SITE CHARACTERIZATION REPORT FOR CITY OF CLARKSTON

BRIDGE STREET SHOP SITE
1455 BRIDGE STREET
CLARKSTON, WASHINGTON

WDOE INCIDENT NO. 3666
WDOE SITE NO. 100255

FEBRUARY 1993

PREPARED BY:

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LEWISTON, IDAHO 83501

WJE JOB NO. 1000-F

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EXECUTIVE SUMMARY

The City of Clarkston's Bridge Street Shop fueling facility was determined to have petroleum contaminated soil under the facility. The fueling facility at this site included three underground storage tanks (500 gallon regular gasoline; 1,000 gallon unleaded gasoline; and 1,000 gallon diesel), product transfer lines, and dispensers. This facility has been removed and will not be replaced.

The petroleum contamination was both gasoline and diesel. The only observed leak in the fueling facility was a failed weld at the base of the fill pipe on the unleaded gasoline tank. Petroleum contamination at this site is believed to be from this failed pipe and from tank overfills.

The volume of product loss was estimated at 800 gallons of gasoline and 140 gallons of diesel. Excavation of contaminated soil has removed approximately 50% of this spill volume. Excavated soil is now being land farmed at C&L Farms in Asotin County, Washington. The residual contamination is in soil near and under the shop building that could not be excavated without removing the building.

A ground water monitoring well drilled 20 feet down gradient from the excavation has detected 1.05 ppm gasoline in the ground water. BTEX components were all less than the analytic detection limits. These results indicate that only trace levels (below the Washington State Department of Ecology's action level) of contamination are now reaching the ground water system.

A passive bioremdiation system has been implemented which includes a dry well with a large volume permeable backfill in contact with the residual contaminated soil. Natural barometric pressure variations exchange significant volumes of air into and out of this zone and the primary contaminated zone. Aerobic conditions have developed and microbial degradation of the residual contamination has been initiated. The bioremediation rate should increase significantly during the spring and summer months as the temperature increases.

This passive bioremediation system should break down the contamination at a rate that will exceed the rate of contamination migration into the ground water system and will significantly accelerate the natural remediation process. The monitoring well and dry well provide key structures for monitoring both ground water quality and vadose zone gases to assess this site remediation technique. If ground water contamination increases other remediation options could be implemented using the dry well and/or monitoring well at the site.

SITE CHARACTERIZATION REPORT

I. INTRODUCTION

This site characterization report has been prepared to document the site petroleum contamination in soil and ground water at the City of Clarkston's Bridge Street Shop site (see Figure 1). The shop is located at 1455 Bridge Street in Clarkston, Washington.

The Bridge Street Shop is primarily the motor pool and equipment maintenance area for the City of Clarkston. Underground storage tanks (USTs) and associated product transfer and dispensing systems for diesel, regular gasoline, and unleaded gasoline were installed at the site in the early 1970's. The City of Clarkston had chosen to remove the UST rather than upgrading the tank as per new regulations. It was during the excavation of the UST's that contamination was found.

In July 1992, the City of Clarkston retained Wyatt-Jaykim Engineers to prepare a site assessment in accordance to Washington Department of Ecology site characterization requirements.

II. WDOE SITE CHARACTERIZATION REQUIREMENTS

To facilitate review of this site characterization report, data presented will follow the "Guidance for Remediation of Releases from Underground Storage Tanks", published by the Washington State Department of Ecology (WDOE).

A. Description of Release

In the process of removing USTs from the site, significant hydrocarbon contamination was encountered by Kennedy Equipment Company. Wyatt-Jaykim Engineers was retained to sample the site, to work with the excavation contractor to provide required site documentation, and to remediate the site contamination. Inspection of the USTs, product transfer lines, and dispensing equipment indicated that the only leakage from these systems appeared to be from the fill stand pipe on the unleaded gasoline UST. The weld at the tank had failed which would have resulted in loss of product

from the fill stand pipe when delivered product was filled to a level within this pipe. Three USTs were at the site, Figure 2, and both diesel and gasoline contamination was identified on soil samples. The contamination, other than the unleaded gasoline, which leaked from the fill stand pipe, appears to have been an accumulation of product lost from tank overfills. No free product was encountered. The limited and intermittent product release from the fill stand pipe and tank overfills would dissipate rapidly in the permeable soil and gravels at this site.

B. Action Taken

The 500 gallon regular gasoline tank and the 1,000 gallon unleaded gasoline tank were removed, Figure 2, and soil samples were collected (July 7, 1992). These samples were analyzed for TPH-G, BTEX, and one sample collected near the diesel tank was analyzed for TPH-D. Results of these analyses shown in Figure 3 and Appendix A were positive for all products tested and exceeded the state action level for soil. Based on these results, a decision was made to remove all of the USTs, associated product transfer lines, and the dispensers. The excavation contractor was to remove all of the contaminated soil possible without causing structural damage to the shop building. A total of approximately 60 cubic yards of contaminated soil was removed (see site photographs Figure 4). The contaminated soil removed is now being land farmed on property owned by Lynn Ausman (C&L Farms). Soil samples were collected at four locations at the perimeter of the final excavated area July 17, 1992, (see Figure 3 and Appendix A).

Prior to backfilling the excavation to stabilize the building, a 10-inch diameter, 15.7-foot PVC dry well casing was installed in the primary contaminated zone near the building. This casing was perforated to within approximately 3 feet of the ground surface. Pea gravel was used to backfill along the contaminated east and south walls and the bottom of the excavation to within approximately 3 feet of the surface. The upper 3 feet of backfill was clean silty sand. The dry well is in the 7 cubic

yard pea gravel zone which is in contact with the residual contaminated zone. The dry well will allow the natural barometric pressure fluctuations to transfer oxygen into the contaminated vadose zone to initiate microbial degradation of the contamination.

C. Site Description

The site is located at 1455 Bridge Street in Clarkston, Washington (Figure 1). This section of Bridge Street is a commercial and light industrial area. The Snake River is approximately 1,000 to 1,500 feet northwest and north of the site and the local topography has a gradient to the north. Based on the topographic gradient and the river north of the site, the local ground water gradient would be expected to also be toward the north.

The site is located on fine to medium grained alluvium deposited as a result of flooding of the Snake River system. Major glacial outwash related flooding events impacted this area in the late Pleistocene Epoch (over ten thousand years ago). At this site, near-surface silty sand overlays coarser river gravels interbedded with sand layers that overlay the Columbia River Basalt bedrock. The monitoring well drilled 28 feet (Figure 7) terminated in a sand layer. Wells drilled at the Walla Walla Community College northwest of the site intercepted the basalt bedrock at a depth of approximately 60 feet.

The site had three USTs, as shown in Figure 2. These tanks and the associated dispensing systems were located at the northwest corner of the shop building. The area north and west of the shop building and south of Bridge Street is mostly asphalt covered. The area west of the shop including the excavated area is graveled.

Contamination extended in the excavated area to below the maximum excavated depth of approximately 13 feet. A ground water monitoring well (MW-1) was drilled 20 feet north of the excavation, which is down gradient from the primary contaminated zone, to monitor ground water contamination (see Well Log Figure 2). This well is constructed with perforations

throughout most of the vadose zone below the near-surface silt and sand zone. This will allow the well to be used for monitoring gasoline, oxygen, and carbon dioxide levels in the vadose zone air as well as the ground water. The dry well installed in the excavated area will also allow levels of gasoline, oxygen, and carbon dioxide to be monitored in the vadose zone air. Figure 5 is an undistorted cross-section of the site that shows the relative location of the monitoring well, dry well, excavated area, and the primary contaminated zone.

The locations, depths, and analytic results of soil samples collected in the excavated area are shown in Figure 3. These samples were collected primarily in the contaminated zone. Samples collected north and west of the primary contaminated zone show a sharp decrease in TPH levels.

D. Potential Impact Pathways

Contamination at this site is both diesel and gasoline. No significant surface contamination related to the dispensing systems or the product transfer lines was observed. Contamination was found primarily in soil in contact with the USTs and below the USTs. No free product was observed, as would be expected from a continuous or major intermittent leak. There was no indication that the product had migrated along product transfer lines or the associated electrical conduits. Soils at this site are unconsolidated permeable silt, sand, and gravel layers that would rapidly conduct product away from a saturated spill site.

Levels of contamination observed at the limits of the excavation suggest that the contamination could extend several feet below the 13-foot depth of the excavation. To assess the subsurface movement of contamination into the ground water system, MW-1 was drilled approximately 20 feet down gradient from the excavation. Soil samples were collected with a split spoon sampler at 5-foot intervals from 5 feet to 25 feet. TPH-G and BTEX analyses of the soil samples are all below the analytic detection limits. Ground water was encountered at approximately 21.5 feet. The well was

developed using a Grundfos submersible environmental sampling pump system. After pumping over 75 gallons from MW-1, a sample was collected. The ground water sample had 1.05 ppm TPH-G and all of the BTEX components were below the detection limits. This positive TPH-G (which is below WDOE action level) in the ground water indicates that trace contamination levels have reached the ground water. The low level of contamination observed at 20 feet down gradient from the excavation indicates that there is no immediate concern for off-site migration of the contamination.

There are two wells northwest of the site at the Walla Walla Community College. These wells are not used for potable water. They are part of a ground water heat pump system used to heat the college building. Water from these wells also provides irrigation water for the facility. Only one well log was received from WDOE for the wells and is included in Appendix B. The two wells are essentially at the same location. The log shows the wells are surface sealed with bentonite to 33 feet.

