PERIODIC REVIEW

Arden's Country Store
F/SID #: 419

1458 Old Highway 97
Malott, Washington 98829

Central Region Office

TOXICS CLEANUP PROGRAM

July 29, 2008

1.0 INTRODUCTION

This document is the Department of Ecology's review of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the Arden's Country Store Property (Site), also known as Rodeway Stores. Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 WAC.

Cleanup actions at this Site were completed under Enforcement Order No. DE 91-C141. The cleanup actions resulted in residual concentrations of volatile organic compounds and gasoline-range petroleum hydrocarbons exceeding MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). WAC 173-340-420 (1) requires that " if the department selects or approves a cleanup action that results in hazardous substances remaining at a site at concentrations which exceed Method A or Method B cleanup levels established under WAC 173-340-700 through 173-340-760 or if conditional points of compliance have been established, the department shall review the cleanup action no less frequently than every five years after the initiation of such cleanup action to ensure that human health and the environment are being protected".

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(2)]:

(a) The effectiveness of ongoing or completed cleanup actions;
(b) New scientific information for individual hazardous substances of mixtures present at the site;
(c) New applicable state and federal laws for hazardous substances present at the Site;
(d) Current and projected site use;
(e) Availability and practicability of higher preference technologies; and
(f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the site register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

Arden's Country Store is located in Malott, Okanogan County, Washington (Appendix 6.1). An emergency action and remedial activities were conducted at the Site between 1988 and 1999. Enforcement Order No. DE 91-C141 was issued in May 1991. There has been no activity at the Site since 1999.

The Site is located on the southwest corner of Old Highway 97 and Allen Street, in Malott. Arden's Country Store is currently operating as a convenience store, and prior to 1991 it operated as a gasoline station. In 1988, the Site was reported to the Ecology as an emergency situation due to the presence of explosive levels of gasoline vapors in the store.

2.2 Cleanup Levels

The Enforcement Order states that all remedial actions are to be conducted in accordance with Washington Administrative Code 173-340. Based on that requirement, the following levels are used at the site:

Soil - Method A cleanup levels are appropriate for the Site soils.

Table 1: 1991 MTCA Method A Soil Cleanup Levels

Analyte	1991 MTCA Soil Cleanup Level (ppm)
Benzene	0.5
Lead	250
Tetrachloroethylene	0.5
Toluene	40
Total Xylenes	20
TPH	NL
TPH-Gas	100
TPH-Diesel	200
TPH-Oil	200
NL = None listed	

Groundwater - Method A cleanup levels are appropriate for Site groundwater.

Table 2: 1991 MTCA Method A Groundwater Cleanup Levels

Analyte	1991 MTCA Method A Groundwater Cleanup level (ppb)
Benzene	5
Lead	5
Tetrachloroethylene	5
Toluene	40
Total Xylenes	20
TPH	1000
TPH-Gas	NL
TPH-Diesel	NL
TPH-Oil	NL
NL = None listed	

2.3 Points of Compliance

The Site is defined as Arden's Country Store. The extent of the Site includes the area containing soil and/or groundwater that have been impacted by the release of petroleum hydrocarbons from the Arden's Country Store property. The point of compliance for soil shall be defined as the area affected by petroleum hydrocarbons released from the Site into soil at concentrations above MTCA Method A cleanup levels, regardless of depth, to protect groundwater.

The groundwater point of compliance is throughout the Site from the uppermost level of the saturated zone to the lowest depth that could possibly be affected by the Site.

2.4 Summary of Cleanup Actions

Following the emergency notification of explosive vapors in the basement of the store, immediate actions at the Site included the removal of two abandoned underground storage tanks (USTs) along with associated contaminated soils. An abandoned domestic well in the floor of the store was also sealed to prevent additional vapor migration into the structure. A site map is available as Appendix 6.2.

In 1989, a shallow dug well in the basement of the store was sampled by Hart-Crowser. Groundwater contamination was confirmed by the presence of benzene at 4,000 micrograms per liter (ug/L), toluene at 170 ug/L, and xylenes at 321 ug/L. Additional samples from the basement well were collected in 1990. They indicated increasing concentrations of benzene,

toluene, ethylbenzene and xylenes (BTEX) at 8,600 ug/L, 2,500 ug/L, 200 ug/L and 2,300 ug/L, respectively. The City of Malott does not have a public water supply, and several private domestic water wells were identified in the vicinity of the store. Samples collected from these domestic water wells detected BTEX above laboratory detection limits, but below MTCA Method A cleanup levels.

Following the discovery of the extent of contamination at the Site, the property owner failed to take action. In May 1991, Ecology issued an Enforcement Order requiring a Remedial Investigation/Feasibility Study (RI/FS). The Order was not complied with, so Ecology contracted for the work to be done using funds from the State Toxics Control Account. Field work conducted for the RI/FS covered the majority of downtown Malott, and included domestic well sampling, a soil gas survey, installation of five monitoring wells, and sampling of soil and groundwater.

The RI/FS examined eight potential contamination sources. These included the following:

1. Source Area 1: West end of Arden's Country Store. Two USTs were previously removed from this location.
2. Source Area 2: North end of Arden's Country Store property. Three USTs were in operation here until 1991.
3. Source Area 3: USTs located on the Allen Street side of the former Malott Garage property and former site of an Arco gasoline station. Two inactive USTs were located here during the RI/FS.
4. Source Area 4: La Esquina Pool Hall building area, and former Malott Garage Arco Station. Solvents were reportedly discharged down a floor drain here into a septic tank.
5. Source Area 5: Open dump south of the former Malott Garage property.
6. Source Area 6: Former Chevron Station Site. No information was known about this site. No physical evidence of the station was present in 1991.
7. Source Area 7: Vacant building with abandoned UST at Old Highway 97 and B&O Road.
8. Source Area 8: Scroggins Property. Mr. Scroggins Property was the former site of auto body repairs and painting.

