.	mg/L
1,1,1-TRICHLOROETHANE<2	mg/L
	mg/L
BENZENE	mg/L
- PLOTOTORORORIANE	· T. * · · ·
	mg/L
	mg/L
	mg/L
DIBROMOCHLOROMETHANE.	mg/L
CHLOROBENZENE	. mg/L
ETHYLBENZENE<12	
1.1.1.2-TETRACHT.PODPMUANTE	mg/L
1,1,1,2-TETRACHLRORETHANE BROMOFORM	mg/L
BROMOFORM<7	
1,3-DICHLOROBENZENE	
1,4-DICHLOROBENZENE	mg/L
	mg/L
*TOTAL XYLENES88	mg/L
*NOT A 601/602 VOC) A - / /	••

APPROVED BY: Below Mawouper: 09/25/92



(509) 535-5501

November 3, 1992

Vestal Jobber Manufacturing Inc. N. 902 Dyer Rd. Spokane, WA 99212-1007

Dear Sir:

A sample of sludge was taken from an underground tank on July 13, 1992 at 9:00 am located on the South West corner of a building located at N. 902 Dyer Rd, Spokane, Washington. The tank had been uncovered but was still located in the ground. The sample collected was a wet sludge, which was returned to Treclan Labs for analysis.

Portions of the sample were weighed and digested in acid in order to determine acid soluble heavy metals. A second portion was analyzed for fats, oils and grease, while a third sample was sent away to test for volatile organic solvents.

These tests were chosen in order to determine whether or not the sludge could be incinerated as an oil or diesel waste. Previous tests had indicated that the sludge contained high percentages of diesel oil which prevented it from being placed in a landfill, therefore, incineration seemed like a logical alternative.

The volatile organic test indicates little or no contamination from halogenated hydrocarbons which, if present in high enough levels, could prevent burning the sludge. Oil and grease results besically agree with previous tests run. Metal analysis, however, indicate high levels of Zinc and Chromium with moderate levels of Cadmium, Nickel, Copper, Lead and Mercury. These metals at the concentrations found would most likely prevent the sludge from being burned.

In light of the metal and oil concentrations found in the sludge, disposal at a hazardous waste disposal facility would most likely be required.

Respectfully Submitted,

Trackton

John Trechter

Chemist

ROBERT J. McKANNA, P.S. ATTORNEY AT LAW

NORTH 122 UNIVERSITY SPOKANE, WASHINGTON 99206-5297 TELEPHONE (509) 924-8144 FAX: (509) 924-8146 Nov. 1 2 1992

October 27, 1992

Mr. Norman Harrison 2040 S.W. 98th Street Portland, OR 97225

Re: Sale of Property on N. 902 Dyer Road to Vestal
Our File No. 16669

Dear Mr. Harrison:

As you will recall, it has been a little over a year since I first wrote to you concerning the hazardous waste disposal and storage problem that pre-existed the occupancy of the property sold by your firm to Mr. Vestal.

In the Spring of 1992, you came to Spokane and began the removal of a storage tank. At that time you were advised by the Department of Ecology about the required measures that were absolutely necessary to the further disposal of the waste products stored in the tank and the tank itself as well as the study and determination of the ground areas around the tank.

Mr. Vestal has been more than patient in his attitude and acceptance of your interest in removing this problem and disposing of the tank and waste products properly.

However, the situation is a continuing problem for Mr. Vestal and he is unable to enjoy the property as it existed prior to the attempt to remove the product and tank. He is entitled to the quiet enjoyment of his property free of the nuisance that currently exists thereon.

Demand is made upon you to finish what you started, get the property cleared of the question that surrounds it, dispose of the product and tank according to the rules furnished you by the Department of Ecology.

Very truly yours,

RÓBERT J. MCKANNA

RJM: dw

cc: Lynn Masser, Dept. of Ecology Ralph Vestal





UNDERGROUND STORAGETANKI992

30 Day Notice of Intent to Close/Decommission Tanks

notify the identified person of the earliest date closure/decommissioning activities may commence.