Near-surface ground water in alluvial systems generally has potential patterns that are a subdued reflection of the smoothed surface elevation pattern. This would imply that the ground water flow direction at the site would be to the north, as indicated earlier. The near-surface ground water system discharges to the Snake River (Lower Granite Lake), which is approximately 1,000 to 1,500 feet northwest and north of the site. The average Lower Granite Lake elevation, based on over 10 years of Corp of Engineers measurements, would be approximately 736 feet at Red Wolf Crossing northwest of the site. Elevation of the ground water at MW-1 is approximately 737.5 feet. Based on these elevations and a minimum distance to the river of 1,000 feet, the ground water gradient would be 0.0015 ft./ft. The gravel and sand samples observed at near the ground water level would typically have a hydraulic conductivity of approximately 15 ft./day. Using this hydraulic conductivity, the 0.0015 ft./ft. potential gradient, and assuming an effective porosity of 20 percent, the local ground water flow velocity would be approximately 40 feet per year

to the north. Based on this analysis, MW-1 located 20 feet north of the excavated area should provide an adequate ground water monitoring structure for this site.

E. Sample Analyses

Soil samples were collected from the excavation after the USTs were removed and when the practical limits of the excavation were reached. These samples were obtained by manually digging approximately 12 inches into the walls and bottom of the excavation. Analyses were conducted for TPH-G, TPH-D, BTEX, and lead (see Appendix B for Water and Soil Test Results and Appendix C for Lab Reports and Chain of Custody Records).

The excavation soil sample locations, depths, and analytic results are shown in Figure 3. Contamination in the excavated area was found to decrease rapidly to the west and north. An area of primary contamination appeared to be centered on the east side of the excavation south of the diesel tank. This primary contaminated zone appears to be approximately 16 feet in diameter and shows relatively consistent levels of TPH-G contamination from the bottom of the tanks to the bottom of the excavated area. Using these data, the zone of primary contamination was divided into a 3-foot thick uncontaminated surface zone-1; a 4-foot thick zone-2 including the USTs and localized areas of contamination; and an 8-foot thick zone-3 containing the primary dispersed gasoline and diesel contamination. Figure 6 shows an attempt to estimate the volume of product released using the primary contaminated zones as a model. The analysis required estimating the average TPH-D and TPH-G for soil zones 2 and 3; calculating the soil volume and weight in each zone; and estimating the volume of diesel and gasoline. Estimates are only an approximation based on observations of product distribution in the field and utilizing the limited analytic data available. The primary contaminated zones are plotted in Figures 2 and 3 as a perimeter of the zone and in cross-section Figure 5 to show the vertical extent of the zones. Based on this analysis, approximately 140 gallons of diesel and 800 gallons of gasoline

were estimated. Approximately one half of this primary contaminated zone has been excavated. The excavated soil is now being land farmed on property owned by Lynn Ausman (C&L Farms) in Asotin County.

Soil samples were collected to a depth of 25 feet at 5-foot intervals during drilling of MW-1 located 20 feet north of the excavation, see Figure 7. These samples were collected with a split spoon sampler and were analyzed for TPH-G and BTEX. No soil contamination above the analytic detection limit was observed. Ground water sampled from MW-1 had a TPH-G level of 1.05 ppm, which is just slightly above the analytic detection limit of 1.0 ppm. BTEX components in the ground water were all below the detection limits. These results and the estimated ground water flow velocity of 40 ft./yr. suggest that only trace amounts of the contamination have reached the ground water at this site.

Analyses were conducted at the site to determine if the dry well was providing enough atmospheric exchange with the vadose zone to establish aerobic conditions at the monitoring well. The following results were obtained in mid January, 1993, over six months after the dry well was installed.

	Measurements of Vadose Zone Air	
	Dry Well	MW-1
	12-foot Depth	15-foot Depth
Temperature	11.2°C	16.7°C*
Gasoline	10 ppm	<5 ppm
Oxygen**	21%	13.5%
Carbon dioxide ***	800 ppm	750 ppm

* Ground water temperature in MW-1 was also 16.7°C

** Background oxygen is 22.5%

*** Background carbon dioxide is 300 ppm

The gasoline, oxygen, and carbon dioxide measurements were made with a Sensidyne gas monitoring system. At the time the vadose zone air measurements were collected, the dry well was discharging air. The dry well oxygen level of 21% is only slightly below the 22.5% background level. Carbon dioxide at 800 ppm is over twice the background level of 300 ppm. The suppressed oxygen and increased carbon dioxide levels suggest that aerobic conditions have been established and microbial degradation of the residual contamination has been initiated. The vadose zone measurements in MW-1, 20 feet north of the excavation, confirm that aerobic conditions have been established with an oxygen level at 13.5%. The carbon dioxide level of over twice the background level suggests that microbial degradation of the residual contamination has been initiated and carbon dioxide is being transported into MW-1. Natural barometric cycles appear to have established aerobic conditions in the vadose zone to a distance well beyond the primary contamination zone radius in the undisturbed sediments.

III. CONCLUSIONS AND RECOMMENDATIONS

The gasoline and diesel fueling facilities at this site including the USTs, product transfer lines, and dispensers have been removed and will not be replaced. This removes the primary source of contamination at this site. The excavation of contaminated soil accounted for removal of approximately 50% of the estimated release volume. Residual product in the primary contaminated zone that could not be excavated without jeopardizing the shop building is estimated to be approximately 400 gallons of gasoline and 70 gallons of diesel. To assess the risk of migration of this residual contamination into the ground water, a monitoring well (MW-1) was drilled approximately 20 feet down gradient from the excavated area. Samples from MW-1 show no soil contamination above the analytic detection limits and a ground water concentration of 1.05 ppm TPH-G with BTEX components below the analytic detection limits. These results indicate that only trace levels of the contamination are now reaching the ground water system.

In order to remediate the residual product, access was provided to the contamination by backfilling the excavation in the primary contaminated zone with pea gravel and installing a 10-inch perforated dry well. The excavated area was then covered with approximately 3 feet of silty sand. This provides a large isolated permeable area in the excavated vadose zone that is in direct contact with the residual contaminated areas. Natural barometric variations will exchange significant volumes of air into and out of this zone and the primary contaminated vadose zone. The exchange of air in this zone has locally developed aerobic conditions and promoted in situ microbial degradation of the residual contamination. Analyses of the vadose zone air for gasoline, oxygen, and carbon dioxide have verified that aerobic conditions have been established at MW-1 located 20 feet north of the excavated area. The oxygen level measured at a 15-foot depth in MW-1 mid January, 1993, was 13.5%. This down gradient well is outside of the contaminated vadose zone. Aerobic conditions established at this distance indicate that the primary contaminated zone should now have aerobic conditions established. The carbon dioxide levels observed in both the dry well and MW-1 are over twice the background level. This increased carbon dioxide level suggests that aerobic microbial degradation of the contamination has been initiated. The microbial degradation of the contamination should increase significantly during the spring and summer months as the system temperature increases.

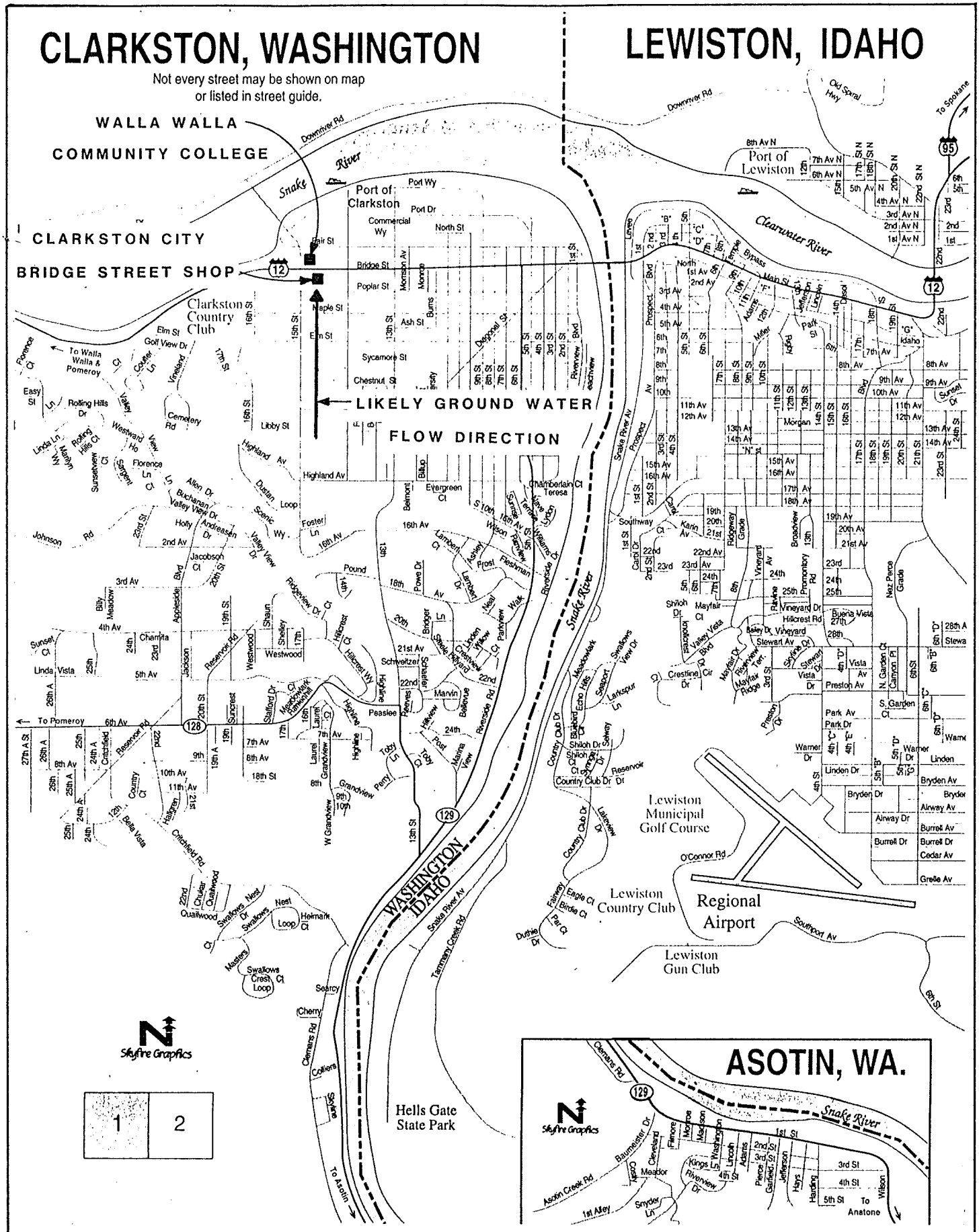
This passive bioremediation system should break down the contamination at a rate that will exceed the rate of contamination migration into the ground water system. This totally passive approach to remediation has the financial advantage of requiring only monitoring the system after the initial installation. In this case, 7 cubic yards of pea gravel and installation of the dry well were the only additional costs. The ground water monitoring well was required as part of the site characterization. This well will now be a key structure for monitoring movement of ground water contamination from the site and for monitoring the vadose zone oxygen and carbon dioxide levels associated with the bioremediation.