Based data collected in the RI/FS, it was determined that source area 2, the location of the active tanks at Arden's Country Store, was the primary source of contamination in the area. Contaminants included BTEX, gasoline-range petroleum hydrocarbons (TPH-G) and diesel-range petroleum hydrocarbons (TPH-D).

Following the RI/FS, EVOCA Corporation (EVOKA) was contracted to perform remedial activities at the Site. These activities included UST removals, soil and groundwater sampling, and soil and groundwater treatment at the Site. The tanks consisted of a 4,000-gallon leaded gasoline tank, two 2,000-gallon unleaded gasoline tanks, associated piping and a dispenser island. Following removal of the tanks, a photoionization detector (PID) was used to screen soils

from the excavation for the presence of volatile organic compounds (VOCs). No elevated PID readings were observed in soils from the UST excavation. Seven soil samples were collected from the limits of the excavation and analyzed for TPH-G, TPH-D, BTEX and total lead. Sample results did not detect contamination above MTCA Method A cleanup levels.
Soil under the dispenser island had strong visual and odor indications of TPH-G contamination. Excavation of contaminated soils from below the dispenser island continued until PID readings no longer detected contamination. Approximately 1100 cubic yards of soil were excavated from this location and stockpiled at the Site for treatment. CET Environmental Services treated this soil by thermal desorption. Samples collected from the south and east sidewalls of the final excavation still contained petroleum hydrocarbon contamination at concentrations exceeding MTCA Method A cleanup levels. Excavation could not continue in those directions without risking structural damage to the store building. Following treatment, the treated material was used for backfilling the excavation.

One groundwater monitoring well and one groundwater pumping well were installed at the Site at this time. Both wells were advanced to depths of 40 feet below ground surface (bgs). Soil samples were collected at 5 foot intervals during drilling. Benzene was detected at 0.058 ppm, just above the cleanup level of 0.5 ppm, in the recovery well boring at 15 feet bgs.

Groundwater samples were collected from the new monitoring well, MW-2, as well as two wells installed during the RI/FS, MW-1 and MW-A5. MW-A5, which is the only monitoring well in the immediate vicinity of the tank excavation, exceeded MTCA Method A cleanup levels for TPH-G, benzene, toluene and xylenes. MW-2, located southeast of the tank excavation, exceeded MTCA Method A cleanup levels for lead and benzene.

A groundwater treatment system was installed at the Site in June 1993. The system consisted of a groundwater pumping well, two granular activated carbon units, and an infiltration gallery located upgradient of the pumping well for reinjection of treated groundwater.

2.5 Monitoring

Groundwater monitoring was conducted by Ecology on an annual basis from 1993 until 1997, and again in 1999. Contaminant concentrations have trended generally downward. Results from the final sampling event in 1999 indicate that only RW-2 contains benzene and concentrations exceeding MTCA Method A cleanup levels.

On July 22, 2008, Ecology conducted an additional sampling event at the Site as part of the periodic review process. Samples were collected from MW-1, RW-1, MW-A5 and RW-2. MW-2 could not be sampled because it was dry at the time of the sampling event. All wells were sampled using low flow techniques with the exception of MW-1, which did not have enough water in the well casing to use an in-well pump. A disposable bailer was used to collect the sample from MW-1. No visible sheen or odor was detected in any of the wells indicating the

presence of petroleum hydrocarbons. Sample data sheets and laboratory results are available as Appendix 3 and Appendix 4.

Analytical results from the July 2008 sampling event did not detect contamination in any of the wells at the Site. Monitoring data is available below:

Table 3: Groundwater Monitoring Data

Date	benzene	toluene	ethylbenzene	xylenes	TPH-G
RW1					
12/15/1993	0.2	0.2	0.2	0.6	NA
4/13/1994	NS	NS	NS	NS	NS
3/21/1995	1	1	1	1	0.25
3/25/1996	1	1	1	3	0.12
12/15/1997	1	1	1	3	0.12
10/13/1999	1	1	1	3	0.03
7/22/2008	.5	2	1	1.5	.1
RW2					
12/15/1993	**4.1**	0.2	0.2	0.6	NA
duplicate	**28.4**	0.3	0.2	0.6	NA
4/13/1994	NS	NS	NS	NS	NS
3/21/1995	**130**	11	16	**85**	680
3/25/1996	**370**	10	**150**	**210**	**2700**
12/15/1997	**35**	7.4	**33**	**95**	560
10/13/1999	**26**	1	**30**	**84**	290
7/22/2008	.5	2	1	1.5	.1
MW1					
12/15/1993	0.2	0.2	0.2	0.6	NA
4/13/1994	0.2	0.2	0.2	0.6	0.024
3/21/1995	1	1	1	1	0.25
3/25/1996	1	1	1	3	0.12
12/15/1997	1	1	1	3	0.12
10/13/1999	1	1	1	3	0.03
7/22/2008	.5	2	1	1.5	.1
MW2					
12/15/1993	NS	NS	NS	NS	NS
4/13/1994	1.2	0.2	0.2	0.5	0.024
3/21/1995	1	1	1	1	0.25
3/25/1996	1	1	1	3	0.12
12/15/1997	1	1	1	3	0.12