DEPARTMENT OF ECOLOGY EASTERN REGIONAL OFFICE

The purpose of this form is to provide the Department of Ecology with notice of intent to close/decommission an UST. It must be received 30 days prior to the closure activities. It must be signed and dated by either the owner/operator of the UST to'be closed or his/her authorized representative. (This could be the firm contracted to do the work.) Ecology will

For questions on completing this form please call (206) 459-6293.

DEPARTMENT OF ECOLOGY UNDERGROUND STORAGE TANKS

Please type or use ink.

The completed checklist should be mailed to:

Underground Storage Tank Section Department of Ecology Mail Stop PV-11 Olympia WA 98504-8711

AUG 1 9 1992

·	Ot	ympia, WA 98504-8711		
1. TANK OWNER A	ND LOCATION		en di di salah kan di di salah s	
UST Owner/Operator:	HARRISON PR	COPERTIES		
Owners Mailing Address		63RD Avenu	e	
	LAKE OSWEC	so, OR		97035
Telephone:	1503) 636-36	State	^	ZP-Code
Site ID Number (on invo	sice or available from Ecology if	tank is registered):	NR	
Site/Business Name:	Atlas Indus	strial Coati	ngs	
Site Address:		YER Road	,	Spotane
	Spokane	WA		99212
	CRY	. 5		ZP-Code
	NT CLOSURE TO BE PERI	FORMED BY (If know	n):	
Firm:	Rob's Demolition			
Address:	E. 7917 Gunning	Drive		P.O. Box
	Spokane, WA 992	12		
Telephone:	(509) 928-0431		Contact Name: Ja	y Torgerson
3. TANK INFORMA	TION			
Tank Identification	Approx. Closure Date	Tank Capacity	Tank Age	Last Substance Stored
1	9/92	(galions)	(veers)	Has Not been determined
	11	1000 ?	3.	()
4. SIGNATURE OF	TANK OWNER/OPERATOR	OR AUTHORIZED B	EDDECENTATIVE	
		Rob's Demoli	ion	
Jey Offe &)O—	Authorized Re	epresentativ	e Aug 10, 1992
ECY 101-155 11/90				



STATE OF WASHINGTON

COPY

Dangerous Waste

DEPARTMENT OF ECOLOGY

N. 4601 Monroe, Suite 100 • Spokane, Washington 99205-1295 • (509) 456-2926 **June 15, 1992**

Mr. Norman F. Harrison Harrison Properties 17430 S. W. 63rd Avenue Lake Oswego, Oregon 97035

Dear Mr. Harrison:

RE: Recent Complaint Investigation

This letter is being written as a follow up to the events which took place at North 902 Dyer Road in Spokane on May 6, 1992. This letter is being directed to you, since, as the former property owner you have assumed responsibility, both verbally and apparently in written documents, for any environmental problems at this site. As we discussed in person, there are several major areas of concern which need to be addressed as soon as possible. It should also be re-emphasized that activities related to the removal of underground tanks and their contents are strictly regulated. No further actions should be attempted by unauthorized persons. The major areas are:

Hazardous Waste. (Federal RCRA regulations - 40 CFR (260-272), and state Dangerous Waste regulations - WAC 173-303). Several mistakes have already been made in this area. Let me outline some of the steps which need to be taken at this time.

- 1). An EPA ID# needs to obtained for this site (this has been taken care of an emergency number has been obtained).
- 2). All drums and containers must be designated as to whether or not their contents are hazardous waste. This probably means lab analysis of a representative sample from each container.
- 3). All containers should be stored in a secure and safe manner. The current storage arrangements have several deficiencies, so it may be necessary to have the appropriate containers transported by an authorized transporter to a permitted storage facility.

