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SEP 15 2009

REPORT

DOCUMENTATION OF UST REMOVAL, MEREDITH'S REPAIR AND TOWING

Worley, Idaho

Submitted To: Glen Meredith
Meredith's Repair and Towing
PO Box 126
Worley, Idaho 83876

Submitted By: Golder Associates Inc.
1200 W. Ironwood Drive
Suite 200
Coeur d'Alene, ID 83814

Distribution:
1 Copy – Meredith's Repair and Towing
1 Copy (Electronic) – Environmental Protection Agency/Indian Health Service
1 Copy (Electronic) – Idaho State Insurance Fund

September 11, 2009

Project No. 093-93353

A world of capabilities delivered locally

Golder Associates

3.0 ANALYTICAL RESULTS

The analytical results from soil and groundwater samples collected from the excavation are attached as Appendix 1 and summarized in Tables 1 and 2, where they are compared with IDTL values. One soil sample (UST3-WWC) had Dibenzo(a,h)anthracene present at the method detection limit but below the IDTL. MTBE was detected in one soil sample (UST2-EWC) at 0.049 mg/Kg, which exceeds the soil IDTL for MTBE. Benzene (1.95 ug/L) and Toluene (4.26 ug/L) were detected in one groundwater sample (GW-2) at levels below IDTLs for groundwater.

4.0 CONCLUSIONS

During the closure work, no visual or olfactory evidence of a release to the environment was observed. Soil confirmation samples show that MTBE was present in one soil sample at levels that slightly exceed IDEQ IDTLs. Very low levels of COC's well below IDTLs were detected in one ground water sample. These detections suggest that incidental petroleum contamination, possibly from minor spills that may have occurred during tank filling, was present in parts of the excavation.

5.0 CLOSING

Golder is pleased to present you with the results of confirmation soil and groundwater sampling conducted during removal of your underground storage tanks. Site observations and analytical analysis of soil and groundwater confirmation samples indicates that minor petroleum contamination was present in the soil and groundwater at the UST site. The concentrations of COCs in groundwater were below IDEQ IDTLs. Detection of MTBE in one soil sample at levels that slightly exceed the IDEQ IDTL does not, in our opinion, warrant additional site investigation or soil removal. Our site observations, coupled with laboratory results, indicate that your site has successfully been closed.

GOLDER ASSOCIATES INC.

John Monks, P.G.
Senior Project Hydrogeologist

Christopher A. Sneider, P.E.
Senior Geotechnical Engineer/Office Manager

1.0 INTRODUCTION

Meredith's Repair and Towing is located at 9726 West F Street in Worley, Idaho, in the NE ¼ of the SE ¼ of Section 23, Township 47N, Range 5W. The Meredith property is situated along the main thoroughfare of State Highway 95, the primary north-south roadway through the Coeur d'Alene Indian Reservation and the town of Worley. Meredith's was used primarily as a fuel station, repair shop, and general store until 2008. During 2008 the fuel pumps and associated lines were removed from the site, leaving three underground storage tanks remaining on the property. The fuel tanks that are the subject of this report were positioned south of the repair shop and store approximately 125 feet from F Street and 15 feet from 2nd Street, as shown on Figure 1. The Meredith's' continue to operate the site as a repair shop and general store, and anticipate continuing to conduct business at this location for these purposes.

2.0 FIELD METHODS AND OBSERVATIONS

Golder personnel used visual and olfactory examination for possible tank leakage and soil contamination during field observation of storage tank removal. No visual signs of soil staining, leakage or seepage, or odor of petroleum products were encountered during removal of the tanks. After removal of each storage tank, Golder collected soil confirmation samples to ensure no contamination existed within native soils present on the site. Samples were taken from each end of tanks and from the north and south ends of the overall excavation to ensure no contamination existed in any direction from the tanks positions, shown on Figure 2. Each soil sample was taken using clean nitrile gloves and a sampling shovel that was decontaminated between each sample collection. Each sample was discretely taken from the sidewall of the excavation at the lowest point accessible by the sampler. Samples were placed into a plastic storage bag and homogenized before being placed into sample jars. Each sample was labeled suitable to its location and position associated with each fuel storage tank and appropriately packaged for delivery to the laboratory for analytical testing for petroleum-based contamination. After each sampling, new nitrile gloves and de-ionized water was used to wash the sampling shovel before the next sampling was conducted.