10/13/1999	1	1	1	3	0.03
7/22/2008	NS	NS	NS	NS	NS
DW2					
12/15/1993	0.2	0.2	0.2	0.6	NA
4/13/1994	NS	NS	NS	NS	NS
3/21/1995	NS	NS	NS	NS	NS
3/25/1996	NS	NS	NS	NS	NS
12/15/1997	NS	NS	NS	NS	NS
10/13/1999	NS	NS	NS	NS	NS
MWA2					
12/15/1993	NS	NS	NS	NS	NS
4/13/1994	0.2	0.2	0.2	0.6	0.024
3/21/1995	NS	NS	NS	NS	NS
3/25/1996	NS	NS	NS	NS	NS
12/15/1997	NS	NS	NS	NS	NS
10/13/1999	NS	NS	NS	NS	NS
MWA5					
12/15/1993	NS	NS	NS	NS	NS
4/13/1994	NS	NS	NS	NS	NS
3/21/1995	**3100**	**2300**	**560**	**3260**	**30000**
3/25/1996	**40**	4.4	7	8.5	**3600**
12/15/1997	**32**	24	**53**	**39**	**1100**
10/13/1999	3.6	10	3.6	4	850
7/22/2008	.5	2	1	1.5	.1
MW1B					
12/15/1993	NS	NS	NS	NS	NS
4/13/1994	NS	NS	NS	NS	NS
3/21/1995	NS	NS	NS	NS	NS
3/25/1996	1	1	1	3	0.12
12/15/1997	1	1	1	3	0.12
10/13/1999	1	1	1	3	0.03

1991 Cleanup levels	**5**	**40**	**30**	**20**	**1000**
2008 Cleanup levels	**5**	**1000**	**700**	**1000**	**800/1000***

Red = Exceeds 1991 MTCA Method A cleanup levels

Green = Below laboratory detection limits

*= value if benzene detected / value with no benzene detected

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The excavation conducted during the interim action eliminated the human exposure pathways (ingestion, contact) to highly contaminated soils at the Site. The buildings and asphalt surface at the site also helps prevent direct contact with the contaminated soils. Groundwater sampling results indicate that contamination is no longer present in groundwater at concentrations exceeding laboratory detection limits. Based upon the site visit conducted on July 22, 2008, no repair, maintenance, or contingency actions have been required. The Site continues to operate as a convenience store without gasoline facilities. The surface completions of all monitoring wells were intact. Two of the five monitoring wells that were gauged prior to sampling had obstructions in the well casings. A photo log is available as Appendix 6.5.

A Restrictive Covenant has not been recorded for the Site.

Conclusions:

Soils with TPH concentrations higher than the 2000 mg/Kg Method A cleanup level for TPH-D may still be present at the Site. However, the asphalt cap and the clean soil cap prevent the human exposure of the TPH by ingestion and direct contact with soils. Groundwater no longer has concentrations of TPH or BTEX exceeding MTCA Method A cleanup levels. An Environmental Covenant is necessary to ensure that the integrity of the asphalt cap will be protected through maintaining the current use of the Site.

3.2 New scientific information for individual hazardous substances for mixtures present at the site

There is no new scientific information for the petroleum contaminants related to the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

The cleanup at the site was governed by Chapter 173-340 WAC (1996 ed.). WAC 173-340-702(12)(c) [2001 ed.] provides that,

"A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the

previous cleanup action is no longer sufficiently protective of human health and the environment."

Although cleanup levels changed for gasoline, diesel, and volatile organic compounds as a result of modifications to MTCA in 2001, contamination remains at the site above MTCA Method A cleanup levels and the cleanup action is still protective of human health and the environment. A table comparing cleanup levels is available below:

Table 4: Changes to MTCA Method A Cleanup Levels

Analyte	1991 MTCA Soil Cleanup Level (ppm)	2001 MTCA Method A Soil Cleanup Level (ppm)	1991 MTCA Method A Groundwater Cleanup level (ppb)	2001 MTCA Method A Groundwater Cleanup Level (ppb)
Benzene	0.5	**0.03**	5	**5**
Ethylbenzene	20	**6**	30	**700**
Lead	250	**250**	5	**15**
Toluene	40	**7**	40	**1000**
Total Xylenes	20	**9**	20	**1000**
TPH	NL	**NL**	1000	NL
TPH-Gas	100	**100/30***	NL	1000/**800^**
TPH-Diesel	200	**2000**	NL	**500**
TPH-Oil	200	**2000**	NL	**500**

Red = Changed value for 2001
* = 100 ppm for gasoline mixtures without Benzene / 30 ppm when benzene present.
^ = 1000 ppb for gasoline mixtures without benzene / 800 ppb when benzene present.

3.4 Current and projected site use

The site is currently used for commercial purposes. There have been no changes in current or projected future site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included removal/recycling of hazardous substances as well as containment, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels.

The analytical methods used at the time of the remedial action were capable of detection well below MTCA Method A cleanup levels for the contaminants of concern. The presence of improved analytical techniques would not effect decisions or recommendations made for the site.

4.0 CONCLUSIONS

- The cleanup action completed at the Site is protective of human health and the environment.

- Soils cleanup levels have not been met at the Site; however, under WAC 173-340-740(6)(d), the cleanup action is determined to comply with cleanup standards, since the long-term integrity of the containment system is ensured and the requirements for containment technologies in WAC 173-340-360(8) have been met.

- Groundwater cleanup levels have been met at the Site.

- A Restrictive Covenant has not been recorded for the property. A Restrictive Covenant is necessary to issue a No Further Action determination for the Site, because soil contamination remains at concentrations exceeding MTCA Method A cleanup levels. A Restrictive covenant would serve to protect the integrity of the soil cleanup action and the soil cap.

Based on this five-year review, the Department of Ecology has determined that the requirements of the Model Toxics Control Act have not been met for the Site. Additional actions are required by the property owner in order to receive a No Further Action determination for the Site.