Tank Removal. (UST- 40 CFR 280, and the hazardous waste regulations above). Tank removal must be accomplished with proper notification and by an authorized contractor. Contents of the tanks in question (the two already identified and any others) must also be designated and handled properly, and the tanks themselves need to be cleaned and disposed of properly.

Norman Harrison Page 2 June 15, 1992

Site characterization and cleanup of contaminated soil. (The State Model Toxics Control Act - Wac 173-340). Spillage occurred on May 6th from at least one of the tanks, and may have occurred in the past. Testing needs to be done to determine the extent and nature of the contamination at the site. Appropriate cleanup procedures will be determined based on those test results.

This is a very brief, and not all-inclusive summary of the problems associated with cleaning up the old tanks at this site. Each of these areas involve serious regulatory implications. It should be reemphasized that no actions should be taken without careful consultation with the proper authorities. It may be wise to work with a consultant, or waste disposal specialist who can coordinate work on the site, and insure that all regulatory considerations are met.

I am enclosing general information about hazardous waste responsibilities. I am also enclosing a request for public information from which should be completed and returned since you requested a copy of the report about the waste in the tank. Please don't hasitate to call me at 456-6187, if you have any questions about these points or any other hazardous waste matters. Jim Greeves (456-6385) can assist you on matters relating to tank removal, and Dave George (456-6164) can assist on questions about cleanup and site characterization.

Sincerely,

Lynn Maser

Hazardous Waste Inspector

Solid and Hazardous Waste Program

LM:kn

Enclosures: Step by Step Fact Sheets

Public Records Request

cc: Jim Greeves, Dept. of Ecology, UST, Spokane

Sherman Spencer, Dept. of Ecology, Toxics Cleanup Program

Ralph Vestal, Vestal Jobber Manufacturing, Spokane



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

N. 4601 Monroe, Suite 100 • Spokane, Washington 99205-1295 • (509) 456-2926

June 11, 1992

Mr. Ralph Vestal N. 902 Dyer Road Spokane, WA 99212-1007

RE: EARLY NOTICE LETTER REGARDING THE VESTAL JOBBER MANUFACTURING COMPANY PROPERTY LOCATED AT NORTH 902 DYER ROAD, SPOKANE, SPOKANE COUNTY, WASHINGTON

Dear Mr. Vestal:

On May 5, 1992 at 4:30 p.m., the Department of Ecology was notified of a tank removal to occur the following day at the above referenced propperty. The anonymous caller was concerned that the tank removal would be performed without meeting state and local requirements. Ecology personnel arrived at the site the morning of May 6, 1992 to find one tank, still containing an unknown product, removed without a licensed decommissioner and registered site assessor present. The larger tank had not been removed but the product had been pumped out and placed in barrels. At that point, Norman Harrison, the previous owner, was informed to discontinue any activities related to the tank removal until a licensed decommissioner had been hired as required under the Underground Storage Tank Regulations [Chapter 173-360 Washington Administrative Code (WAC)].

Visible staining of the soils were observed in the excavation indicating the need for further investigation. There was also an area on the west sidewall of the excavation where spillage had occurred from a hole in the smaller tank during the removal. It is our understanding that you are the current owner/operator of this property/facility. Notice was given to Ecology that Mr. Harrison plans to conduct an independent investigation/cleanup.

Under the Model Toxics Control Act [Chapter 70.105D Revised Code of Washington (RCW)], Ecology maintains a database of known or suspected contaminated sites. Based on available information and results of the initial investigation, it is Ecology's decision that the above referenced property will be added to the database, and that a site hazard assessment will be required [WAC 173-340-310(4)]. Please note that inclusion in the database does not mean that Ecology has determined you are a potentially liable person under the Model Toxics Control Act (administered under Chapter 173-340 WAC).

Mr. Ralph Vestal June 11, 1992 Page 2

Regardless of the planned/present actions, Ecology may still need to conduct a more detailed inspection of this property in the future, including testing for possible contamination. At that time, we may assess the need for further action and establish a priority for this work, if needed.

