

August 18, 1995

15,881.001

Mr. Joseph L. Glassman
Director of Environmental Programs
Front Royal Environmental Insurance Management, Inc.
45615 Willow Pond Plaza
Sterling, Virginia 21064

Dear Mr. Glassman:

**Groundwater Monitoring Well Installation and Sampling
Winlock School District Bus Garage
Winlock, Washington**

This letter documents groundwater monitoring well installation and sampling activities performed by AGI Technologies (AGI) on June 29, 1995 at the Winlock School District Bus Garage in Winlock, Washington. AGI's services were performed in accordance with our June 23, 1995 confirming proposal.

BACKGROUND

The Winlock School District Bus Garage location is shown on Figure 1. The bus garage is used by the local school district to service and maintain the school motor vehicle fleet. Prior to March 1995, the vehicles were fueled from two 11-year-old 1,000-gallon USTs, one diesel and one gasoline, located under a canopy at the north end of the bus garage (see Figure 2). We understand a release from the gasoline UST was discovered in March 1995, and that both USTs were removed at that time. A third 1,000-gallon UST, which had been abandoned in place approximately 20 years ago, was also removed at the same time. The third UST was reported to have stored leaded gasoline while in service.

During UST removal activities, soil impacted by petroleum hydrocarbons was excavated to the extent practical and treated aboveground. Soil containing gasoline-range petroleum hydrocarbon concentrations above Washington State Method A (routine site) soil cleanup levels,¹ reportedly

¹ Method A suggested cleanup level for residential soil promulgated under Washington Administrative Code (WAC), Chapter 173-340, Model Toxics Control Act Cleanup Regulation.

remains in place below the northeast portion of the bus garage. The UST removal and soil remediation activities are described in Industrial Safety and Training, Inc.'s May 14, 1995 report.

PURPOSE AND SCOPE OF SERVICES

The purpose of our proposed services was to evaluate shallow groundwater in the vicinity of the former USTs. Our proposed scope of services to address these objectives included:

- Exploring subsurface soil and groundwater conditions by drilling and logging four soil borings and completing them as 2-inch-diameter groundwater monitoring wells.
- Evaluating soil samples collected during drilling using headspace screening.
- Submitting one soil sample from each of the two hydraulically downgradient soil borings for laboratory analyses by Washington State Method WTPH-G for total petroleum hydrocarbons (TPH) quantified as gasoline, and by EPA Method 8020 for benzene, ethylbenzene, toluene, and total xylenes (BETX).
- Developing and purging the monitoring wells. A groundwater sample was collected from each well following purging and submitted to a laboratory for analyses using Washington State Method WTPH-G and EPA Method 8020 for BETX.
- Surveying the monitoring wells to a common datum after installation and preparing a potentiometric surface map using depth to water measurements.
- Preparing this summary report documenting our findings.

SITE DESCRIPTION

The City of Winlock is located within the Puget Trough section of the Pacific Border physiographic province. A geologic map² of the area classifies the underlying deposits as belonging to the glaciofluvial Logan Hill Formation, consisting of poorly sorted gravel and sand with lenses of clay, sand, gravel, and till. This formation is found to depths ranging from 90 to more than 180 feet, with an average thickness of 140 feet.

² Weigle, J. M., and B. L. Foxworthy, 1962. *Geology and Ground-Water Resources of West-Central Lewis County, Washington*. State of Washington, Department of Conservation, Division of Water Resources, Water Supply Bulletin No. 17.

The 3,800-square-foot bus garage is situated on a relatively flat site which has been recently surfaced with crushed rock. The site is bordered by Olequa Creek to the east and King Road to the south; Winlock Rental and Industrial Supplies owns the open lots bordering the north and west sides of the property. To the east of Olequa Creek a wood products mill is active; to the south of King Road lies a school athletic field. At some time in the past, Olequa Creek was reportedly dammed and used to generate hydroelectric power for the mill. The bus garage is situated on the site of the old mill pond.

Following the removal of the USTs in March 1995, two aboveground fuel tanks (500-gallon unleaded gasoline and 2,000-gallon diesel) were installed east of the bus garage. A concrete secondary containment structure surrounds the tanks. An underground line from the bus garage supplies electricity to the pumps located within the containment structure.

FIELD INVESTIGATION AND ANALYSIS

Monitoring Well Installation, Development, and Sampling

Four monitoring wells (MW1 through MW4) were drilled, installed, surveyed, and sampled on June 21, 1995. Drilling and well installation were performed by Holt Testing, Inc. of Puyallup, Washington using a Mobile Drill B-59 drill rig equipped with 4-1/4-inch inside-diameter hollow-stem augers. Figure 2 shows monitoring well locations. Logs of borings and well completion details are presented on Plates 1 through 6.

Soil samples were collected during drilling using a split-barrel sampler, examined, and logged according to the Unified Soil Classification System as shown on Plate 1. Soil samples collected during drilling were screened for volatile organic compounds (VOCs) using an organic vapor meter equipped with a photoionization detector (OVM-PID).

Soils observed during drilling were a mixture of silt and silty gravel fill material to a depth of 7.5 to 10 feet below ground surface (bgs). Gray to black sand with a varying silt and organic content is present below the fill material, and is believed to be deposited in the former mill pond. One boring (MW3) intersected a hard brown silt at 14 feet bgs, which is considered to belong to the Logan Hill Formation.

Well elevations were surveyed by AGI and referenced to a temporary benchmark (assigned elevation 100.00 feet) located on top of the southwest corner of the secondary containment wall surrounding the aboveground tanks. Water elevations were measured on June 21 following sampling. Figure 3 illustrates the potentiometric surface and direction of groundwater flow. Based on the inferred direction of groundwater flow, Monitoring Wells MW1 and MW2 are located generally downgradient of the former USTs.

Sample Analysis

Two soil samples were collected for analysis during drilling, one from each of the downgradient wells (MW1 and MW2). Groundwater samples were collected from each monitoring well following development. Samples were delivered to CCI Analytical Laboratories, Inc. (CCI) on June 22, 1995 for analysis of TPH quantified as gasoline by WTPH-G and for BETX by EPA Method 8020.

ANALYTICAL RESULTS

Analytical results for soil are summarized in Table 1. TPH quantified as gasoline was detected above the cleanup level in MW2 at 10 feet. All other results were either not detected or below cleanup levels.

Groundwater analytical results are summarized in Table 2. Fuel hydrocarbons quantified as gasoline and/or gasoline components (BETX) were detected in each of the four groundwater samples. Detections above cleanup levels included benzene in MW1 and BETX and TPH quantified as gasoline in MW2.