5.0 REFERENCES

GN Northern, Inc. 1997, Underground Storage Tank Site Assessment Report

Kent, Richard, 1997, Geologic Logs

Northwest Envirocon, Inc., 1998, Bioremediation of Petroleum Contaminated Soil

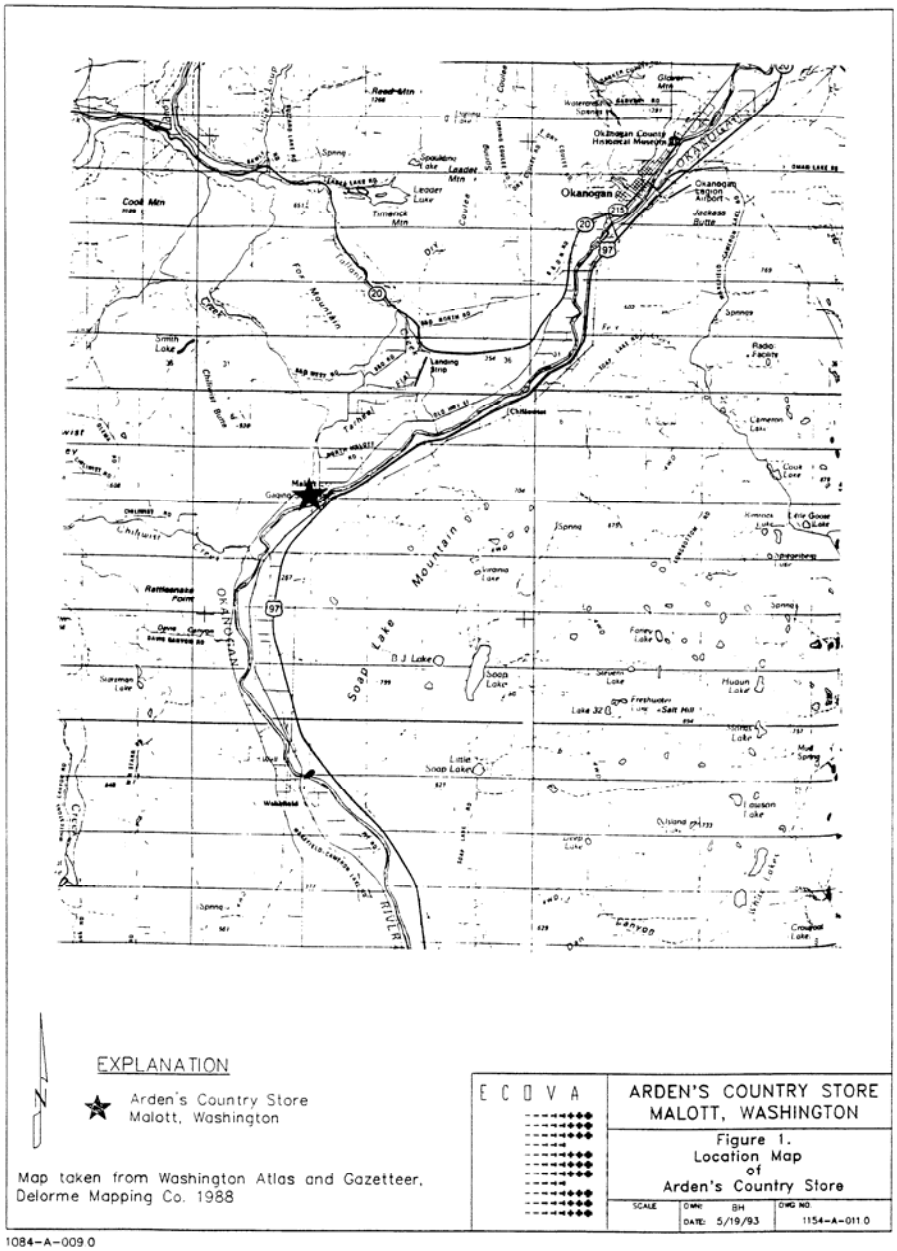
Ecology, 1999, No Further Action Letter

Ecology, 1999, Restrictive Covenant

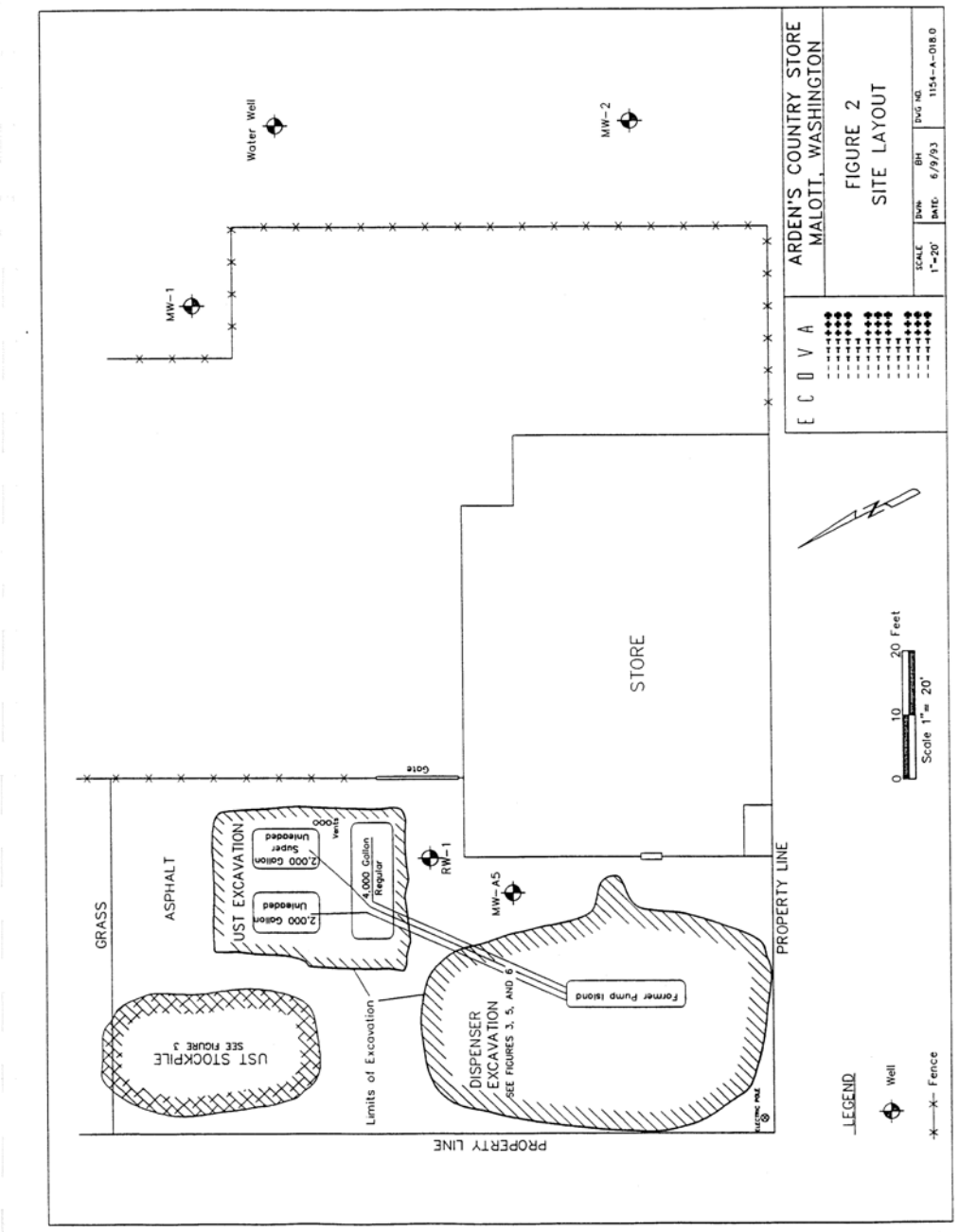
Ecology, 2008, Site Visit

6.0 APPENDICIES

6.1 Vicinity Map



6.2 Site Plan


ARDEN'S COUNTRY STORE
MALOTT, WASHINGTON
FIGURE 2
SITE LAYOUT
E C O V A
SCALE 1"=20'
Dwn BH
DATE 6/9/93
DWG NO. 1154-A-018.0
Water Well
MW-2
MW-1
STORE
Gate
GRASS
ASPHALT
UST EXCAVATION
2,000 Gallon Unleaded
2,000 Gallon Super Unleaded
4,000 Gallon Regular
Vents
RW-1
MW-A5
Former Pump Island
DISPENSER EXCAVATION
SEE FIGURES 3, 5, AND 6
Limits of Excavation
UST STOCKPILE
SEE FIGURE 3
PROPERTY LINE
0 10 20 Feet
Scale 1" = 20'
LEGEND
Well
Fence

6.3 2008 Sample Data Sheets

(1)

GROUNDWATER SAMPLING DATA SHEET

SITE NAME: Arden's Country Store	SITE LOCATION: Malott, Washington	
WELL NO: MW-1	SAMPLE ID: MW-1-072208	DATE: 7-22-08

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 13.5 feet to 23.5 feet	STATIC DEPTH TO WATER (feet): 16.31	PURGE PUMP TYPE OR BAILER: Submersible Electric / Disposable bailer

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (17.70 feet – 16.31 feet) X 0.16 gallons/foot = ~.2 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 17'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0845	1	1	/	16.31	7.43	14.7	501		SI Turbid	Clear	NNO
			Only 12" of H_2O in well casing.								
			Well sampled w/ disposable bailer								

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Newschwander/WSDOE	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 17'	SAMPLE PUMP FLOW RATE (mL per minute): —	TUBING MATERIAL: Polyethylene	
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-1-072208	3			HCl				

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