Ecology has a strong commitment to working cooperatively with persons to accomplish prompt and effective cleanups. However, due to limited resources and requirements in state law, we are not always able to provide all the assistance requested. Your cooperation in planning or conducting a remedial action is not an admission of guilt or liability.

In proceeding with an independent cleanup, please be aware that there are requirements in state law which must be adhered to. Some of these requirements are addressed in WAC 173-340-120(8)(B) and -300(4). Please note that Ecology will use the appropriate requirements contained throughout this chapter in its evaluation of the adequacy of any independent remedial actions performed.

A copy of Chapter 70.105D RCW and the implementing regulations, Chapter 173-340 WAC, are enclosed for your review and reference. If you have any questions regarding this letter or the requirements under the Model Toxics Control Act, please contact Dave George at (509) 456-6164. Continue to work with Lynn Maser in our office in relation to State Dangerous Waste regulations, Chapter 173-303 WAC, that pertain to this site.

Sincerely,

Debbie Charloe Site Manager

Toxics Cleanup Program

Debbie Charlos

DC:adw

Enclosures

cc: Norman Harrison



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

N. 4601 Monroe, Suite 100 • Spokane, Washington 99205-1295 • (509) 456-2926

June 11, 1992

Mr. Norman Harrison Harrison Properties 17430 SW 63rd Avenue Lake Oswego, OR 97035

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Sincerely,

Debbie Charloe Site Manager

Toxics Cleanup Program

Debbis Charlos

DC:adw

Enclosures

cc: Ralph Vestal



TELEPHONE RECORD

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NOTES

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VESTAL JOBBER MANUFACTURING INCORPORATED Gustom Manufacturing • CNC Milling & Turning
GIFFORD CONSULTANTS, INC. A String Northwest Industries with: (Formerly Shannon & Wilson, Inc., Spokane Office)
E. 11616 Montgomery Road, Sulte #4 • Spokane, WA 99206
Owner N. 902 Dyer (509) 534-4830 Geologist Geologist
ARRISON
T PROPERTIES 534 3670 -
17430 S.W. 63 rd Avenue Lake Oswego, Oregon 97035 (503) 636-3670
Norman F. Harrison H • (503) 292-1060 Robert W. Harrison

· Lynn Miser, Dave G., Sherm 5/8/92 Ralph Vestal present owner - 86 results show chrome at time waste to porture - Gifford took samples - tank was layered - took staff from tank to downs -both danks still in ground. - drum s in holding per destantion - has been told to sample each drum -sludge has to do be sample D.W. will take Ralph Vestel - talking with Lynn draw buldging may not be real Lynn will get energency I.D.

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JIM GREEVES

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DEFT OF ECOLOGY

(509)-456-6385

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CEPARTMENT OF ECOLOGY THEIROMHENTAL REPORT TRACKING SYSTEM INITIAL SEPORT FOLLOWER

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DEPARTMENT OF ECOLOGY ENVIRONMENTAL REPORT TRACKING SYSTEM INITIAL REPORT/FOLLOWUP

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5/6/92... N 902 Dyn Rd Removing old tonks Have High Chronium wastes - 17 Drum has stuff from both touks
- Sludge in bothern of large touk
(1000gal)
- small touk leaking &
partially spilled Ralph Vustal — Vestal Sabben — New owner Have letter stating (tonks) enveronewhal problems August 91 discovered tank Atlas Coating -> previous operation (owned by Harrison

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Move to TSD for Storage & Blockade R.E. Contract - Part of > Problems in Oregon -> Jeff at country my well too Atlas Cookin Allied Coatring X responsibility.

91-12i



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While this Fact Sheet summarizes the waste identification requirements of the Dangerous Waste Regulations (Chapter 173-303 WAC), it does not replace them. Always refer to the regulations themselves for more detail or call a hazardous waste specialist at your nearest Ecology regional office.