We recommend collecting quarterly ground water samples from MW-1 and monitoring the temperature, oxygen, and carbon dioxide levels in the dry well and MW-1. These data over the next year should provide adequate monitoring of both the ground water quality and effectiveness of this passive in situ remediation technique. If the oxygen level decreases or the contamination level in the ground water increases significantly, the bioactivity can be enhanced by adding a fan to force an additional volume of air into the contaminated zone. This technique is now being used to remediate a site in North Lewiston, Idaho, where there was no opportunity to create the natural barometric pumping system that is provided by the pea gravel backfill at this site. The gasoline contamination at the North Lewiston site has been significantly decreased in both the vadose zone and in the ground water over the past year of operation.

If ground water contamination increases significantly, other remediation options could be implemented. The dry well could be used to extract soil vapors or to biovent the site. The monitoring well could be used to pump and treat the ground water. These and other remediation options are significantly more expensive than the passive bioremediation system, and should only be considered if the passive system fails.

FIGURES

FIGURE 1 - VICINITY MAP



VICINITY MAP
CLARKSTON CITY BRIDGE STREET SHOP

FIGURE # 1

Wyatt-Jaykim engineers

LEWISTON • SPOKANE

FIGURE 2 - SITE MAP

SITE MAP

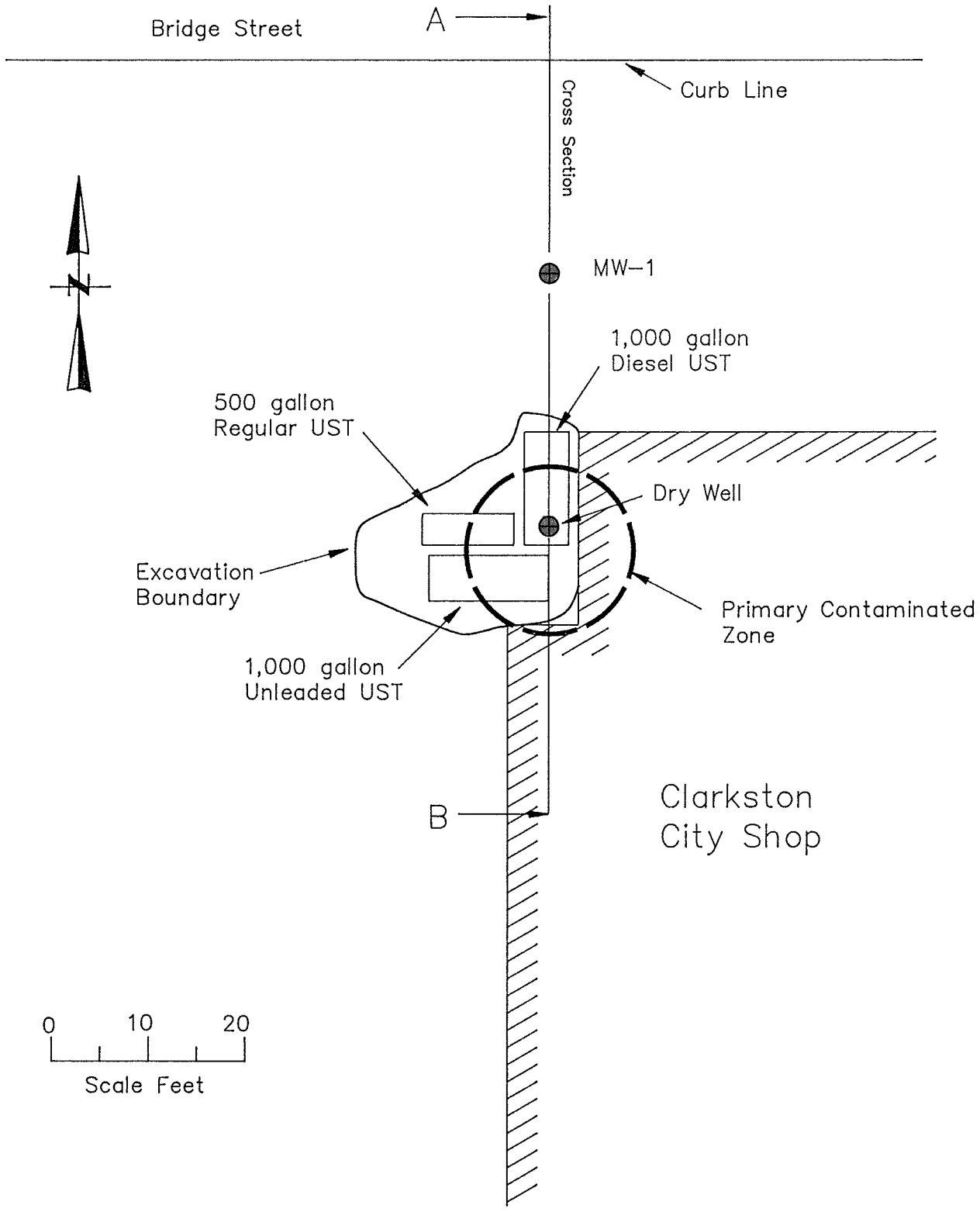


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FIGURE #2

FIGURE 3 - SITE MAP AND TPH LEVELS

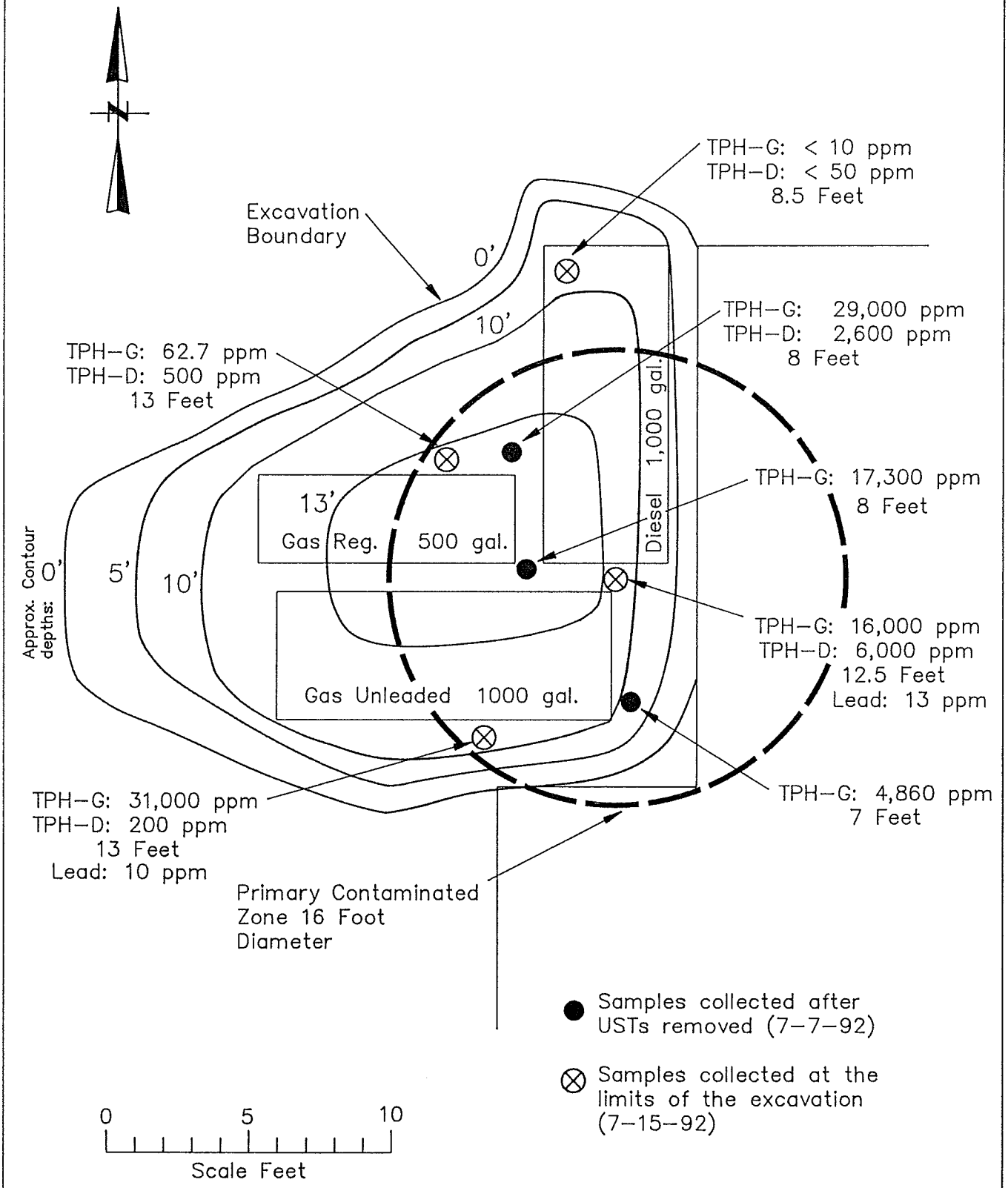

FIGURE #3

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FIGURE 4 - PHOTOS OF THE EXCAVATION