NOTES:

1. **STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)**

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

(2)

GROUNDWATER SAMPLING DATA SHEET

SITE NAME: Arden's Country Store	SITE LOCATION: Malott, Washington	
WELL NO: RW-1	SAMPLE ID: RW-1-072208	DATE: 7/22/08

PURGING DATA

WELL DIAMETER (inches): 4" ~~2"~~	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 10 feet to 40 feet	STATIC DEPTH TO WATER (feet): 17.42	PURGE PUMP TYPE OR BAILER: Submersible Electric

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: **1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1100	1	1	.15	17.47	7.11	16.4	301		Clear	Sl Orange	NNO
1115	2.5	3.5	.15	17.51	7.04	16.4	241		↓	↓	↓
1125	1.5	5.0	.15	17.54	7.02	16.4	230				
1140	2.0	7.0	.15	17.55	7.02	16.4	235				

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Newschwander/WSDOE	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet): 25'	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL: Polyethylene	
FIELD DECONTAMINATION: (Y) N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
RW-1-072208	3			HCl		7.02		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene, **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

NOTES:

1. **STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)**

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

3

GROUNDWATER SAMPLING DATA SHEET

SITE NAME: Arden's Country Store	SITE LOCATION: Malott, Washington	
WELL NO: MW-A5	SAMPLE ID: MW-A5-072208	DATE: 7-22-08

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 10 feet to 40 feet	STATIC DEPTH TO WATER (feet): 17.13	PURGE PUMP TYPE OR BAILER: Submersible Electric

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: **1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1330	1	1	.2	17.15	7.32	15.7	211		SL Turbid	SL Orange	NNO
1345	3	4	.2	17.19	7.45	15.9	221		↓	↓	↓
1400	3	7	.2	17.20	7.41	15.9	240				
1410	3	10	.2	17.20	7.43	15.9	213				