Spokane (509) 456-2926 Tumwater (206) 753-2353 Bellevue (206) 649-7000 Yakima (509) 575-2490 DEPARTMENT OF ECOLOGY

INITIAL INVESTIGATION DATA SHEET

DEPARTMENT OF ECOLOGY

OCO

DATE 5-6-92 TIME 10:351 1:00 INVESTIGATOR Charles Jurner ON SITE OFF SITE and Sylvenes
SITE NAME Vistal Politics CITY/COUNTY Spokary Spokary Spokary Street Address Nosth 902 Dues Road ZIP 992/2
SITE LOCATION:1/41/4, SEC, T N., R E.W.M.
SITE CONTACT Ralph Westal SITE PHONE (509) 534-4830
MAILING CONTACT N902 Oyer Rd PHONE (509) 534-4830
MAILING ADDRESS ZIP
PERSONS ON SITE Doblio Charlos Paul Turner Quin Speeces
PRESENT OWNER/LESSEE Ralph Westal Doman Date DATE
PAST OWNER/LESSEE Morman Harrison DATE
DATE
TYPE CONTAMINATION REPORTED/SUSPECTED Chroming Solvents
possibly - needs to be determined
CONTAMINATION OBSERVED soil staining month side wall
of excavation, unknown product clost from
ackhoe west side wall of refearation
SOIL REMOVED: NO X YES [] AMNT DEPTH TO G-WATER unknown
SUPPLY WELLS NEARBY: NO [] YES [
SURFACE WATER SOURCES NEARBY: NO Y YES []
MIGRATION PATHWAYS
STRESSED VEGETATION: NO [] YES []
PHOTOS TAKEN: NO [] YES [] TIP READINGS TAKEN: NO [] YES []
COMMENTS Balph Clestal had hired David Lehn
COMMENTS Balph Clestal had hired David Lehn (Stifford Consult.) to find out what's in the tank and limited site assessment Ralph gave me a copy of the report.
gave me a copy of the report.

S	ITE LAYOUT SKETO	СН] _eb_
	ement grave amp gras gras Co. Inc		> 1000	Old piping outside of building
dirt/gra	asphalt Parking Lot Vel area		16 had	ued as well on site not beer not been not beer not been n
D -	yer Road (a	asphalt)		
NOT TO SCALE	I ECHID	-	Sign Making	
monitoring well: supply well: tip rdng location: photo & orientation:	LEGEND railroa □ ○ •••	NOT	TO SCALE	

employees in process of pulling tank, festated that he was not aware of the 11st requirements until he spoke with Jim Fearlier. Product was pumped out of tanks & put into barrels—
Stored on site - working with Lynn Muser Dangerous waste) on storage & disposal of possible dangerous w ste. - Mr Harrison w a told to discontinue activities in relation to removal of tanks until he

5/6/92 I.I. continued

hired a licensed tank decommissioner

Told him that he needed to secure

the area for safety & recommended

that visqueen be used to put the soil

on & cover the pile.



GIFFORD CONSULTANTS, INC

E-1279-01

(Formerly Shannon & Wilson, Inc., Spokane Office)
Geotechnical Engineers

E. 11616 Montgomery Road, Suite #4 • Spokane, WA 99206 • Telephone (509) 922-3818 • Fax 922-8214

January 8, 1992

Vestal Jobber Manufacturing Company N. 902 Dyer Road Spokane, Washington 99212

Attn: Mr. Ralph Vestal

RESULTS OF UNDERGROUND STORAGE TANK SAMPLING AND ENGINEERING SERVICES FOR THE N. 902 DYER ROAD SITE, SPOKANE, WASHINGTON

This letter report presents the results of underground storage tank sampling and engineering services performed for Vestal Jobber Manufacturing Company, at N. 902 Dyer Road, in Spokane, Washington. The information contained herein was previously reported to you verbally and this letter confirms our originally provided conclusions and recommendations.