CONCLUSIONS

TPH quantified as gasoline was detected above routine site cleanup levels in the soil sample collected from MW2. This is likely a result of a past release, since we would expect to see a higher concentration of benzene associated with a recent release. The hydrocarbon concentrations may have resulted from a surface spill, as evidenced by elevated organic vapor concentrations measured in near-surface soils during drilling. Similarly, the relatively low concentration of benzene in the groundwater sample from MW2 may be associated with a past release. The benzene detected in the groundwater sample from MW1 is only slightly above the cleanup level.

RECOMMENDATIONS

We recommend quarterly groundwater monitoring be performed through three additional quarters to evaluate the residual petroleum hydrocarbons in groundwater and seasonal fluctuations in groundwater elevation. Additional actions can be determined at that time.

LIMITATIONS

This report has been prepared for the exclusive use of Front Royal Environmental Insurance Management, Inc. and its consultants for this project only. The analyses, conclusions, and recommendations presented in this report are based on conditions encountered at the time of our study and our experience and engineering judgement. AGI cannot be held responsible for the interpretation by others of the data contained herein.

Mr. Joseph L. Glassman
Front Royal Environmental Insurance Management, Inc.
August 18, 1995
Page 5



Our services have been performed in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the area. No other warranty, express or implied, is made.

Sincerely,

AGI Technologies

A handwritten signature in black ink, appearing to read "L. Christenson", written over the printed name.

Lief Christenson, P.G.
Geologist

A handwritten signature in black ink, appearing to read "Gary Laakso", written over the printed name.

Gary Laakso
Principal Scientist

LGC/GLL/tag

attachments

TABLES	
--------	--

Table 1
Summary of Chemical Analyses – Soil
 Front Royal/Winlock School District
 Winlock, Washington

Sample I.D.	Date Sampled	EPA Test Method				Washington State Test Method
		<u>BETX 5030/8020</u>				WTPH—G
		Benzene	Ethylbenzene	Toluene	Total Xylenes	
		mg/kg				mg/kg
MW1—15.0	06/29/95	ND	ND	ND	ND	ND
MW2—10.0	06/29/95	ND	2.9	1.6	16	420
Method Reporting Limit		0.2	0.2	0.2	0.6	10
State Cleanup Levels ^a		0.5	20.0	40.0	20.0	100

Notes:

a) Method A suggested cleanup level for residential soil promulgated under Washington Administrative Code Chapter 173-340, State of Washington Model Toxics Control Act Cleanup Regulation.

mg/kg – Milligrams per kilogram.

ND – Not detected.

TPH-G – Total petroleum hydrocarbons quantified as gasoline.

Table 2
Summary of Analytical Results – Groundwater
 Front Royal/Winlock School District
 Winlock, Washington

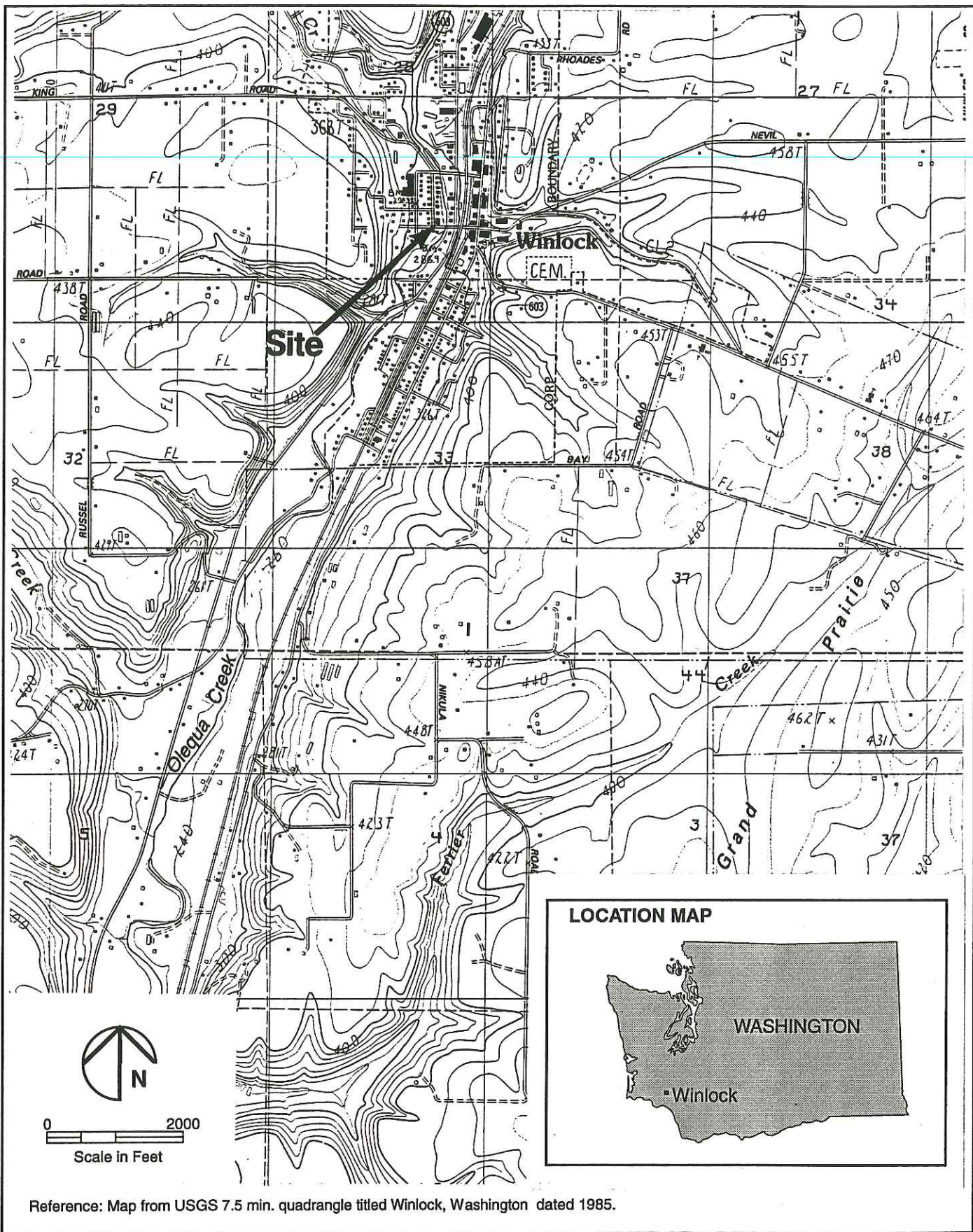
Sample Location	Sample ID	Date Sampled	EPA Test Method				Washington State Test Method
			BETX 5030/8030				TPH-G
			Benzene	Ethylbenzene	Toluene	Xylenes	
			$\mu\text{g/L}$				$\mu\text{g/L}$
MW1	W-1	06/29/95	8.5	1.4	1.6	1.4	150
MW2	W-2	06/29/95	390	240	400	1,100	9,700
MW3	W-3	06/29/95	ND	ND	ND	ND	75
MW4	W-4	06/29/95	ND	ND	ND	ND	130
Method Reporting Limit			1	1	1	3	50
Method A Cleanup Levels ^a			5	30	40	20	1,000

a) Method A suggested cleanup level for groundwater promulgated under Washington Administrative Code Chapter 173-340, Model Toxics Control Act Cleanup Regulation.