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006, **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Newschwander/WSDOE	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1310	SAMPLING ENDED AT: 1420
PUMP OR TUBING DEPTH IN WELL (feet): 25'	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL: Polyethylene	
FIELD DECONTAMINATION: (Y) N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-A5-072208	3			HCl				

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap, **O** = Other (Specify)

NOTES:

1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

4

GROUNDWATER SAMPLING DATA SHEET

SITE NAME: Arden's Country Store		SITE LOCATION: Malott, Washington
WELL NO: MW-2	SAMPLE ID: MW-2-072208	DATE: 7-22-08

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 10 feet to 40 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: Submersible Electric

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
				Dry							
					14.5'						

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Newschwander/WSDOE	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL: Polyethylene	
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

NOTES:

1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

5

GROUNDWATER SAMPLING DATA SHEET

~~AS~~ 1715

SITE NAME: Arden's Country Store	SITE LOCATION: Malott, Washington	
WELL NO: RW-2	SAMPLE ID: RW-2-072208	DATE: 7-22-08

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 4"	WELL SCREEN INTERVAL DEPTH: 10 feet to 40 feet	STATIC DEPTH TO WATER (feet): 16.82	PURGE PUMP TYPE OR BAILER: Submersible Electric

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: **1 EQUIPMENT VOL.** = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1610	1	1	.2	16.84	6.40	14.7	391	NM	SI Turbid	Clear	NNO
1630	4	5	.2	16.85	6.50	14.6	510	↓	↓	↓	↓
1645	3	8	.2	16.85	6.44	14.6	456				
1700	3	11	.2	16.85	6.51	14.6	448	↓	↓	↓	↓

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jeff Newschwander/WSDOE	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1600	SAMPLING ENDED AT: 1715
PUMP OR TUBING DEPTH IN WELL (feet): 25'	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL: Polyethylene	
FIELD DECONTAMINATION: Y N	FIELD-FILTERED: Y N FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		
RW-2-072208	3			HCl				

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **VT** = Vacuum Trap; **O** = Other (Specify)

NOTES:

1. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

6.4 Sample Results

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206
ph: (509) 924.9200 fax: (509) 924.9290

August 06, 2008

Jeff Newschwander
Washington Department of Ecology - Yakima
15 W. Yakima Ave. Suite 200
Yakima, WA 98902

RE: Arden's Country Store

Enclosed are the results of analyses for samples received by the laboratory on 07/23/08 09:55. The following list is a summary of the Work Orders contained in this report, generated on 08/06/08 16:03.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
SRG0122	Arden's Country Store	J1G07

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206-5302
ph: (509) 924.9200 fax: (509) 924.9290

Washington Department of Ecology - Yakima	Project Name:	**Arden's Country Store**	
15 W. Yakima Ave. Suite 200	Project Number:	J1G07	Report Created:
Yakima, WA 98902	Project Manager:	Jeff Newschwander	08/06/08 16:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1-072208	SRG0122-01	Water	07/22/08 09:10	07/23/08 09:55
RW-1-072208	SRG0122-02	Water	07/22/08 11:45	07/23/08 09:55
MW-A5-072208	SRG0122-03	Water	07/22/08 14:20	07/23/08 09:55
RW-2-072208	SRG0122-04	Water	07/22/08 17:15	07/23/08 09:55

Randee Decker, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206-5302
ph: (509) 924.9200 fax: (509) 924.9290

Washington Department of Ecology - Yakima	Project Name: **Arden's Country Store**	
15 W. Yakima Ave. Suite 200	Project Number: J1G07	Report Created:
Yakima, WA 98902	Project Manager: Jeff Newschwander	08/06/08 16:03

Gasoline Hydrocarbons by NWTPH-Gx and BTEX by EPA Method 8021B
TestAmerica Spokane

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
SRG0122-01 (MW-1-072208)		**Water**			**Sampled: 07/22/08 09:10**					
Gasoline Range Hydrocarbons	NWTPH-G/8021B	ND	----	100	ug/l	1x	8070198	07/30/08 10:00	07/30/08 14:06	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	2.00	"	"	"	"	"	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*69.1%*			*36 - 150 %*	"			"	
4-BFB (PID)		*96.4%*			*64.1 - 131 %*	"			"	
SRG0122-02 (RW-1-072208)		**Water**			**Sampled: 07/22/08 11:45**					
Gasoline Range Hydrocarbons	NWTPH-G/8021B	ND	----	100	ug/l	1x	8070198	07/30/08 10:00	07/30/08 15:20	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	2.00	"	"	"	"	"	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*66.4%*			*36 - 150 %*	"			"	
4-BFB (PID)		*95.6%*			*64.1 - 131 %*	"			"	
SRG0122-03 (MW-A5-072208)		**Water**			**Sampled: 07/22/08 14:20**					
Gasoline Range Hydrocarbons	NWTPH-G/8021B	ND	----	100	ug/l	1x	8070198	07/30/08 10:00	07/30/08 15:52	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	2.00	"	"	"	"	"	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*67.5%*			*36 - 150 %*	"			"	
4-BFB (PID)		*103%*			*64.1 - 131 %*	"			"	
SRG0122-04 (RW-2-072208)		**Water**			**Sampled: 07/22/08 17:15**					
Gasoline Range Hydrocarbons	NWTPH-G/8021B	ND	----	100	ug/l	1x	8070198	07/30/08 10:00	07/30/08 16:23	
Benzene	"	ND	----	0.500	"	"	"	"	"	
Toluene	"	ND	----	2.00	"	"	"	"	"	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.50	"	"	"	"	"	
Surrogate(s): 4-BFB (FID)		*76.3%*			*36 - 150 %*	"			"	
4-BFB (PID)		*103%*			*64.1 - 131 %*	"			"	