We understand that an underground storage tank was discovered in July 1991 on a property you purchased in 1986. We also understand that the tank location was discovered when the fill pipe was exposed following a rainstorm.

The purpose of the work we performed was to sample and conduct screening analysis to assess the general character of the tank contents and to provide preliminary information for planning tank removal. The work was performed in general accordance with our proposal and confirming letter of October 17, 1991. The work was verbally authorized by Mr. Ralph Vestal, on October 11, 1991.

SITE DESCRIPTION

The site consists of a light industrial-manufacturing property, located on the southeast corner of Dyer Road and Dean Avenue, near Broadway Avenue and Interstate 90. A one-story building occupies the southeast part of the property. The west side of the property, along Dyer Road, and part of the north side are paved. The streets are not paved and there are no curbs.

A drywell is located on Dean Ave., north of the building site,

and a catch basin is located at the building's southwest corner, below a loading dock. These two drainage features do not appear to be connected. Inspection of the catch basin shows it has a drainage pipe leading toward the southeast, in the direction of the underground storage tank, but does not appear to be connected to it.

The underground tank is located in a rectangular area where the asphalt pavement has been removed. We understand the tank is accessible only through a 2 in. diameter fill pipe, which is inside of a protective 6 in. diameter steel guard casing. Only about 3 or 4 ins. of the guard pipe is visible at the ground surface. The 2 in. diameter fill pipe extends about 4 ft. below ground surface and a liquid surface is present in the pipe at a depth of about 18 ins. below the top. The depth to the bottom of the tank is about 8 ft. below the ground surface.

The unpaved, rectangular area above the tank is about 8 by 20 ft. If we assume the tank is about 8 ft. in diameter and about 16 ft. long, it would have an approximate capacity of 6,000 gallons.

We understand that you purchased the property from Atlas Industrial Coatings, Inc. The previous owner operated a teflon stripping and recoating business in the building. You told us these processes used a variety of chemicals, including sodium hydroxide, nitric acid, and a petroleum-based product dissolved in diesel fuel. During your examination of the fill pipe and measurements of the tank depth, you believe that contact with the liquid contents produced a chemical burn on your skin. We understand you contacted the previous owner and discussed a schedule for the disposal of the tank contents and its removal.

TANK SAMPLING

The underground tank contents were sampled on October 24, 1991. Samples of each of three layers in the tank were collected, including a surface oil layer, an intermediate aqueous solution, and a semi-solid sludge on the tank bottom. We were not able to collect background information on the previous operations in the building, because you requested that we not contact the previous owner. As a result of this limited information about the previous operations in the building, it was necessary for us to conduct a broad-range sampling and screening program.

The oil was sampled directly from the 2 in. diameter fill pipe. The fill pipe extended down into the tank, so that direct measurement of the amount of oil in the tank cannot be accurately determined. Visual observations of the oil layer indicted it

was brown and semi-transparent.

The oil layer sample was analyzed for total petroleum hydrocarbons (TPH) by EPA Method 8015 (Modified). Results of the testing are included in Appendix A. The analysis indicates the oil layer consists of about 70% Diesel #2 and about 15% Diesel #1. The analysis revealed no detectable gasoline. In our opinion, the remaining, unidentified 15% of the sample could be moisture, particulate matter, or heavier oils not detectable by the 8015 Modified Analytical Method. A considerable amount of suspended material was visible in the oil and a narrow zone of oil-water mixing appeared to be present at the oil-aqueous solution interface.

Visual description of the aqueous solution, which constitutes most of the underground tank contents, showed it had a pale yellow color and also was transparent. It had no obvious odor. The pH (acidity/alkalinity) of the aqueous solution ranged from 6.27 to 6.33, indicating it to be slightly acidic. A neutral solution would have a pH of 7.0. The nitrate concentration, expressed as total nitrogen, was 1.48 mg/l (milligrams per liter = ppm).