PHOTOS OF THE EXCAVATION

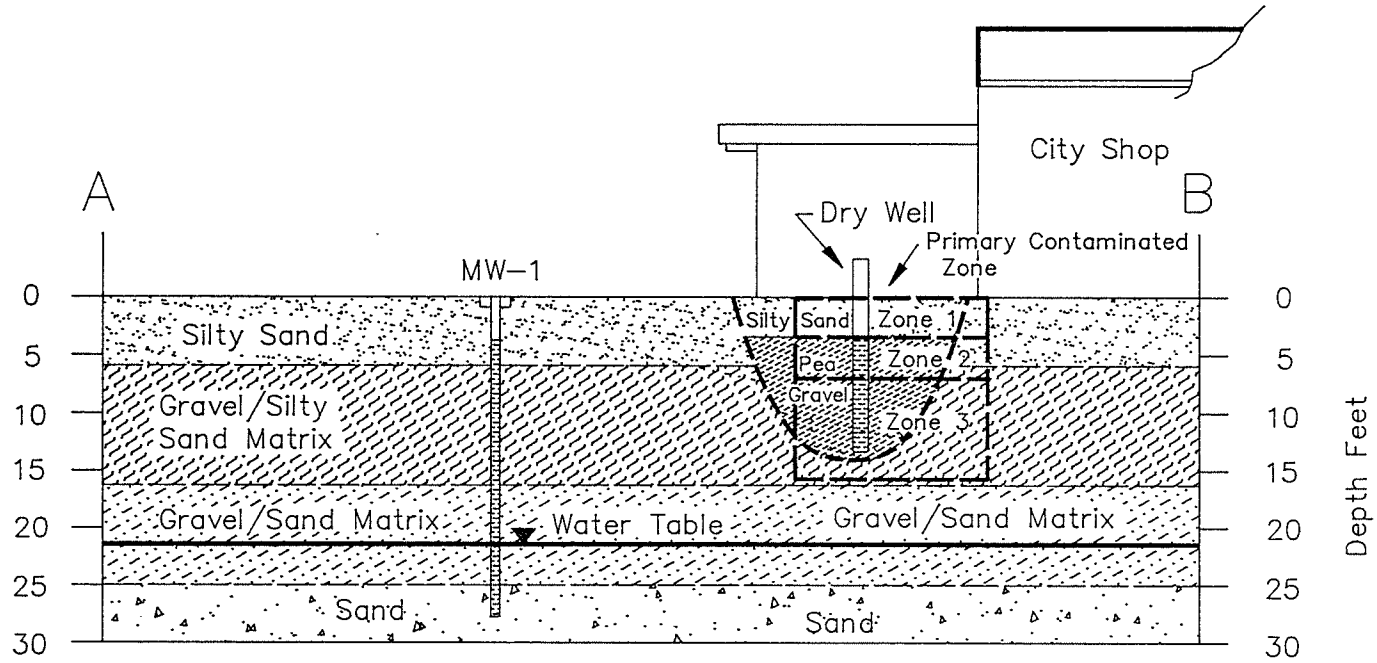
VIEW OF THE EXCAVATION LOOKING NORTHEAST WITH THE SHOP BUILDING AND BRIDGE STREET IN THE BACKGROUND.

VIEW INTO THE EXCAVATION SHOWING THE SILTY SAND OVERLAYING THE GRAVEL.

FIGURE #4

FIGURE 5 - SITE CROSS-SECTION MAP

SITE CROSS-SECTION MAP



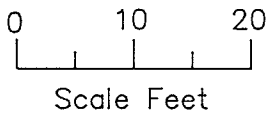


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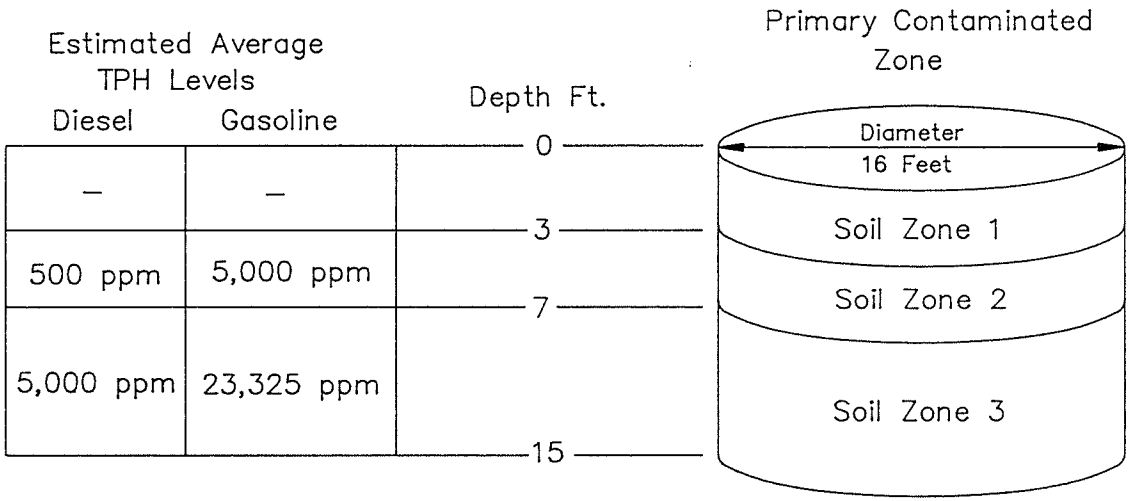
FIGURE #5

FIGURE 6 - VOLUME OF PRODUCT RELEASE

VOLUME OF PRODUCT RELEASE



Estimated Average TPH Levels		Depth Ft.	Zone Thickness	Cubic Feet Soil	Estimated Product Volume Gallons **	
Diesel	Gasoline				Diesel	Gasoline
		0				
–	–		3 Feet	603.19	–	–
		3				
500 ppm	5,000 ppm		4 Feet	637.25 *	5.30	62.15
		7				
5,000 ppm	23,325 ppm		8 Feet	1,608.5	133.86	731.83
		15				
			Estimated Total Gallons of Product Released.		139.16	793.98

* Soil Zone 2 volume has been adjusted for including approximately 167 cubic feet of USTs.

** Product volume based on Diesel = 7.21 lbs./gal. and gasoline = 6.152 lbs./gal.

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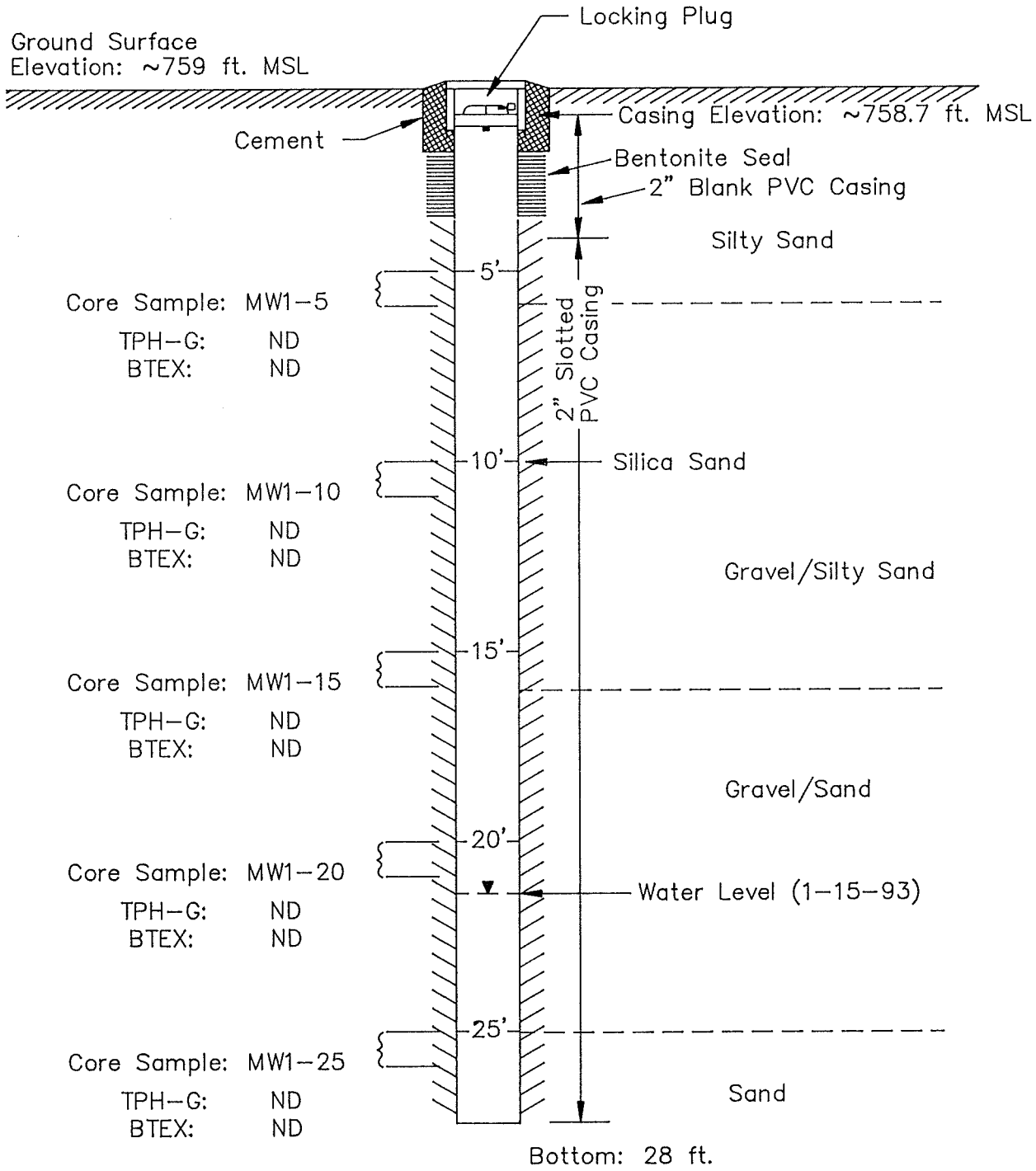
FIGURE #6