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206-5302
ph: (509) 924.9200 fax: (509) 924.9290

Washington Department of Ecology - Yakima	Project Name: **Arden's Country Store**	
15 W. Yakima Ave. Suite 200	Project Number: J1G07	Report Created:
Yakima, WA 98902	Project Manager: Jeff Newschwander	08/06/08 16:03

Gasoline Hydrocarbons by NWTPH-Gx and BTEX by EPA Method 8021B - Laboratory Quality Control Results
TestAmerica Spokane

QC Batch: 8070198 **Water Preparation Method: GC Volatiles**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	RPD	(Limits)	Analyzed	Notes
Blank (8070198-BLK1)								**Extracted: 07/30/08 10:00**						
Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	ND	---	100	ug/l	1x	--	--	--	--	--	--	07/30/08 10:43	
Benzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.50	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 68.6%*			*Limits: 36-150%*	"							*07/30/08 10:43*	
4-BFB (PID)		*104%*			*64.1-131%*	"							"	
LCS (8070198-BS1)								**Extracted: 07/30/08 10:00**						
Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	812	---	100	ug/l	1x	--	1000	81.2%	(80-120)	--	--	07/30/08 12:48	
Surrogate(s): 4-BFB (FID)		*Recovery: 105%*			*Limits: 36-150%*	"							*07/30/08 12:48*	
LCS (8070198-BS2)								**Extracted: 07/30/08 10:00**						
Benzene	NWTPH-Gx/8021B	19.0	---	0.500	ug/l	1x	--	20.0	95.0%	(80-120)	--	--	07/30/08 13:24	
Toluene	"	19.3	---	2.00	"	"	--	"	96.3%	"	--	--	"	
Ethylbenzene	"	19.0	---	1.00	"	"	--	"	94.8%	(77.6-128)	--	--	"	
Xylenes (total)	"	56.9	---	1.50	"	"	--	60.0	94.8%	(80-121)	--	--	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 98.3%*			*Limits: 64.1-131%*	"							*07/30/08 13:24*	
Duplicate (8070198-DUP1)					**QC Source: SRG0128-01**			**Extracted: 07/30/08 10:00**						
Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	ND	---	100	ug/l	1x	ND	--	--	--	21.2%	(35)	07/31/08 13:13	
Benzene	"	4.43	---	0.500	"	"	3.94	--	--	--	11.6%	(30.7)	"	
Toluene	"	ND	---	2.00	"	"	ND	--	--	--	NR	(16.8)	"	
Ethylbenzene	"	1.42	---	1.00	"	"	1.76	--	--	--	21.1%	(11.5)	"	R4
Xylenes (total)	"	4.14	---	1.50	"	"	4.55	--	--	--	9.25%	(15.3)	"	
Surrogate(s): 4-BFB (FID)		*Recovery: 74.3%*			*Limits: 36-150%*	"							*07/31/08 13:13*	
4-BFB (PID)		*104%*			*64.1-131%*	"							"	
Matrix Spike (8070198-MS1)					**QC Source: SRG0128-01**			**Extracted: 07/30/08 10:00**						
Gasoline Range Hydrocarbons	NWTPH-Gx/8021B	873	---	100	ug/l	1x	12.7	1000	86.0%	(55.6-126)	--	--	07/31/08 13:48	
Surrogate(s): 4-BFB (FID)		*Recovery: 98.4%*			*Limits: 36-150%*	"							*07/31/08 13:48*	
Matrix Spike (8070198-MS2)					**QC Source: SRG0128-01**			**Extracted: 07/30/08 10:00**						
Benzene	NWTPH-Gx/8021B	23.0	---	0.500	ug/l	1x	3.94	20.0	95.0%	(76.5-129)	--	--	07/31/08 14:24	
Toluene	"	20.1	---	2.00	"	"	0.295	"	99.0%	(80-120)	--	--	"	
Ethylbenzene	"	21.0	---	1.00	"	"	1.76	"	96.1%	(80-128)	--	--	"	
Xylenes (total)	"	61.8	---	1.50	"	"	4.55	60.0	95.4%	(80-130)	--	--	"	

TestAmerica Spokane

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Randee Decker, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206-5302
ph: (509) 924.9200 fax: (509) 924.9290

Washington Department of Ecology - Yakima	Project Name:	**Arden's Country Store**	
15 W. Yakima Ave. Suite 200	Project Number:	J1G07	Report Created:
Yakima, WA 98902	Project Manager:	Jeff Newschwander	08/06/08 16:03

Gasoline Hydrocarbons by NWTPH-Gx and BTEX by EPA Method 8021B - Laboratory Quality Control Results
TestAmerica Spokane

QC Batch: 8070198 **Water Preparation Method: GC Volatiles**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (8070198-MS2)					QC Source: SRG0128-01				Extracted: 07/30/08 10:00					
Surrogate(s): 4-BFB (PID)		*Recovery: 103%*			*Limits: 64.1-131%*	*1x*							*07/31/08 14:24*	

TestAmerica Spokane

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Randee Decker, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SPOKANE, WA 11922 E. 1ST AVENUE
SPOKANE VALLEY, WA 99206-5302
ph: (509) 924.9200 fax: (509) 924.9290

Washington Department of Ecology - Yakima	Project Name:	**Arden's Country Store**	
15 W. Yakima Ave. Suite 200	Project Number:	J1G07	Report Created:
Yakima, WA 98902	Project Manager:	Jeff Newschwander	08/06/08 16:03

Notes and Definitions

Report Specific Notes:

R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR/NA - Not Reported / Not Available

dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.

wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.

RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).