Beneath the aqueous solution, at the bottom of the tank, is a sludge that was visually described as a black suspension, having a granular, viscous consistency. Probing indicated the layer was about 8 to 10 ins. thick. A representative sample of the sludge was pumped from the tank and analyzed for eight heavy metal contaminants, using the Toxicity Characterization Leaching Procedure (TCLP-metals). Results of the analysis indicated that the concentrations of six metals is below the detection limit. Two metals, chromium (C_r) and barium (B_a), had concentrations of 0.2 and 0.8 ppm, respectively. The chemical laboratory reports are presented in the Appendix.

A sample of tank sludge provided by the Atlas Industrial Coating Company, the former occupant of the building, was analyzed by the Spokane Waste Water Treatment Plant in 1986. Their records indicate that the sludge had a total chromium concentration of 231 ppm. On that basis, the Treatment Plant refused to accept it for disposal. The TCLP screening analysis we conducted showed that the leachable concentration was 0.2 ppm. Mike Koster, of the wastewater lab, indicated that the TCLP data would have to be supplemented with a total chromium concentration analysis before they would consider the sludge for disposal. We understand that the sludge would also have to be tested for ignitability, fats, oils, and greases. Based on the results of the Wastewater Treatment Plant's previous testing of the tank sludge, it is our opinion that the they would probably still consider it unacceptable

for their disposal.

CONCLUSIONS

The underground storage tank discovered on the property apparently was abandoned in-place. It appears to be full and may contain about 5,000 to 6,000 gallons. The contents include diesel fuel, floating on an aqueous solution, with a semi-solid sludge on the bottom. The fill pipe extends into the tank, so that an accurate measurement of the thickness of the diesel fuel layer on the top is not readily possible.

The laboratory chemical testing indicates the upper layer consists primarily of diesel fuel, but contains no gasoline. The diesel fuel will probably have to be separated from the other liquid for disposal.

It seems that most of the tank contents consist of the aqueous solution. This solution is slightly acidic and has a low nitrate content. Disposal procedures will depend on the results of a more complete chemical characterization. The requirements for acceptance by the Spokane Wastewater Treatment Facility would include analyses for total concentrations of the following ten elements and compounds, plus an analysis for Total Petroleum Hydrocarbons (TPH in water).

	MAXIMUM ALLOWABLE TOTAL
	CONCENTRATIONS WITHOUT SPECIAL
COMPOUND OR ELEMENT	PROVISIONS (mg/l)
Arsenic	0.1
Cadmium	0.69
Chromium	5.0
Copper	1.4
Cyanide	1.0
Lead	1.3
Mercury	0.2
Nickel	3.98
Silver	0.5
Zinc	8.0

If the aqueous solution shows concentrations less than those above, the Spokane Wastewater Treatment Facility would accept the aqueous solution for disposal, with a prearranged notification. This procedure would require a chain of custody, provided by the licensed septage hauler, and a copy of the laboratory test results, which should accompany the shipment.

The TCLP analyses show that the sludge layer contains chromium.

Historical analysis of similar sludge from the previous business in 1986 showed that at that time it contained a total concentration of 231 ppm. This concentration would exclude the sludge from being acceptable for treatment and disposal at the Wastewater Treatment Facility. Analysis for total chromium concentration would be necessary to determine whether or not the sludge is a hazardous waste. A hazardous waste designation would determine that it would have to be disposed of in a regulated treatment and storage facility.

To provide more complete definition of the chemical composition of the tank contents, we recommend that samples of the aqueous solution be analysed for total concentrations of the ten metals and compounds listed above, as well as for total petroleum hydrocarbons, and that samples of the tank sludge be tested for total chromium, as well as ignitability, fats, oils, and greases.