FIGURE 7 - MONITORING WELL LOG #1

Monitoring Well #1 Log



Groundwater Results (12-30-92)

TPH-G: 1.05 ppm
BTEX: ND

ND - Less Than The Analytic Detection Limit

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FIGURE #7

APPENDIX

APPENDIX A

WATER AND SOIL SAMPLE TEST RESULTS

WATER AND SOIL SAMPLE TEST RESULTS

LOCATION:	DATE	DEPTH	TPH-G	TPH-D	LEAD	BETX:
SOIL SAMPLES:						
#1	7/7/92	8′	29,000 ppm	2,600 ppm		Benzene 44.2 ppm Toluene 1740 ppm Ethylbenzene 235 ppm Xylenes 1180 ppm
#2	7/7/92	7′	4,860 ppm			Benzene 1.8 ppm Toluene 160 ppm Ethylbenzene 15 ppm Xylenes 290 ppm
#3	7/7/92	8′	17,300 ppm			Benzene 11.5 ppm Toluene 604 ppm Ethylbenzene 159 ppm Xylenes 675 ppm
EXCAVATION COMPLETED						
SOIL SAMPLES:						
#1	7/15/92	13′	16,000 ppm	6,000 ppm	13 ppm	Benzene 3.13 ppm Toluene 117 ppm Ethylbenzene 91 ppm Xylenes 500 ppm
#2	7/15/92	13′	31,000 ppm	200 ppm	10 ppm	Benzene 6.2 ppm Toluene 447 ppm Ethylbenzene 428 ppm Xylenes 6000 ppm
#3	7/15/92	13′	62.7 ppm	500 ppm		
#4	7/15/92	8.5′	<10 ppm	<50 ppm		

WATER AND SOIL SAMPLE TEST RESULTS

LOCATION:	DATE	DEPTH	TPH-G	TPH-D	LEAD	BETX:
MONITORING WELL #1						
SOIL SAMPLES:						
MW1-5	12/8/92	5′	ND			ND
MW1-10	12/8/92	10′	ND			ND
MW1-15	12/8/92	15′	ND			ND
MW1-20	12/8/92	20′	ND			ND
MW1-25	12/8/92	25′	ND			ND
WATER SAMPLE:						
MW1-1	12/30/92		1.05 ppm			ND

*ND - NOT DETECTED

APPENDIX B

WELL LOG - WALLA WALLA COMMUNITY COLLEGE

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. 00113S
Permit No. ....

(1) OWNER: Name WALLA WALLA COMMUNITY COLLEGE Address CLARKSTON, WA

(2) LOCATION OF WELL: County ASOTIN ¼ ¼ Sec. 20 T. 11 N., R. 46 W.M.
Bearing and distance from section or subdivision corner S 1/2 OF LOT 13. ALL LOT 14 & 15 - LOT 16 EXCEPT 164'W

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☒ GW Heat Pump

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well .... inches.
Drilled 105 ft. Depth of completed well 105 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 12" Diam. from +3 ft. to 34 ft.
Threaded ☐ 8" Diam. from +3 ft. to 50 ft.
Welded ☒ 6" Diam. from -3 ft. to 105 ft.

Perforations: Yes ☒ No ☐ TORCH CUT
Type of perforator used 1/4
SIZE of perforations .... in. by 1.0 in.
40 perforations from 33 ft. to 51 ft.
50 perforations from 60 ft. to 93 ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☐ No ☐
Manufacturer's Name....
Type.... Model No....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☐ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☒ No ☐ To what depth? 33 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? .... Depth of strata....
Method of sealing strata off....

(7) PUMP: Manufacturer's Name....
Type: .... H.P....

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ....ft.
Static level ....ft. below top of well Date....
Artesian pressure ....lbs. per square inch Date....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?....
Yield: gal./min. with .... ft. drawdown after .... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test....gal./min. with....ft. drawdown after....hrs.
Artesian flow....g.p.m. Date....
Temperature of water.... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG: 126' 49' BLOCK FF VINEYARD

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
TOP SOIL	0	3
GRAVEL	3	17
MIXED BLACK SAND & GRAVEL	17	28
SAND & FEA GRAVEL	28	32
RIVER ROCK & LITTLE SAND	32	60
MED. HARD BLACK BASALT & LITTLE SAND	60	73
HARD BLACK BASALT	73	79
BLACK FR. BASALT SOME GRN	79	82
BLACK FR. MED. HARD BASALT	82	105

JUN 10 1988

Work started 4/20, 19 88 Completed 5/18, 19 88

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME DETRAY DRILLING / ROGER DETRAY
(Person, firm, or corporation) (Type or print)

Address 1036 - 15th St CLARKSTON

[Signed] Roger Detray
(Well Driller)

License No. 1318 Date 5/16, 1988

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

APPENDIX C

LAB REPORTS AND CHAIN OF CUSTODY RECORDS

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

RECEIVED JUL 21 1992

July 10, 1992

Wyatt-Jaykim Engineers
101 Thain Road
Lewiston, ID 83501
Attn: David Doeringsfeld
Project: City of Clarkston Shop 1000-F

Items: Results of analysis for samples received 7/09/92. Sample Log-in number is 0290.

Report # 92-0710-WJE

All solid sample results are based on dry weight. mg/Kg = ppm, & mg/L = ppm.

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
#1	Soil	7/10/92	Gasoline	29,000 mg/Kg
			Diesel	Detected by HCID
			Benzene	44.2 mg/Kg
			Toluene	1740 mg/Kg
			Ethylbenzene	235 mg/Kg
			Xylenes (total)	1180 mg/Kg
#2	Soil	7/10/92	Gasoline	4860 mg/Kg
			Benzene	1.8 mg/Kg
			Toluene	160 mg/Kg
			Ethylbenzene	15 mg/Kg
			Xylenes (total)	290 mg/Kg
#3	Soil	7/10/92	Gasoline	17,300 mg/Kg
			Benzene	11.5 mg/Kg
			Toluene	604 mg/Kg
			Ethylbenzene	159 mg/Kg
			Xylenes (total)	675 mg/Kg

Mike Pearson
Laboratory Director

WYATT-JAYKIM ENGINEERS

Chain of Custody Record

Project	Sampler(s) Name(s)
City of Clk Shop 1000-F	David Doeringsfeld

Sample #	Station/Location	Date	Time	Sample Type: Water	Soil/Sed.	TPH	BTX & E	Other	No. of Containers
#1	Clk Shop (Reg) North & East End	7-7-92	1:00pm		Y	TPH-G	X	HCID	1
#2	Underdoor South & East End	7-7-92	"		X	"	"		1
#3	Bottom	7-7-92	"		X	"	"		1

		Date/Time
Relinquished by: David Doeringsfeld	Received by: P.L. Woods	7/9/92 1:53p
Relinquished by:	Received by:	
Relinquished by:	Received by:	
Relinquished by:	Received by:	

Dispatched by:	Date/time	Received for Lab by:	Date/time
		P.L. Woods	7/9/92 1:53p

Method of Shipment

Remarks To Washington DOE standards
* Odor noted in all samples

WYATT-JAYKIM ENGINEERS
101 Thain Road
Lewiston, ID 83501
208-746-2661

WYATT-JAYKIM ENGINEERS
W. 1801 Broadway, Suite 110
Spokane, WA 99201
509-328-5139

U470

Anatek Labs

1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

RECEIVED JUL 27 1992

July 20, 1992

Wyatt-Jaykim Engineers
101 Thain Road
Lewiston, ID 83501
Attn: David Doeringsfeld

Items: Results of analysis for samples received 7/15/92. Sample Log-in number is 0299.

Report # 92-0720-WJE

All solid sample results are based on dry weight. mg/Kg = ppm, & mg/L = ppm.

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
1	Soil	7/17/92	Gasoline	16,000 mg/Kg
			Diesel	6,000 mg/Kg
			Benzene	3.13 mg/Kg
			Toluene	117 mg/Kg
			Ethylbenzene	91 mg/Kg
			Xylenes (total)	500 mg/Kg
2	Soil	7/17/92	Gasoline	31,000 mg/Kg
			Diesel	200 mg/Kg
			Benzene	6.2 mg/Kg
			Toluene	447 mg/Kg
			Ethylbenzene	428 mg/Kg
			Xylenes (total)	6,000 mg/Kg

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
3	Soil	7/20/92	Gasoline	62.7 mg/Kg
		7/17/92	Diesel	500 mg/Kg
4	Soil	7/17/92	Gasoline	< 10 mg/Kg
		7/17/92	Diesel	< 50 mg/Kg

Shane Needham
Organics Laboratory Supervisor

WYATT-JAYKIM ENGINEERS

Chain of Custody Record

Project				Sampler(s) Name(s)					
Clk Shop UST 1000-F				David Dorrington					
Sample #	Station/Location	Date	Time	Sample Type: Water	Soil/Sed.	TPH	BTX & E	Other	No. of Containers
1	East End	7-15-92				TPH-G TPH-D	X		1
2	South End	"				TPH-G TPH-D	X		1
3	West End	"				TPH-G TPH-D			1
4	NW End	"				TPH-G TPH-D			1

		Date/Time
Relinquished by: David Dorrington	Received by: Mike Wanner	7-15-92 2:00pm
Relinquished by: Mike Wanner	Received by: PSC Woods	7/15/92 3:10pm
Relinquished by:	Received by:	
Relinquished by:	Received by:	

Dispatched by:	Date/time	Received for Lab by:	Date/time

Method of Shipment

Remarks

WYATT-JAYKIM ENGINEERS
101 Thain Road
Lewiston, ID 83501
208-746-2661

WYATT-JAYKIM ENGINEERS
W. 1801 Broadway, Suite 110
Spokane, WA 99201
509-328-5139

Anatek Labs

1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

RECEIVED JUL 27 1992

July 23, 1992

Wyatt-Jaykim Engineers
101 Thain Road
Lewiston, ID 83501
Attn: David Doeringsfeld

Items: Results of analysis for samples received 7/15/92. Sample Log-in number is 0299.