ND – Not detected.

TPH-G – Total petroleum hydrocarbons quantified as gasoline.

$\mu\text{g/L}$ – Micrograms per liter.



AGI
TECHNOLOGIES

Vicinity Map
Front Royal/Winlock School District
Winlock, Washington

FIGURE

1

PROJECT NO.
15,881.001

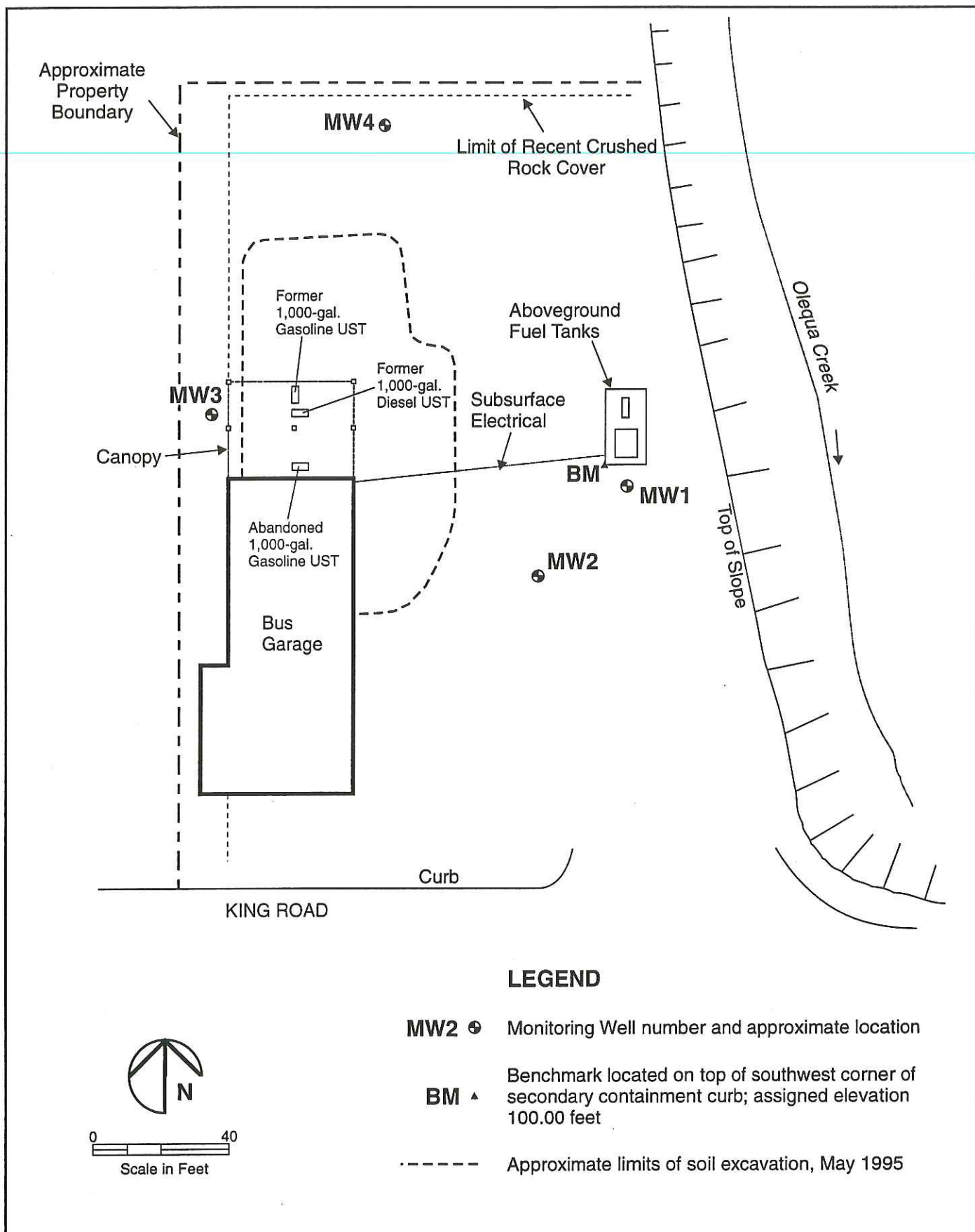
DRAWN
DFF

DATE
17 Jul 95

APPROVED
MJC

REVISED

DATE



AGI
TECHNOLOGIES

siteplan.cdr

PROJECT NO.
15,881.001

DRAWN
DFF

Site Plan

Front Royal/Winlock School District
Winlock, Washington

DATE
10 Jul 95

APPROVED

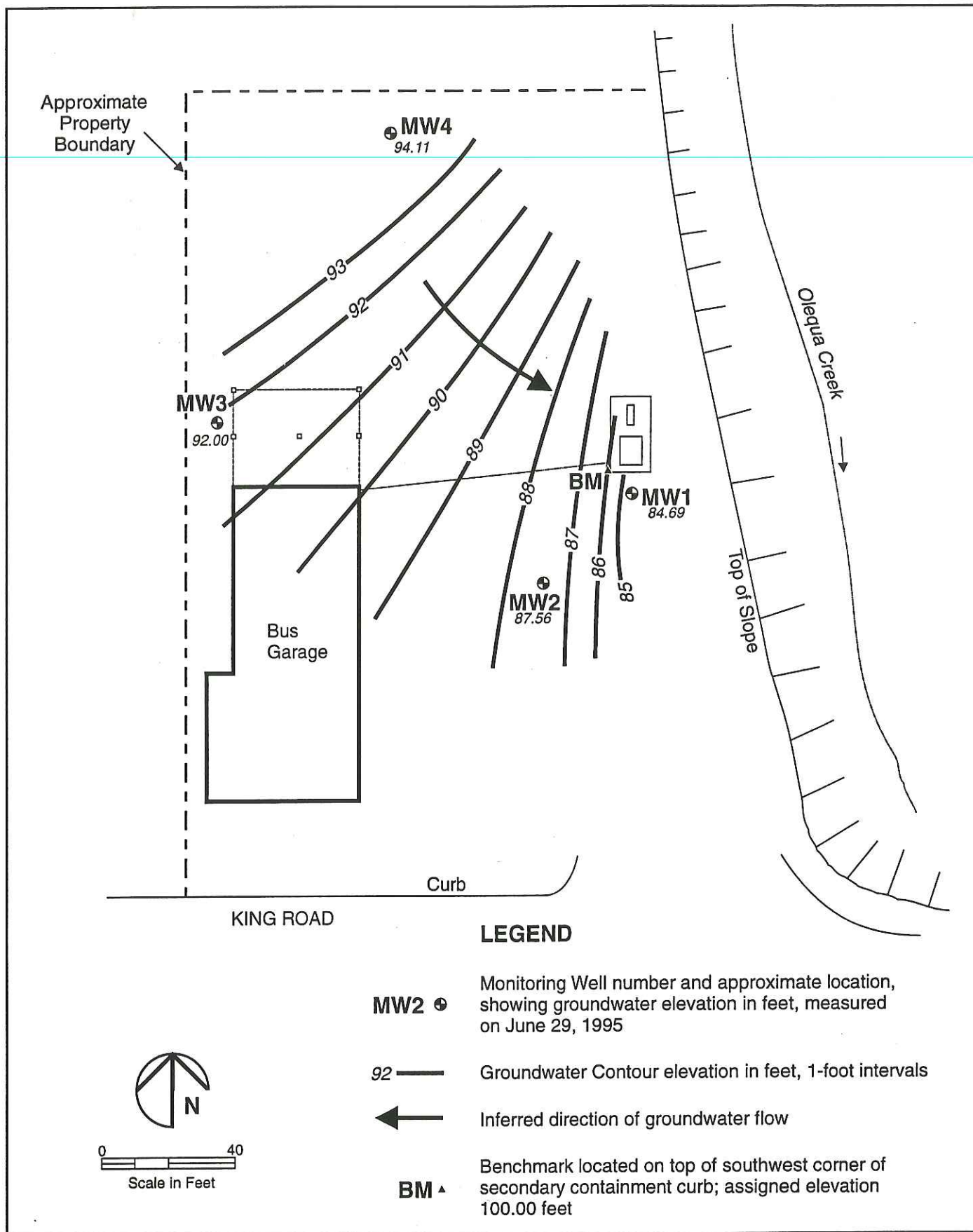
MSC

REVISED

FIGURE

2

DATE



AGI
TECHNOLOGIES

grdwater.cdr

Groundwater Contour & Elevation Map

Front Royal/Winlock School District
Winlock, Washington

FIGURE

3

PROJECT NO.
15,881.001

DRAWN
DFF

DATE
10 Jul 95

APPROVED
MJC

REVISED

DATE

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS				TYPICAL NAMES	
COARSE GRAINED SOILS More than half is larger than No. 200 Sieve	GRAVELS More than half coarse fraction is larger than No. 4 sieve size	Clean gravels with little or no fines	GW	Well graded gravels, gravel-sand mixtures	
			GP	Poorly graded gravels, gravel-sand mixtures	
		Gravels with over 12% fines	GM	Silty Gravels, poorly graded gravel-sand-silt mixtures	
			GC	Clayey gravels, poorly graded gravel-sand-clay mixtures	
	SANDS More than half coarse fraction is smaller than No. 4 sieve size	Clean sands with little or no fines	SW	Well graded sands, gravelly sands	
			SP	Poorly graded sands, gravelly sands	
		Sands with over 12% fines	SM	Silty sand, poorly graded sand-silt mixtures	