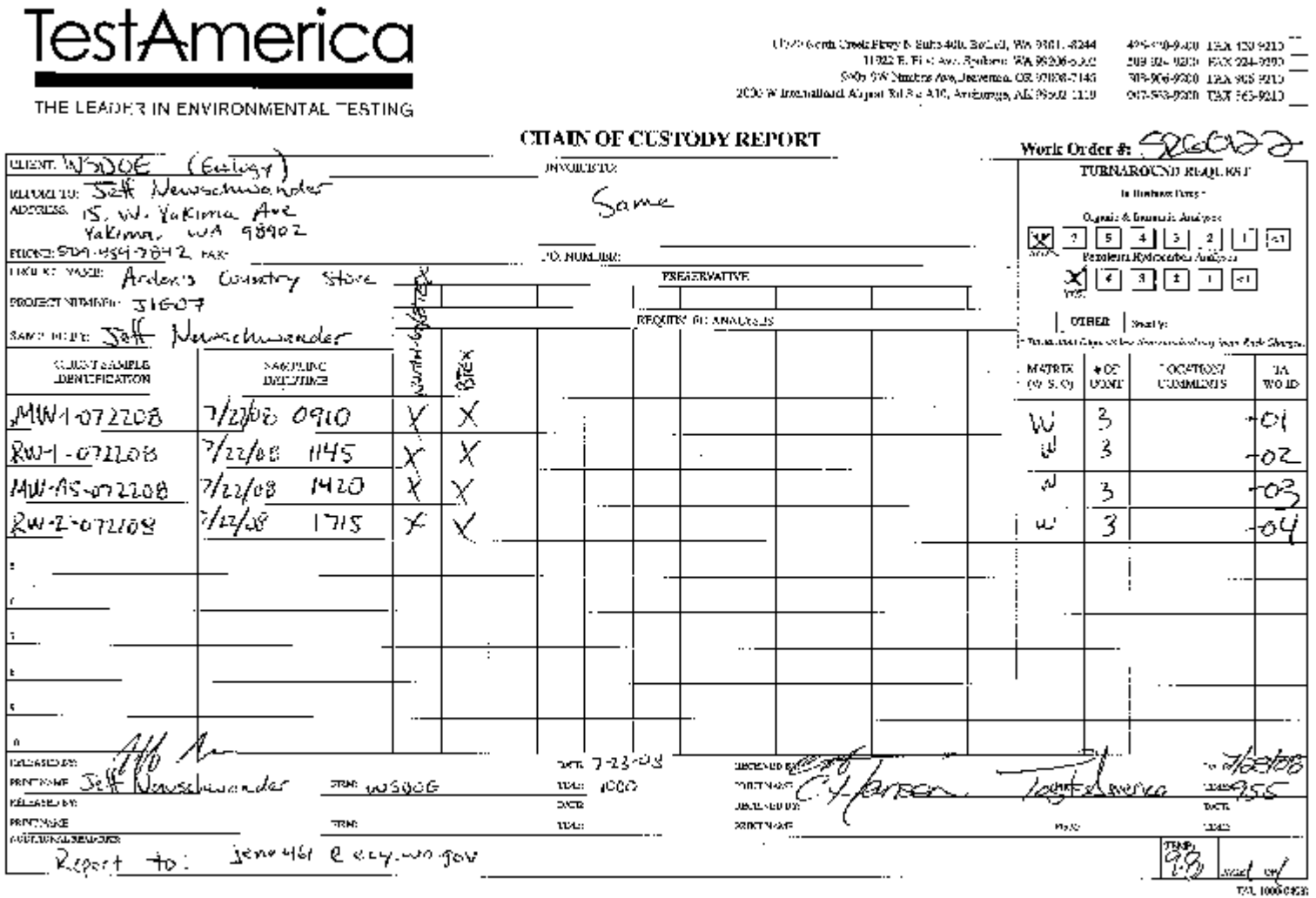
MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CHAIN OF CUSTODY REPORT

Work Order #: SRC0D2

CLIENT: WSDOE (Ecology)
INVOICE TO: Same
REPORT TO: Jeff Newschwander
ADDRESS: 15 W. Yakima Ave Yakima, WA 98902
PHONE: 509-454-7842 FAX:
P.O. NUMBER:
FROM PROJECT NAME: Arden's Country Store
PROJECT NUMBER: 31607
SAMPLER NAME: Jeff Newschwander
PRESERVATIVE
REQUIRED ANALYSIS

TURNAROUND REQUEST (in business days)
Organic & Inorganic Analyses: X Yes | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analysis: X Yes | 4 | 3 | 2 | 1 | <1
OTHER | Specify:
* Turnaround Days will be determined by your Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Gx/BTEX	BTEX	MATRIX (W, S, O)	# OF CONT	LOCATION/ COMMENTS	TA WO ID
MW1-072208	7/22/08 0910	X	X	W	3		-01
RW1-072208	7/22/08 1145	X	X	W	3		-02
MW-A5-072208	7/22/08 1420	X	X	W	3		-03
RW-2-072208	7/22/08 1715	X	X	W	3		-04

RELINQUISHED BY: Jeff Newschwander
PRINT NAME: Jeff Newschwander
FIRM: WSDOE
DATE: 7-23-08
TIME: 1000
RELINQUISHED BY:
PRINT NAME:
FIRM:
DATE:
TIME:
ADDITIONAL REMARKS: Report to: jene461@ecy.wa.gov

RECEIVED BY: C. Harper
PRINT NAME:
RECEIVED BY: Taylor Rivera
PRINT NAME:
DATE: 7/23/08
TIME: 955
TEMP: 9.9
seal on

TAL 1000 0420

6.5 Photo log

Photo 1: Front of Store – from the southwest

Photo 2: Front of store – from the south, former treatment system location

Photo 3: Back of Residence – recovery well and post office from the north

Photo 4: Back of Residence – recovery well and post office from the northwest