Report # 92-0723-WJE

All solid sample results are based on dry weight. mg/Kg = ppm, & mg/L = ppm.
All Lead results are based upon extraction basis.

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
1 East End	Soil	7/22/92	Lead	13 mg/Kg
2 South End	Soil	7/22/92	Lead	10 mg/Kg

Mike Pearson
Laboratory Director

WYATT-JAYKIM ENGINEERS

Chain of Custody Record

Clk Shop UST 1000-F				Sampler(s) Name(s): David Derrington					
				Sample Type					No. of Containers
Sample #	Station/Location	Date	Time	Water	Soil/Sed.	TPH	BTX & E	Other	
1	East End	7-15-92				TPH-G TPH-D	X	Total Pb added 7/20 by Phone	1
2	South End	"				TPH-G TPH-D	X	Total Pb added 7/20 by Phone	1
3	West End	"				TPH-G TPH-D			1
4	NW End	"				TPH-G TPH-D			1

Relinquished by: David Derrington	Received by: W.H. Wampler	Date/Time	7-15-92 2:00pm
Relinquished by: W.H. Wampler	Received by: PSC Woods		7/15/92 3:10pm
Relinquished by:	Received by:		
Relinquished by:	Received by:		

Dispatched by:	Date/time	Received for Lab by:	Date/time

Method of Shipment

Remarks

WYATT-JAYKIM ENGINEERS
101 Thain Road
Lewiston, ID 83501
208-746-2661

WYATT-JAYKIM ENGINEERS
W. 1801 Broadway, Suite 110
Spokane, WA 99201
509-328-5139

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

RECEIVED DEC 17 1992

December 9, 1992

Wyatt-Jaykim Engineers
101 Thain Road
Lewiston, ID 83501
Attn: David Doeringsfeld / Jay Eliason

Items: Results of analysis for samples received 12/8/92. Sample Log-in number is 608.
Date Sampled: 12/8/92 Job #: City of Clarkston #1000F
Report # 92-1209A-WJE
Gasoline by WA-TPH-G BTEX by EPA 8020
All solid sample results are based on dry weight. mg/Kg = ppm, & mg/L = ppm.

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
MW1-5 SOIL	Soil	12/9/92	Gasoline	< 1.0 mg/Kg
			Benzene	< 0.001 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylenes (total)	< 0.015 mg/Kg
MW1-10 SOIL	Soil	12/9/92	Gasoline	< 1.0 mg/Kg
			Benzene	< 0.001 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylenes (total)	< 0.015 mg/Kg
MW1-15 SOIL	Soil	12/9/92	Gasoline	< 1.0 mg/Kg
			Benzene	< 0.001 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylenes (total)	< 0.015 mg/Kg
MW1-20 SOIL	Soil	12/9/92	Gasoline	< 1.0 mg/Kg
			Benzene	< 0.001 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylenes (total)	< 0.015 mg/Kg
MW1-25 SOIL	Soil	12/9/92	Gasoline	< 1.0 mg/Kg
			Benzene	< 0.001 mg/Kg
			Toluene	< 0.005 mg/Kg
			Ethylbenzene	< 0.005 mg/Kg
			Xylenes (total)	< 0.015 mg/Kg

Mike Pearson
Laboratory Director

Chain of Custody Record

Business:	WYATT-JAYKIM ENGINEERS
Address:	101 THAIN ROAD
City, State, ZIP:	LEWISTON, ID 83823
Phone, FAX:	746-2661 / 746-6825
Contact:	David Doeringsfeld/Jay Eliason

Ship Samples To:
Anatek Labs
1917 S. Main
Moscow, ID 83843
(208)883-2839

	Matrix		Date	Analysis					
Sample ID#	Water	Soil	Sampled	BTEX	TPH-G	TPH-D	HCID	418.1	Other
MW1-5		SOIL X	12-8-92 8:05	X	X				
MW1-10		SOIL X	12-8-92 8:49	X	X				
MW1-15		SOIL X	12-8-92 9:05	X	X				
MW1-20		SOIL X	12-8-92 9:19	X	X				
MW1-25		SOIL X	12-8-92 9:35	X	X				
~~MW1-~~		X		X	X	VE 12-8-92			

Specify Turnaround: ☐ Same Day ☐ 24 Hour ☑ Normal

Note: Same Day and 24 Hour samples must be verified with the lab before shipping.

Samples Relinquished By: Jaime K Eliason **Date/Time:** 12-8-92 14:00

Samples Received By: M A A **Date/Time:** 12/8/92 14:00

Laboratory Log-In #: 0608 **Do you want results to be faxed?** _____

Special instructions/comments: Please send Copies to David & Jay Gray Eliason PO Box 309, Pasco ID 83523

Purchase Order #/ Job #: City of Clarkston #1000 F

Additional information you would like on your report: _____

0608

Anatek Labs
1917 S. Main Moscow, ID 83843 (208) 883-BTEX (2839) FAX: (208) 882-9246

January 4, 1993

Wyatt-Jaykim Engineers
101 Thain Road
Lewiston, ID 83501
Attn: David Doeringsfeld /J. Eliason

Items: Results of analysis for samples received 12/30/92. Sample Log-in number is 644.
Date Sampled: 12/30/92
Job #: Clarkston City
Report # 93-1-4-WJE

Gasoline by WA-TPH-G
BTEX by EPA 602
All solid sample results are based on dry weight. mg/Kg = ppm, & mg/L = ppm.

Sample Name	*Matrix*	*Analysis Date*	*Analyte*	*Concentration*
MW1-1	Water	12/31/93	Gasoline	1.05 mg/L
			Benzene	< 0.001 mg/L
			Toluene	< 0.005 mg/L
			Ethylbenzene	< 0.005 mg/L
			Xylenes (total)	< 0.015 mg/L
Blank-1	Water	12/31/93	Gasoline	< 1.0 mg/L
			Benzene	< 0.001 mg/L
			Toluene	< 0.005 mg/L
			Ethylbenzene	< 0.005 mg/L
			Xylenes (total)	< 0.015 mg/L

Mike Pearson
Laboratory Director

Chain of Custody Record

Business:	WYATT-JAYKIM ENGINEERS
Address:	101 THAIN ROAD
City, State, ZIP:	LEWISTON, ID 83823
Phone, FAX:	746-2661 / 746-6825
Contact:	David Doeringsfeld/Jay Eliason

Ship Samples To:
Anatek Labs
1917 S. Main
Moscow, ID 83843
(208)883-2839

	Matrix		Date	Analysis					
Sample ID#	Water	Soil	Sampled	BTEX	TPH-G	TPH-D	HCID	418.1	Other
MW1-1	X		12-30-92 10:45	X	X				
Blank-1	X		12-30-92 12:10	X	X				

Specify Turnaround: ☐ Same Day ☐ 24 Hour ☑ Normal

Note: Same Day and 24 Hour samples must be verified with the lab before shipping.

Samples Relinquished By: JKC Eliasson Date/Time: 12-30-92 17:17

Samples Received By: M. L. L. Date/Time: 12/30/92 17:17

Laboratory Log-In #: 0644 Do you want results to be faxed? _____

Special instructions/comments: Copy to Jay Eliasson POB 309 Deary ID 83823

Purchase Order #/ Job #: Clarkston City

Additional information you would like on your report: _____

0644

APPENDIX D

PERMANENT CLOSURE/CHANGE-IN-SERVICE CHECKLIST

UNDERGROUND STORAGE TANK
Permanent Closure/Change-In-Service Checklist

The purpose of this form is to certify the proper closure/change-in-service of underground storage tank (UST) systems. These activities must be conducted in accordance with Chapter 173.360 WAC. Washington State UST rules require the tank owner or operator to notify Ecology in writing 30 days prior to closure or change-in-service of tanks. This must be done by completing the 30 Day Notice form (ECY 010-155).

This Permanent Closure Checklist shall be completed and signed by a Licensed **Decommissioning Supervisor.** The supervisor shall be on site when all tank permanent closure/change-in-service activities are being conducted. The firm which employs the licensed supervisor shall also be licensed by the Washington State Department of Ecology as a **Service Provider.** If any of the activities listed below have been supervised by a different licensed supervisor, a separate checklist must be filled out and signed by the licensed supervisor performing those activities.

For further information about completing this form, please contact the Department of Ecology UST Program.

A separate checklist must be completed for each UST system (tank and associated piping), except that UST systems at one site may be reported together by completing page 2 of this form separately for each system. The completed checklist should be mailed to the following address within 30 days of the completion of the closure or change-in-service.

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

1. UST SYSTEM OWNER AND LOCATION

Site Owner/Operator: CITY OF CLARKSTON

Owners Address: Bridge Street (Street) P.O. Box

CLARKSTON (City) WA (State) 99402 (ZIP-Code)

Telephone: (509) 758-1671

Site ID Number (on invoice or available from Ecology if tank is registered):

Site/Business Name: SAME AS ABOVE

Site Address: (Street) (County)

(City) (State) (ZIP-Code)

2. TANK PERMANENT CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Firm: Kennedy EQUIPMENT CO. INC License Number: ~~WD0[illegible]~~

Address: 510 3rd Street (Street) P.O. Box

CLARKSTON WA (City) (State) 99402 (ZIP-Code)

Telephone: 509 758-2493

Licensed Supervisor: mike Hartley Decommissioning License Number: WØØØ876

This page must be completed separately for each tank permanently closed (decommissioned) or change-in-service at the site. For additional tanks you may photocopy this form prior to completing.