			SC	Clayey sands, poorly graded sand-clay mixtures	
	FINE GRAINED SOILS More than half is smaller than No. 200 Sieve	SILTS AND CLAYS Liquid limit less than 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
OL				Organic clays and organic silty clays of low plasticity	
SILTS AND CLAYS Liquid limit greater than 50		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		
		CH	Inorganic clays of high plasticity, fat clays		
		OH	Organic clays of medium to high plasticity, organic silts		
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils		

SAMPLE

- "Undisturbed"
- ▣ Bulk/Grab
- Not Recovered
- ▤ Recovered, Not Retained

CONTACT BETWEEN UNITS

- Well Defined Change
- Gradational Change
- - - - - Obscure Change
- End of Exploration

PHYSICAL PROPERTY TESTS

- Consol - Consolidation
- LL - Liquid Limit
- PL - Plastic Limit
- Gs - Specific Gravity
- SA - Size Analysis
- TxS - Triaxial Shear
- TxP - Triaxial Permeability
- Perm - Permeability
- Po - Porosity
- MD - Moisture/Density
- DS - Direct Shear
- VS - Vane Shear
- Comp - Compaction

BLOWS PER FOOT

Hammer is 140 pounds with 30-inch drop, unless otherwise noted

- S - SPT Sampler (2.0-Inch O.D.)
- T - Thin Wall Sampler (2.8-Inch Sample)
- H - Split Barrel Sampler (2.4-Inch Sample)

MOISTURE DESCRIPTION

- Dry - Considerably less than optimum for compaction
- Moist - Near optimum moisture content
- Wet - Over optimum moisture content
- Saturated - Below water table, in capillary zone, or in perched groundwater

- UU - Unconsolidated, Undrained
- CU - Consolidated, Undrained
- CD - Consolidated, Drained