In addition to the above, proper closure procedures for removing the underground tank will have to be followed. These include obtaining a permit from the Spokane County Building and Safety Department and following the tank removal check list provided by the Washington Department of Ecology.

LIMITATIONS

The chemical analyses performed for the Vestal Jobber Manufacturing Company were conducted to assess the general character of the underground tank contents. Thorough chemical assessment of the tank contents and complete recommendations for disposal are not included in this report. The analyses performed were intended for preliminary characterization and are not sufficient to define a complete chemical profile.

Removal of the tank and disposal of the contents will require the cooperation and coordination of several regulatory agencies. These include the Spokane Waste Water Management Department, The Spokane County Building and Safety Department, and the Washington Department of Ecology. Coordination will also be required with the firm selected to perform the tank removal and excavation work and the tank contents disposal work.

Gifford Consultants, Inc., makes no warranty regarding the accuracy of the information provided in this report. This report was prepared for the exclusive use of the Vestal Jobber Manufacturing Company and should be used only as preliminary assessment of the contents of the underground storage tank. It should not be used for deciding the final disposition of the tank contents, or an assessment of environmental conditions on other parts of the site.

We appreciate the opportunity to be of service to you on this project. If you have any questions about this letter, or we can be of any further assistance, please let us know.

Sincerely,

GIFFORD CONSULTANTS, INC. (Formerly Shannon & Wilson, Inc.)

David Lehn Geologist

Allen B. Wiffeld P.E. President

Encl: Appendix A

APPENDIX A

- N A T I O N A L C H E M L A B — 103 12th Avenue SW Ephrata, WA. 98823 (509)754-5725

Environmental Analysis Report

NCL Report #: WE1102501

Sample #: TS--1

Customer: GIFFORD CONSULTANTS

PO #:

Received: 10/25/91 09:30

Received By: DEBBIE

Sample Source: E127901 -

Parameter	Results	Date & Time Analyzed	Method
TPH Gasoline Diesel 1 Diesel 2 Other	<150 mg/Kg 150000 mg/Kg 700000 mg/Kg <150 mg/Kg	10/28/91 16:40	8015

RECEIVED

UCT 3 0 1991

GIFFORD CONSULTANTS, INC.

Approved By

BEEL)

Date 10-28-91



ANALYTICAL REPORT

___Gifford Consulting

Client: E. 11616 Montgomery Rd. Suite #4

mg/l

P.O. Box 14642, Spokane, WA 99214

Spokane, WA 992Ø6

Report Number: E-443

Sample ID	mg/l	mg/l	mg/l	mg/l	_	_	mg/l	mg/l
1Ø-24-91	As	<u>Hg</u>	<u>Se</u>	<u>Cd</u>	Cr	<u>Pb</u>	Ag	Ba
TS-3&TS-4 Comp.	<Ø.Ø1	<Ø.ØØ5	<Ø.Ø1	<ø.ø2	ø.2	<Ø.1	<Ø.1	ø.e

TCLP Metals

Sample ID	<u>N0</u> <u>3</u> N	<u>H q</u>
1 Ø - 2 4 - 9 1		
TS-2	1.48	6.29
TS-3	-	6.27
TS-4	-	6.33

RECEIVED

MOV 2 0 1991

GIFFORD CONSULTANTS, INC. SPOKANE

Date: November 15, 1991

Signed: John Trackter

		TIME: 4:30pm
		ROUTING
SUBJECT:	N902 Diver Rd.	
CALL FROM:	Bob McKanna	
TITLE:	attorney	
LOCATION AND TELEPHONE NUMBER:	924-8144	
CALL TO:		
TITLE:		
LOCATION AND TELEPHONE NUMBER:		
SUMMARY OF CALL:		
	His client is the a	urrent summer
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- the	at they do not kn	ow what's in
- the	tank - possibly so	went solution.
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told	him that the count	y and fire dept.
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TELEPHONE USE REPORT

DATE: 5-5-90