3. TANK CLOSURE/CHANGE-IN-SERVICE INFORMATION

1. Tank ID Number (as registered with Ecology): NA. 2. Year installed: NA
3. Tank capacity in gallons: 1000 4. Date of last use: 7-10-92
5. Last substance stored: Diesel 6. Date of closure/change-in-service: 7-13-92
7. Type of closure: Closure with Tank Removal [X] In-place Closure [ ] Change-in-Service [ ]
8. If in-place closure is used, the tank has been filled with the following substance: _____
9. If change-in-service, indicate new substance stored in tank: _____
10. Local permit(s) (if any) obtained from: _____

Always contact local authorities regarding permit requirements.

11. Has a site assessment been completed? Yes [ ] No [ ]

Unless an external release detection system is operating at the time of closure or change in service, and a report is provided as specified in WAC 173-360-390, a site assessment must be conducted. This site assessment must be conducted by a person registered with the Department of Ecology to perform site assessments. Results of the site assessment must be included with the Site Assessment Checklist (ECY 010-158).

4. CHECKLIST

Each item of the following checklist shall be initialed by the licensed supervisor whose signature appears below.

	Yes	No	NA*
1. Has all liquid been removed from product lines?	MBH		
2. Has all product piping been capped or removed?	MBH		
3. Have all non-product lines been capped or removed?	MBH		
4. Have all liquid and accumulated sludges been removed from the tank?	MBH		
5. Has the tank been properly purged or inerted?	MBH		
6. Have the drop tube, fill pipe, gauge pipe, pumps and other tank fixtures been removed?	MBH		
7. Have all tank openings been plugged or capped? NOTE: One plug should have 1/8 inch vent hole.	MBH		
8. Have all sludges removed from the tank been designated and disposed of in accordance with the state of Washington's dangerous waste regulations (Chapter 173-303 WAC)?	MBH		
9. If removed, was tank properly labeled and disposed of in accordance with all applicable local, state and federal regulations?	MBH		

*Item not applicable

I hereby certify that I have been the licensed supervisor present on site during the above listed permanent closure activities and to the best of my knowledge they have been conducted in compliance with all applicable state and federal laws, regulations and procedures pertaining to underground storage tanks.

Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

7-13-92 (Date) _____ (Signature of Licensed Supervisor)

5. ADDITIONAL REQUIRED SIGNATURES

8/5/92 (Date) _____ (Signature of Licensed Service Provider (firm) Owner or Authorized Representative)

_____ (Date) _____ (Signature of Tank Owner or Authorized Representative)

UNDERGROUND STORAGE TANK
Permanent Closure/Change-In-Service Checklist

The purpose of this form is to certify the proper closure/change-in-service of underground storage tank (UST) systems. These activities must be conducted in accordance with Chapter 173.360 WAC. Washington State UST rules require the tank owner or operator to notify Ecology in writing 30 days prior to closure or change-in-service of tanks. This must be done by completing the 30 Day Notice form (ECY 010-155).

This Permanent Closure Checklist shall be completed and signed by a **Licensed Decommissioning Supervisor.** The supervisor shall be on site when all tank permanent closure/change-in-service activities are being conducted. The firm which employs the licensed supervisor shall also be licensed by the Washington State Department of Ecology as a **Service Provider.** If any of the activities listed below have been supervised by a different licensed supervisor, a separate checklist must be filled out and signed by the licensed supervisor performing those activities.

For further information about completing this form, please contact the Department of Ecology UST Program.

A separate checklist must be completed for each UST system (tank and associated piping), except that UST systems at one site may be reported together by completing page 2 of this form separately for each system. The completed checklist should be mailed to the following address within 30 days of the completion of the closure or change-in-service.

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

1. UST SYSTEM OWNER AND LOCATION

Site Owner/Operator: CITY OF CLARKSTON

Owners Address: 1451 Bridge Street (Street) P.O. Box

CLARKSTON (City) WA (State) 99403 (ZIP-Code)

Telephone: (509) 758-1617

Site ID Number (on invoice or available from Ecology if tank is registered): invoice #4666

Site/Business Name: CITY OF CLARKSTON PUBLIC WORKS DIV.

Site Address: 1451 Bridge Street (Street) ASOTIN (County)

CLARKSTON (City) WA (State) 99403 (ZIP-Code)

2. TANK PERMANENT CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Firm: Kennedy equipment co. inc. License Number:

Address: 510 3rd Street (Street) P.O. Box

CLARKSTON (City) WA (State) 99403 (ZIP-Code)

Telephone: (509) 758-2493

Licensed Supervisor: Mike HARTLEY Decommissioning License Number: WD00876

This page must be completed separately for each tank permanently closed (decommissioned) or change-in-service at the site. For additional tanks you may photocopy this form prior to completing.

3. TANK CLOSURE/CHANGE-IN-SERVICE INFORMATION

1. Tank ID Number (as registered with Ecology): NA
2. Year installed: 1977 ?
3. Tank capacity in gallons: 1000
4. Date of last use: 6-26-92
5. Last substance stored: unLead gasoline
6. Date of closure/change-in-service: 7-7-92
7. Type of closure: Closure with Tank Removal [X] In-place Closure [ ] Change-in-Service [ ]
8. If in-place closure is used, the tank has been filled with the following substance: _____
9. If change-in-service, indicate new substance stored in tank: _____
10. Local permit(s) (if any) obtained from: _____

Always contact local authorities regarding permit requirements.

11. Has a site assessment been completed? Yes [ ] No [ ]

Unless an external release detection system is operating at the time of closure or change in service, and a report is provided as specified in WAC 173-360-390, a site assessment must be conducted. This site assessment must be conducted by a person registered with the Department of Ecology to perform site assessments. Results of the site assessment must be included with the Site Assessment Checklist (ECY 010-158).

4. CHECKLIST

Each item of the following checklist shall be initialed by the **licensed supervisor** whose signature appears below.

	Yes	No	NA*
1. Has all liquid been removed from product lines?	X		
2. Has all product piping been capped or removed?	X		
3. Have all non-product lines been capped or removed?	X		
4. Have all liquid and accumulated sludges been removed from the tank?	X		
5. Has the tank been properly purged or inerted?	X		
6. Have the drop tube, fill pipe, gauge pipe, pumps and other tank fixtures been removed?	X		
7. Have all tank openings been plugged or capped? NOTE: One plug should have 1/8 inch vent hole.	X		
8. Have all sludges removed from the tank been designated and disposed of in accordance with the state of Washington's dangerous waste regulations (Chapter 173-303 WAC)?	X		
9. If removed, was tank properly labeled and disposed of in accordance with all applicable local, state and federal regulations?	X		

*Item not applicable

I hereby certify that I have been the licensed supervisor present on site during the above listed permanent closure activities and to the best of my knowledge they have been conducted in compliance with all applicable state and federal laws, regulations and procedures pertaining to underground storage tanks.

Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

7-7-92 — Date

Mike Hanley — Signature of Licensed Supervisor

5. ADDITIONAL REQUIRED SIGNATURES

8/5/92 — Date

Signature of Licensed Service Provider (firm) Owner or Authorized Representative

Date

Signature of Tank Owner or Authorized Representative

UNDERGROUND STORAGE TANK
Permanent Closure/Change-In-Service Checklist

The purpose of this form is to certify the proper closure/change-in-service of underground storage tank (UST) systems. These activities must be conducted in accordance with Chapter 173.360 WAC. Washington State UST rules require the tank owner or operator to notify Ecology in writing 30 days prior to closure or change-in-service of tanks. This must be done by completing the 30 Day Notice form (ECY 010-155).

This Permanent Closure Checklist shall be completed and signed by a **Licensed Decommissioning Supervisor.** The supervisor shall be on site when all tank permanent closure/change-in-service activities are being conducted. The firm which employs the licensed supervisor shall also be licensed by the Washington State Department of Ecology as a **Service Provider.** If any of the activities listed below have been supervised by a different licensed supervisor, a separate checklist must be filled out and signed by the licensed supervisor performing those activities.

For further information about completing this form, please contact the Department of Ecology UST Program.

A separate checklist must be completed for each UST system (tank and associated piping), except that UST systems at one site may be reported together by completing page 2 of this form separately for each system. The completed checklist should be mailed to the following address within 30 days of the completion of the closure or change-in-service.

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

1. UST SYSTEM OWNER AND LOCATION

Site Owner/Operator: CITY OF CLARKSTON

Owners Address: 1451 (Street) Bridge Street (P.O. Box)

Clarkston (City) WA (State) 99403 (ZIP-Code)

Telephone: (509) 758-1671

Site ID Number (on invoice or available from Ecology if tank is registered): invoice #4666

Site/Business Name: CITY OF CLARKSTON PUBLIC WORKS DIV.

Site Address: 1451 (Street) Bridge Street ASOTIN (County)

CLARKSTON (City) WA. (State) 99403 (ZIP-Code)

2. TANK PERMANENT CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Firm: Kennedy equipment co. inc. License Number:

Address: 510 3rd Street (Street) (P.O. Box)

CLARKSTON WA (City) (State) 99403 (ZIP-Code)

Telephone: (509) 758-2493

Licensed Supervisor: MIKE HARTLEY Decommissioning License Number: W000876

This page must be completed separately for each tank permanently closed (decommissioned) or change-in-service at the site. For additional tanks you may photocopy this form prior to completing.

3. TANK CLOSURE/CHANGE-IN-SERVICE INFORMATION

1. Tank ID Number (as registered with Ecology): NA
2. Year installed: 1977?
3. Tank capacity in gallons: 500
4. Date of last use: 6-26-92
5. Last substance stored: Regular gasoline
6. Date of closure/change-in-service: 7-7-92
7. Type of closure: Closure with Tank Removal [X] In-place Closure [ ] Change-in-Service [ ]
8. If in-place closure is used, the tank has been filled with the following substance: _____
9. If change-in-service, indicate new substance stored in tank: _____
10. Local permit(s) (if any) obtained from: _____

Always contact local authorities regarding permit requirements.