AGI
TECHNOLOGIES

soilcls.cdr

PROJECT NO.
15,881.001

DRAWN
DFF

DATE
10 Jul 95

APPROVED
MSC

REVISED

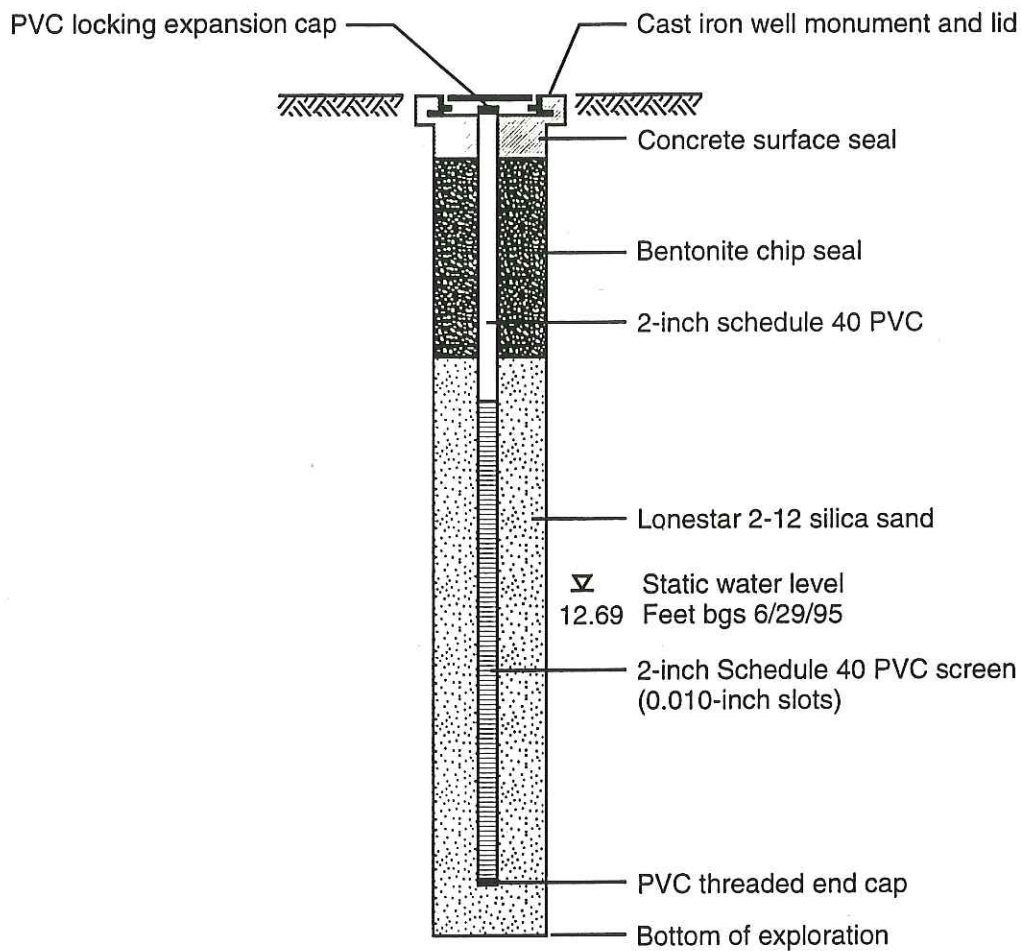
DATE

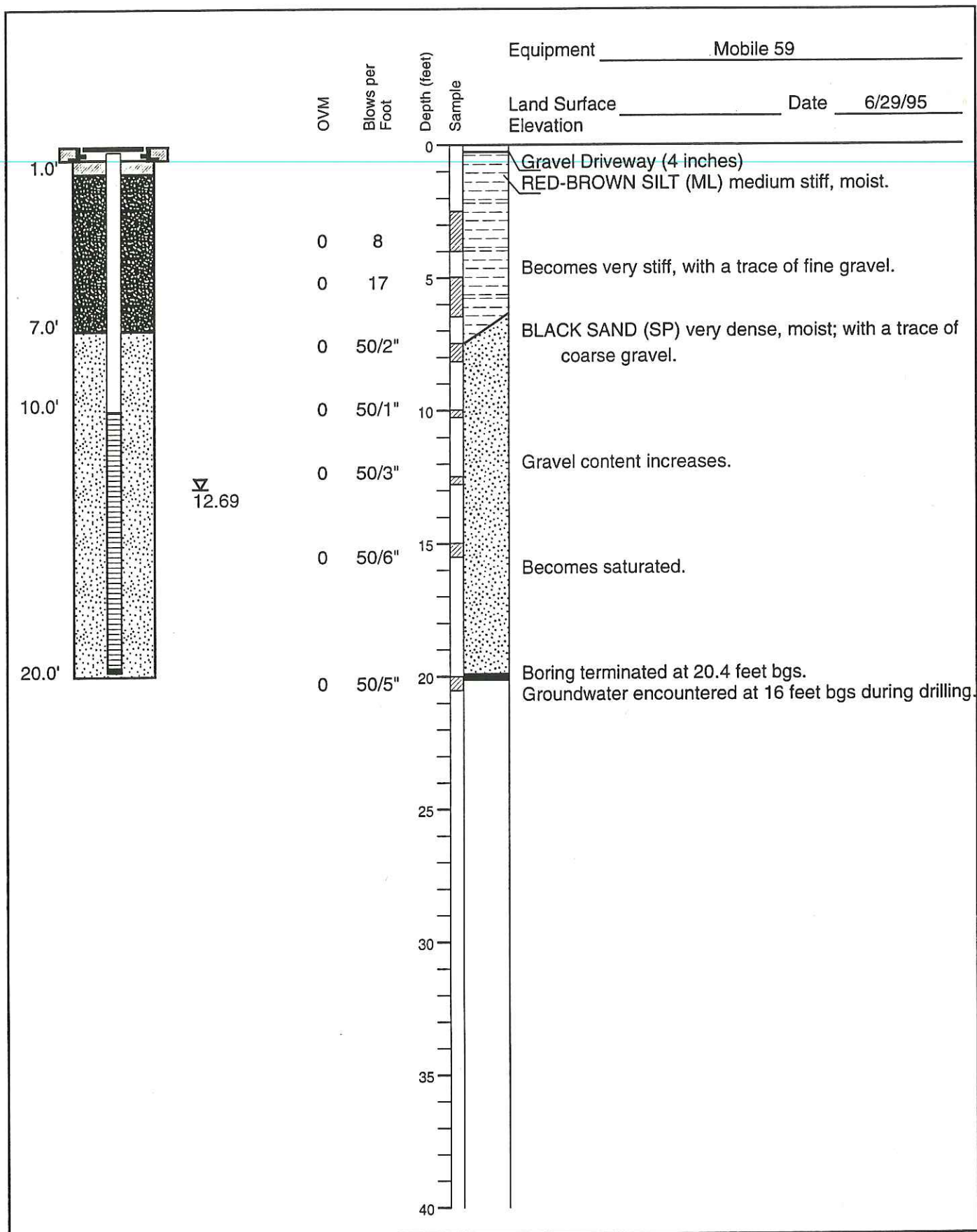
Soil Classification/Legend

Front Royal/Winlock School District
Winlock, Washington

PLATE

1





AGI
TECHNOLOGIES

wellog.cdr

PROJECT NO.
15,881.001

DRAWN
DFF

Log of Monitor Well MW1
Front Royal/Winlock School District
Winlock, Washington

DATE
10 Jul 95

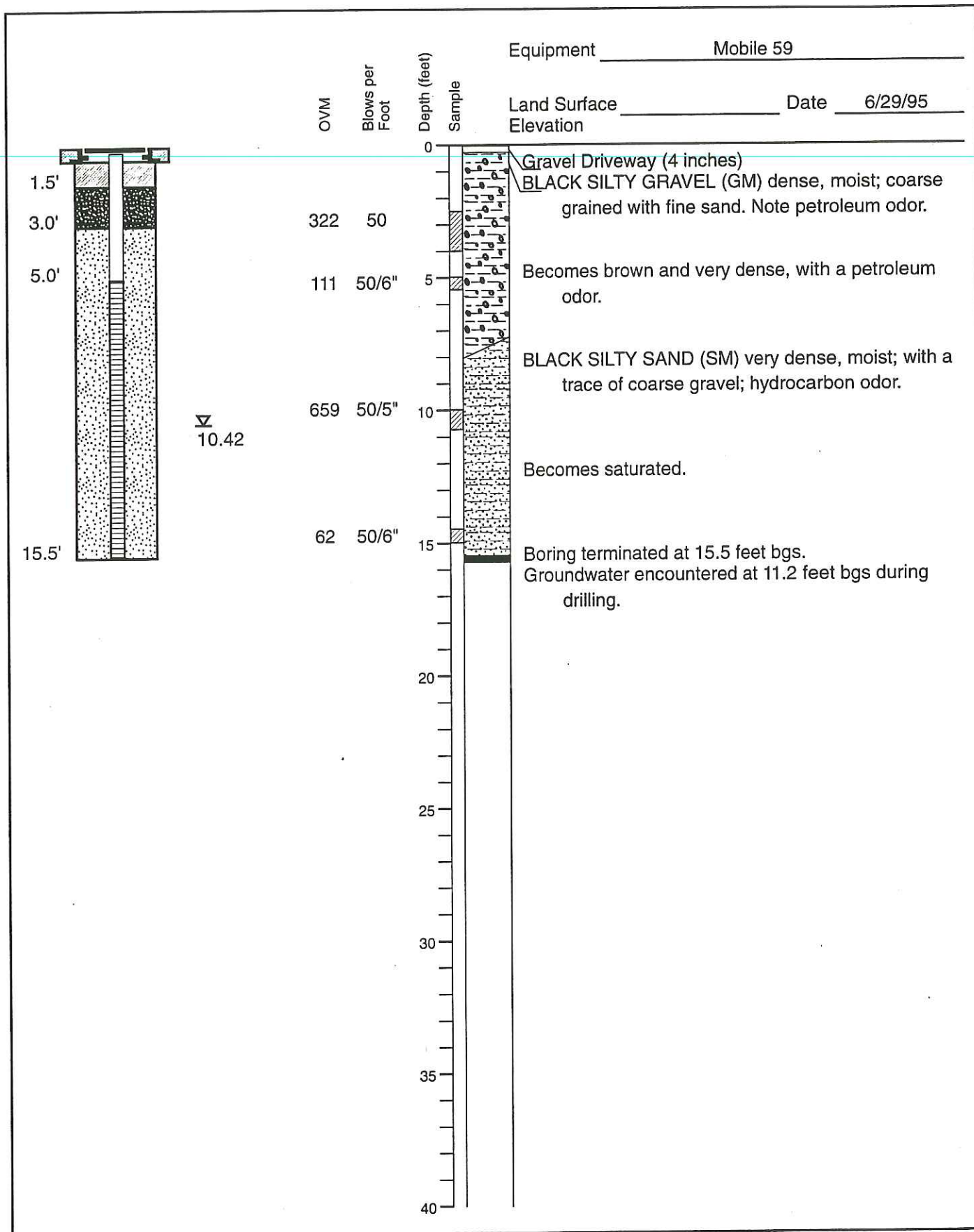
APPROVED
MSE

REVISED

PLATE

3

DATE



AGI
TECHNOLOGIES

wellog.cdr

PROJECT NO.
15,881.001

DRAWN
DFF

DATE
10 Jul 95

APPROVED
MSC

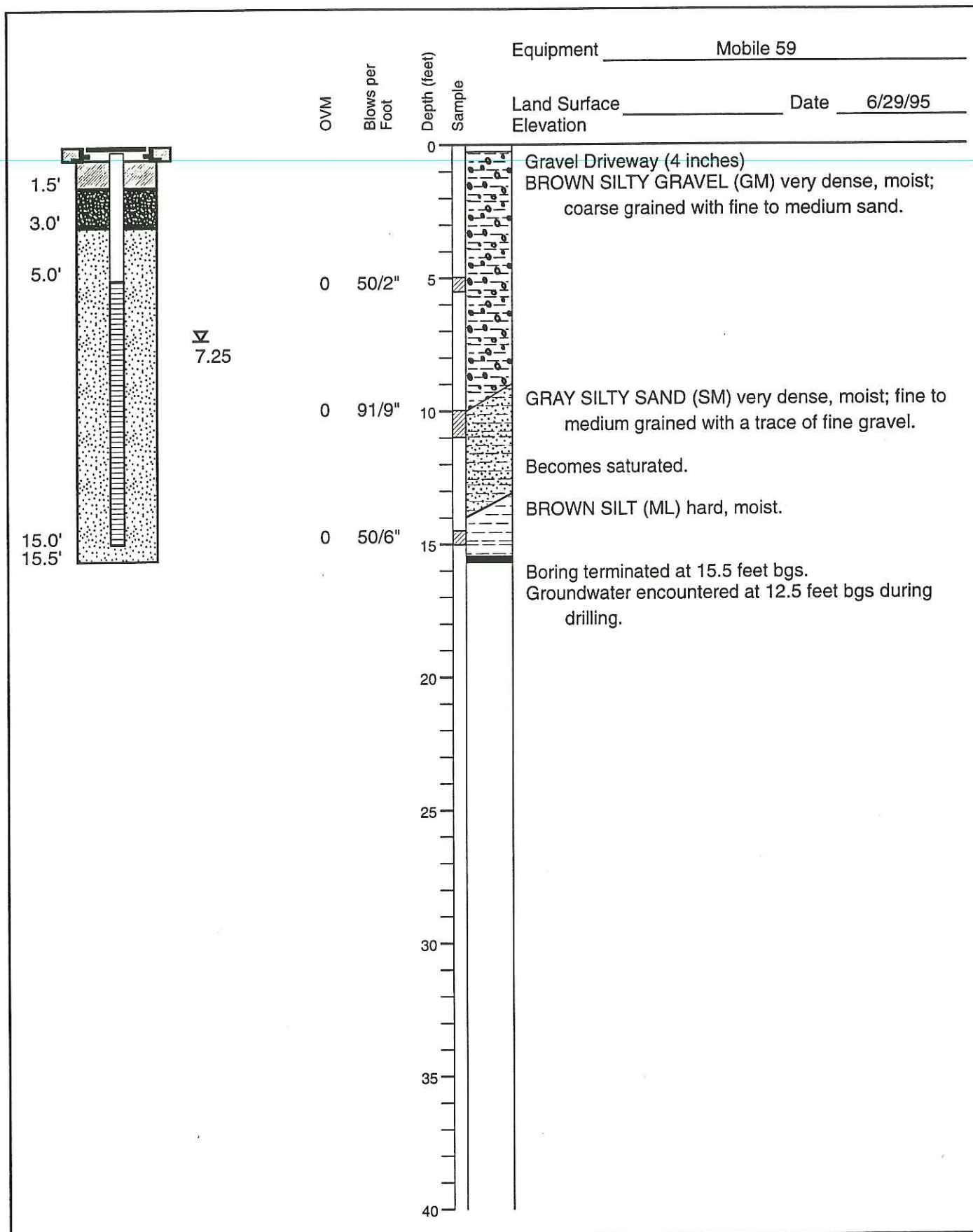
REVISED

PLATE

4

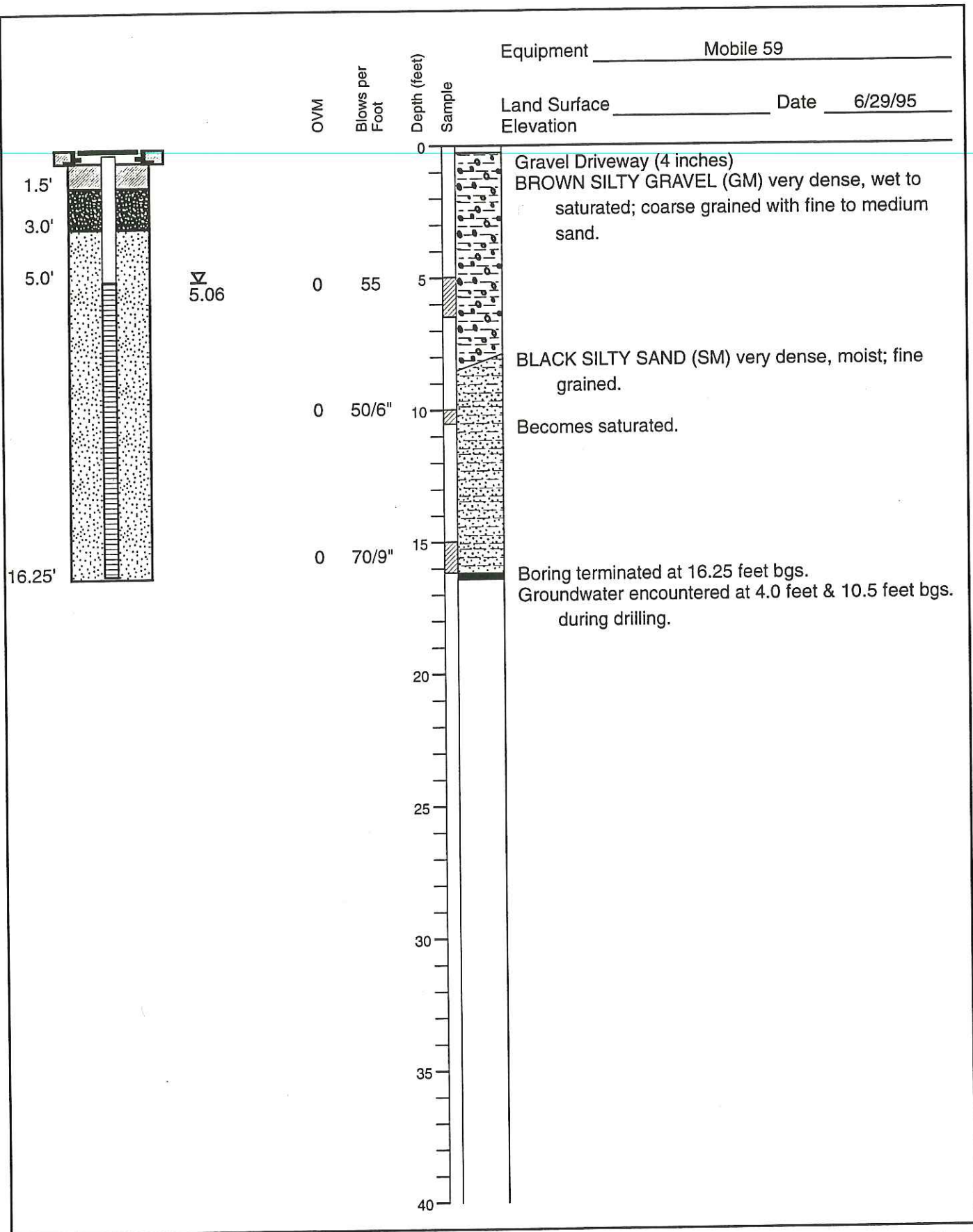
DATE

Log of Monitor Well MW2
Front Royal/Winlock School District
Winlock, Washington



Log of Monitor Well MW3
Front Royal/Winlock School District
Winlock, Washington

PLATE
5



AGI
TECHNOLOGIES

wellog.cdr

PROJECT NO.
15,881.001

DRAWN
DFF

Log of Monitor Well MW4 Front Royal/Winlock School District Winlock, Washington

DATE
10 Jul 95

APPROVED
Mic

REVISED