11. Has a site assessment been completed? Yes [ ] No [ ]

Unless an external release detection system is operating at the time of closure or change in service, and a report is provided as specified in WAC 173-360-390, a site assessment must be conducted. This site assessment must be conducted by a person registered with the Department of Ecology to perform site assessments. Results of the site assessment must be included with the Site Assessment Checklist (ECY 010-158).

4. CHECKLIST

Each item of the following checklist shall be initialed by the **licensed supervisor** whose signature appears below.

	Yes	No	NA*
1. Has all liquid been removed from product lines?	X		
2. Has all product piping been capped or removed?	X		
3. Have all non-product lines been capped or removed?	X		
4. Have all liquid and accumulated sludges been removed from the tank?	X		
5. Has the tank been properly purged or inerted?	X		
6. Have the drop tube, fill pipe, gauge pipe, pumps and other tank fixtures been removed?	X		
7. Have all tank openings been plugged or capped? NOTE: One plug should have 1/8 inch vent hole.	X		
8. Have all sludges removed from the tank been designated and disposed of in accordance with the state of Washington's dangerous waste regulations (Chapter 173-303 WAC)?	X		
9. If removed, was tank properly labeled and disposed of in accordance with all applicable local, state and federal regulations?	X		

*Item not applicable

I hereby certify that I have been the licensed supervisor present on site during the above listed permanent closure activities and to the best of my knowledge they have been conducted in compliance with all applicable state and federal laws, regulations and procedures pertaining to underground storage tanks.

Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

7-7-92 — Date

Mike Pavelka — Signature of Licensed Supervisor

5. ADDITIONAL REQUIRED SIGNATURES

8/5/92 — Date

Signature of Licensed Service Provider (firm) Owner or Authorized Representative

Date

Signature of Tank Owner or Authorized Representative

APPENDIX E

SITE CHECK/SITE ASSESSMENT CHECKLIST

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

The purpose of this form is to certify the proper investigation of an UST site for the presence of a release. These activities shall be conducted in accordance with Chapter 173.360 WAC. A description of the various situations requiring a site check or site assessment is provided in the guidance document for UST site checks and site assessments.

This Site Check/Site Assessment Checklist shall be completed and signed by a person registered with the Department of Ecology to perform site assessments.

Two copies of the results of the site check or site assessment should be included with this checklist according to the reporting requirements in the guidance document for UST site checks and site assessments.

For further information about completing this form, please contact the Department of Ecology UST Program.

The completed checklist should be mailed to the following address:

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

1. UST SYSTEM OWNER AND LOCATION

UST Owner/Operator: City of Clarkston

Owners Address: 830 5th Street (Street) (P.O. Box)

Clarkston, WA 99403 (City) (State) (ZIP-Code)

Telephone: (509) 758-5541

Site ID Number (on invoice or available from Ecology if tank is registered): Invoice #4000

Site/Business Name: Bridge Street Shop Site

Site Address: 1451 Bridge Street (Street) (County)

Clarkston, WA 99403 (City) (State) (ZIP-Code)

2. SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Registered Person: D. Richard Wyatt, P.E.

Address: 101 Thain Road (Street) (P.O. Box)

Lewiston, ID 83501 (City) (State) (ZIP-Code)

Telephone: (208) 746-2661

3. TANK INFORMATION

1. Tank ID Number (as registered with Ecology): N/A
2. Year installed: Early 1970's
3. Tank capacity in gallons: 1,000
4. Last substance stored: Diesel

4. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

_____ Investigate suspected release due to on-site environmental contamination
_____ Investigate suspected release due to off-site environmental contamination
_____ Extend temporary closure of UST system for more than 12 months
_____ UST system undergoing change-in-service
_____ UST system permanently closed-in-place
X UST system permanently closed with tank removed
_____ Required by Ecology or delegated agency for UST system closed before December 22, 1988
_____ Other (describe): _____

5. CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

	Yes	No
1. Has the site check/site assessment been conducted according to applicable procedures specified in the UST site check/site assessment guidance issued by the Department of Ecology?	X	
2. Has a release from the UST system been confirmed? *NOTE: Owners/operators must report all confirmed releases to the Department of Ecology or delegated agency within 24 hours.*	X	
3. Are the results of the site check/site assessment enclosed with this checklist? *NOTE: Two copies of the site check/site assessment results must be submitted to the Department of Ecology according to the reporting requirements specified in the UST site check/site assessment guidance.*	X	

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

2/[illegible]2/93 — Date

D Richard Wyatt — Signature of Person Registered with Ecology

6. OWNER'S SIGNATURE

2-8-93 — Date

[signature] — Signature of Tank Owner or Authorized Representative

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

The purpose of this form is to certify the proper investigation of an UST site for the presence of a release. These activities shall be conducted in accordance with Chapter 173.360 WAC. A description of the various situations requiring a site check or site assessment is provided in the guidance document for UST site checks and site assessments.

This Site Check/Site Assessment Checklist shall be completed and signed by a person registered with the Department of Ecology to perform site assessments.

Two copies of the results of the site check or site assessment should be included with this checklist according to the reporting requirements in the guidance document for UST site checks and site assessments.

For further information about completing this form, please contact the Department of Ecology UST Program.

The completed checklist should be mailed to the following address:

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

1. UST SYSTEM OWNER AND LOCATION

UST Owner/Operator: City of Clarkston

Owners Address: 830 5th Street (Street) (P.O. Box)

Clarkston, WA 99403 (City) (State) (ZIP-Code)

Telephone: (509) 758-5541

Site ID Number (on invoice or available from Ecology if tank is registered): Invoice #4000

Site/Business Name: Bridge Street Shop Site

Site Address: 1451 Bridge Street (Street) (County)

Clarkston, WA 99403 (City) (State) (ZIP-Code)

2. SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Registered Person: D. Richard Wyatt, P.E.

Address: 101 Thain Road (Street) (P.O. Box)

Lewiston, ID 83501 (City) (State) (ZIP-Code)

Telephone: (208) 746-2661

3. TANK INFORMATION

1. Tank ID Number (as registered with Ecology): N/A
2. Year installed: Early 1970's
3. Tank capacity in gallons: 1,000
4. Last substance stored: Unleaded Gasoline

4. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

_____ Investigate suspected release due to on-site environmental contamination

_____ Investigate suspected release due to off-site environmental contamination

_____ Extend temporary closure of UST system for more than 12 months

_____ UST system undergoing change-in-service

_____ UST system permanently closed-in-place

X UST system permanently closed with tank removed

_____ Required by Ecology or delegated agency for UST system closed before December 22, 1988

_____ Other (describe): _____

5. CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

	Yes	No
1. Has the site check/site assessment been conducted according to applicable procedures specified in the UST site check/site assessment guidance issued by the Department of Ecology?	X	
2. Has a release from the UST system been confirmed? *NOTE: Owners/operators must report all confirmed releases to the Department of Ecology or delegated agency within 24 hours.*	X	
3. Are the results of the site check/site assessment enclosed with this checklist? *NOTE: Two copies of the site check/site assessment results must be submitted to the Department of Ecology according to the reporting requirements specified in the UST site check/site assessment guidance.*	X	

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

2/8/93
Date

D Richard Wyatt
Signature of Person Registered with Ecology

6. OWNER'S SIGNATURE

2-8-93
Date

Signature of Tank Owner or Authorized Representative

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

The purpose of this form is to certify the proper investigation of an UST site for the presence of a release. These activities shall be conducted in accordance with Chapter 173.360 WAC. A description of the various situations requiring a site check or site assessment is provided in the guidance document for UST site checks and site assessments.

This Site Check/Site Assessment Checklist shall be completed and signed by a person registered with the Department of Ecology to perform site assessments.

Two copies of the results of the site check or site assessment should be included with this checklist according to the reporting requirements in the guidance document for UST site checks and site assessments.

For further information about completing this form, please contact the Department of Ecology UST Program.

The completed checklist should be mailed to the following address:

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

1. UST SYSTEM OWNER AND LOCATION

UST Owner/Operator: City of Clarkston

Owners Address: 830 5th Street (Street) (P.O. Box)

Clarkston, WA 99403 (City) (State) (ZIP-Code)

Telephone: (509) 758-5541

Site ID Number (on invoice or available from Ecology if tank is registered): Invoice #4000

Site/Business Name: Bridge Street Shop Site

Site Address: 1451 Bridge Street (Street) (County)

Clarkston, WA 99403 (City) (State) (ZIP-Code)

2. SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Registered Person: D. Richard Wyatt, P.E.

Address: 101 Thain Road (Street) (P.O. Box)

Lewiston, ID 83501 (City) (State) (ZIP-Code)

Telephone: (208) 746-2661

3. TANK INFORMATION

1. Tank ID Number (as registered with Ecology): N/A
2. Year installed: Early 1970's
3. Tank capacity in gallons: 500
4. Last substance stored: Regular Gasoline

4. REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

_____ Investigate suspected release due to on-site environmental contamination

_____ Investigate suspected release due to off-site environmental contamination

_____ Extend temporary closure of UST system for more than 12 months

_____ UST system undergoing change-in-service

_____ UST system permanently closed-in-place

X UST system permanently closed with tank removed

_____ Required by Ecology or delegated agency for UST system closed before December 22, 1988

_____ Other (describe): _____

5. CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

	Yes	No
1. Has the site check/site assessment been conducted according to applicable procedures specified in the UST site check/site assessment guidance issued by the Department of Ecology?	X	
2. Has a release from the UST system been confirmed? *NOTE: Owners/operators must report all confirmed releases to the Department of Ecology or delegated agency within 24 hours.*	X	
3. Are the results of the site check/site assessment enclosed with this checklist? *NOTE: Two copies of the site check/site assessment results must be submitted to the Department of Ecology according to the reporting requirements specified in the UST site check/site assessment guidance.*	X	

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

2/8/93 — Date

D Richard Wyatt — Signature of Person Registered with Ecology

6. OWNER'S SIGNATURE

2-8-93 — Date

Howard Edwards — Signature of Tank Owner or Authorized Representative