PLATE
6

DATE



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 1
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: MW1-15.0 6/29/95 750

DATA RESULTS

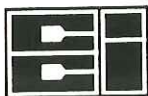
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION	ANALYSIS	ANALYSIS
				LEVEL ***	DATE	BY
TPH-GASOLINE	WTPH-G	ND(<10)	MG/KG	100MG/KG	7/7/95	KLP
BENZENE	EPA-8020	ND(<0.2)	MG/KG	.5MG/KG	7/7/95	KLP
TOLUENE	EPA-8020	ND(<0.2)	MG/KG	40MG/KG	7/7/95	KLP
ETHYLBENZENE	EPA-8020	ND(<0.2)	MG/KG	20MG/KG	7/7/95	KLP
XYLENES	EPA-8020	ND(<0.6)	MG/KG	20MG/KG	7/7/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CPH



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 2
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: MW2-10.0 6/29/95 925

DATA RESULTS

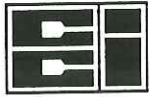
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION	ANALYSIS	ANALYSIS
				LEVEL***	DATE	BY
TPH-GASOLINE	WTPH-G	420	MG/KG	100MG/KG	7/6/95	KLP
BENZENE	EPA-8020	ND(<0.5)	MG/KG	.5MG/KG	7/6/95	KLP
TOLUENE	EPA-8020	1.6	MG/KG	40MG/KG	7/6/95	KLP
ETHYLBENZENE	EPA-8020	2.9	MG/KG	20MG/KG	7/6/95	KLP
XYLENES	EPA-8020	16	MG/KG	20MG/KG	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY:



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 3
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: W-1 6/29/95 1845

DATA RESULTS

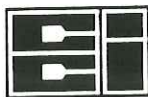
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	150	UG/L	1000 UG/L	7/6/95	KLP
BENZENE	EPA-8020	8.5	UG/L	5 UG/L	7/6/95	KLP
TOLUENE	EPA-8020	1.6	UG/L	40 UG/L	7/6/95	KLP
ETHYLBENZENE	EPA-8020	1.4	UG/L	30 UG/L	7/6/95	KLP
XYLENES	EPA-8020	1.4	UG/L	20 UG/L	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRJ



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 4
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: W-2 6/29/95 1905

DATA RESULTS

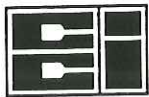
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	9700	UG/L	1000 UG/L	7/7/95	KLP
BENZENE	EPA-8020	390	UG/L	5 UG/L	7/7/95	KLP
TOLUENE	EPA-8020	400	UG/L	40 UG/L	7/7/95	KLP
ETHYLBENZENE	EPA-8020	240	UG/L	30 UG/L	7/7/95	KLP
XYLENES	EPA-8020	1100	UG/L	20 UG/L	7/7/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRB



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 5
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: W-3 6/29/95 1745

DATA RESULTS

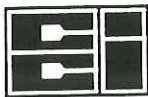
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION	ANALYSIS	ANALYSIS
				LEVEL***	DATE	BY
TPH-GASOLINE	WTPH-G	75	UG/L	1000 UG/L	7/6/95	KLP
BENZENE	EPA-8020	ND(<1)	UG/L	5 UG/L	7/6/95	KLP
TOLUENE	EPA-8020	ND(<1)	UG/L	40 UG/L	7/6/95	KLP
ETHYLBENZENE	EPA-8020	ND(<1)	UG/L	30 UG/L	7/6/95	KLP
XYLENES	EPA-8020	ND(<3)	UG/L	20 UG/L	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRB



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 6
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: W-4 6/29/95 1815

DATA RESULTS

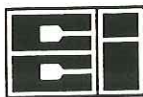
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	130	UG/L	1000 UG/L	7/6/95	KLP
BENZENE	EPA-8020	ND(<2)	UG/L	5 UG/L	7/6/95	KLP
TOLUENE	EPA-8020	ND(<2)	UG/L	40 UG/L	7/6/95	KLP
ETHYLBENZENE	EPA-8020	ND(<2)	UG/L	30 UG/L	7/6/95	KLP
XYLENES	EPA-8020	ND(<6)	UG/L	20 UG/L	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRJ



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 1 DUP
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: DUPLICATE OF MW1-15.0 6/29/95 750

DATA RESULTS

ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	ND(<10)	MG/KG	100MG/KG	7/7/95	KLP
BENZENE	EPA-8020	ND(<0.2)	MG/KG	.5MG/KG	7/7/95	KLP
TOLUENE	EPA-8020	ND(<0.2)	MG/KG	40MG/KG	7/7/95	KLP
ETHYLBENZENE	EPA-8020	ND(<0.2)	MG/KG	20MG/KG	7/7/95	KLP
XYLENES	EPA-8020	ND(<0.6)	MG/KG	20MG/KG	7/7/95	KLP

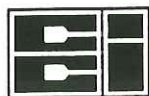
* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY:

cl21



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: 6 DUP
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: DUPLICATE OF W-4 6/29/95 1815

DATA RESULTS

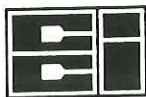
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	140	UG/L	1000 UG/L	7/6/95	KLP
BENZENE	EPA-8020	ND(<2)	UG/L	5 UG/L	7/6/95	KLP
TOLUENE	EPA-8020	ND(<2)	UG/L	40 UG/L	7/6/95	KLP
ETHYLBENZENE	EPA-8020	ND(<2)	UG/L	30 UG/L	7/6/95	KLP
XYLENES	EPA-8020	ND(<6)	UG/L	20 UG/L	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRJ



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: BLK
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: METHOD BLANK FOR SOIL

DATA RESULTS

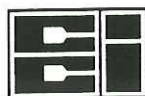
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	ND(<5)	MG/KG	100MG/KG	7/6/95	KLP
BENZENE	EPA-8020	ND(<0.1)	MG/KG	.5MG/KG	7/6/95	KLP
TOLUENE	EPA-8020	ND(<0.1)	MG/KG	40MG/KG	7/6/95	KLP
ETHYLBENZENE	EPA-8020	ND(<0.1)	MG/KG	20MG/KG	7/6/95	KLP
XYLENES	EPA-8020	ND(<0.3)	MG/KG	20MG/KG	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: 



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073
CCIL SAMPLE #: BLK
DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001
CLIENT SAMPLE ID: METHOD BLANK FOR WATER

DATA RESULTS

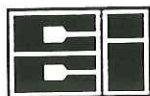
ANALYTE	METHOD	RESULTS*	UNITS**	ACTION LEVEL***	ANALYSIS DATE	ANALYSIS BY
TPH-GASOLINE	WTPH-G	ND(<50)	UG/L	1000 UG/L	7/6/95	KLP
BENZENE	EPA-8020	ND(<1)	UG/L	5 UG/L	7/6/95	KLP
TOLUENE	EPA-8020	ND(<1)	UG/L	40 UG/L	7/6/95	KLP
ETHYLBENZENE	EPA-8020	ND(<1)	UG/L	30 UG/L	7/6/95	KLP
XYLENES	EPA-8020	ND(<3)	UG/L	20 UG/L	7/6/95	KLP

* "ND" INDICATES ANALYTE NOT DETECTED AT CONCENTRATION ABOVE REPORTING LIMIT.
REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

*** ACTIONS LEVELS ARE PROVIDED ONLY WHEN PARAMETER DATA IS USED FOR A GENERALLY
CONSISTENT APPLICATION. WHEN PROVIDED, THEY SHOULD BE USED AS GUIDELINES ONLY.
THE APPROPRIATE REGULATORY DOCUMENT SHOULD BE CONSULTED BEFORE MAKING ANY
DECISIONS BASED ON ANALYTICAL DATA

APPROVED BY: CRP



Analytical Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: AGI TECHNOLOGIES
300 120TH AVE N.E.
BELLEVUE, WA 98005

DATE: 7/7/95
CCIL JOB #: 506073

DATE RECEIVED: 6/30/95
WDOE ACCREDITATION #: C142

CLIENT CONTACT: PETER BARRY/LIEF CHRISTENSON

CLIENT PROJECT ID: WINLOCK SCHOOL DISTRICT 15881.001

QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	ANALYTE	SUR ID	% RECV
506073-01	WTPH-G	TFT	104
506073-01	EPA-8020	TFT	90
506073-02	WTPH-G	TFT	110
506073-02	EPA-8020	TFT	100
506073-03	WTPH-G	TFT	111
506073-03	EPA-8020	TFT	100
506073-04	WTPH-G	TFT	109
506073-04	EPA-8020	TFT	97
506073-05	WTPH-G	TFT	107
506073-05	EPA-8020	TFT	90
506073-06	WTPH-G	TFT	107
506073-06	EPA-8020	TFT	94

MATRIX SPIKE RESULTS

METHOD	SPIKE ID	%MS RECV
WTPH-G SOIL	GASOLINE	96
EPA-8020 SOIL	BENZENE	88
EPA-8020 SOIL	TOLUENE	94
EPA-8020 SOIL	ETHYLBENZENE	92
EPA-8020 SOIL	XYLENES	91
WTPH-G WATER	GASOLINE	112
EPA-8020 WATER	BENZENE	92
EPA-8020 WATER	TOLUENE	98
EPA-8020 WATER	ETHYLBENZENE	96
EPA-8020 WATER	XYLENES	94

APPROVED BY: 