Groundwater was encountered in the excavation during tank removal. When groundwater was first encountered, Golder field personnel used visual and olfactory methods to assess the water for possible petroleum contamination. During this initial investigation no indication of petroleum contamination was encountered. No surface sheen was observed, and no petroleum odors were detected. After the removal of the second and third storage tank, adequate groundwater was encountered for confirmation sampling. Again, no surface sheen was observed, and no petroleum odors were detected. Groundwater sample were taken using clean nitrile gloves. For each groundwater sample, three 1-liter amber bottles and two VOC vials were filled. Each sample was labeled and packaged according to sampling standards and delivered to the laboratory for analysis for petroleum-based contamination. Groundwater sample locations are shown on Figure 2.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

January 8, 2010

Reply To: OCE-164

Mr. Glen Meredith
Meredith's Repair and Towing
P.O. Box 126
Worley, Idaho 83876

Re: Notification of Permanent Underground Storage Tank (UST) Closure
No Further Action Determination at Meredith's Repair and Towing
9726 West F Street, Worley, Idaho: EPA ID No. 2100005

Dear Mr. Meredith:

The U.S. Environmental Protection Agency (EPA) has reviewed the information provided by your contractor, Golder Associates (Golder), who executed the removal of two gasoline USTs and one diesel UST during July 16-17, 2009. The USTs were removed from Meredith's Repair and Towing, located at: 9726 West F Street, Worley, Idaho. Based on the information collected and documented by Golder, EPA has determined that the closure of these federally regulated USTs appear to conform to the permanent closure requirements stated in 40 CFR §§ 280.71 and 280.72. Based on this information, EPA has determined that this UST facility requires no further-action.

This no further-action determination applies only to the area of the property where the aforementioned USTs were located on your property at 9726 West F Street, Worley, Idaho. This determination does not apply to any other release or potential release at the property, or any other areas of the property.

It should be noted that EPA does not assume any liability for any release or any actions taken or omitted by any person or his or her agents or employees with regard to the release, threatened release or other conditions at this facility. However, in the event that additional information becomes available indicating this facility may pose a hazard to human health or the environment, EPA may require additional assessment and remediation activity.

If you have any questions or comments regarding this letter, please feel free to contact me at (206) 553-4012, or via email at nenninger.philip@epa.gov.

Sincerely,

Philip A. Nenninger
Ground Water Unit
Underground Storage Tank Program

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Transmittal

Quantum Engineering
and Geologic Consulting
South 2195 Silver Beach Loop
Coeur d'Alene, Idaho 83814
208 765 2308
quantum@comtch.iea.com

July 19, 2000

Wally Moon

US Environmental Protection Agency-Region 10
1200 Sixth Ave, OW 137

Seattle, WA 98101

Description:

Revised static water contours based on 7/19/00 measurements

Remarks:

Give me a call with comments.

Sincerely: _____

James S. De Smet, PE, PG

RECEIVED
JUL 21 2000
U.S. EPA REGION 10
OFFICE OF WATER

10/14/92

HCI Howard Consultants, Inc.
Consulting Geotechnical Engineers, & Geologists
E. 6002 Alki Avenue, Suite 6, Spokane, Washington 99212 509-534-8870

October 12, 1992
Project No. 3024-40

Ms. Lisa Prochnow
Division of Environmental Quality
2110 Ironwood Parkway
Coeur d'Alene, Idaho 83814-2648

RE: Land Farmed Soils
Worley Shop
Worley Highway District
Worley, Idaho

Dear Ms. Prochnow:

This letter is to inform you that on September 30, 1992, an engineer from our office sampled the petroleum contaminated soils currently being land farmed at the Worley Highway District shop in Worley, Idaho. The highway district has been actively farming approximately 70 cubic yards of soil. Three samples were obtained and analyzed by WTPH-G by an independent laboratory. The results of the analysis indicate that the levels of petroleum contamination are below the maximum allowable concentration of 100 parts per million for gasoline set by the IDEQ. The highway district proposes to use the soil as gravel pit reclamation cover that will be revegetated in the spring. We are of the opinion that the soils have been remediated sufficiently to be used as cover soil. A copy of the laboratory tests results is attached to this letter.

If you have any question or require further information, please call.

Sincerely,

Howard Consultants, Inc.

Derek E. Pohle, E.I.T.
Geological Engineer

Enclosure

cc: Tom Nigh

DEP:sa

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

October 2, 1992

Howard Consultants
West 280 Prairie Ave.
Coeur d' Alene, ID 83814
Attn: Derek Pohle / Carol Wasson

Items: Results of analysis for samples received 10/1/92. Sample log-in number is 0446.
Project #: C 3024-40
Project Name: Worley HWD
WO #: 1157

Report #: 92-1001-HCI

All soil sample results are based on dry weight basis mg/L = ppm, mg/Kg = ppm

Sample Name	Matrix	Analysis Date	Analyte	Concentration	
1	Soil	10/1/92	Gasoline	9.6	mg/Kg
2	Soil	10/1/92	Gasoline	4.5	mg/Kg
3	Soil	10/1/92	Gasoline	12.3	mg/Kg

Mike Pearson
Laboratory Director

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#2-100036 JRO 9/19/97

Worley Highway District

(11/12/91)

2 tanks removed in 91 & replaced in 91 by 2 new tanks.

Letter from Tuler DEQ 2/2/94 - DWHD

indicating adequate clean-up

Data in file indicate adequate remediation of land farmed PCS and ground water samples in compliance

Close

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

October 20, 1997

Reply To
Attn Of: OW-137

Tom Nigh
Worley Highway District
5805 W Kidd Island Bay Road
Coeur d'Alene, Idaho 83814

RE: Permanent Closure of Underground Storage Tanks #1 and #2 at the Worley Highway District, Facility ID #2-100036 Coeur d'Alene Indian Reservation, Idaho

Dear Mr. Nigh:

The U.S. Environmental Protection Agency (EPA) received your Completion of Underground Storage Tank Removal/Closure form for the fuel tanks at the Worley Highway District, located at W 9720 B Street, Worley, Idaho.

Based on the information submitted, EPA has determined that closure of tanks #1 and #2 appears to conform to the permanent closure requirements stated in 40 C.F.R. §§ 280.71 and 280.72, and that existing soil and water appear to meet the Idaho States cleanup levels for required petroleum releases. We are therefore closing the files for these tanks.

If you need additional information regarding this issue, please call me at (206) 553-2580.

Sincerely,

Katherine M. Holt

Katherine M. Holt
Underground Storage Tank Program

cc: David Barr, Tribal UST Coordinator

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IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

2110 Ironwood Parkway, Coeur d'Alene, ID 83814-2648, (208) 667-3524 Cecil D. Andrus, Governor Richard P. Donovan, Director

RECEIVED 10/20/92

October 16, 1992

Mr. Tom Nigh
Worley Highway District
W. 5800 Kidd Island Rd.
Coeur D'Alene, Idaho 83814

RE: Land Farmed Soils, Worley Highway District Shop

Dear Mr. Nigh:

We have reviewed the correspondence and sample results sent on October 12, 1992 by Howard Consultants, Inc. The results indicate that the soil has been remediated to acceptable levels based on DEQ's soil clean up guidelines.

In the correspondence the highway district proposes to use the soil as a gravel pit reclamation cover to be revegetated in the spring. DEQ strongly recommends that the soil not be used in connection with the gravel pit. Gravel pits by there very nature are conduits to underlying ground water, residual contamination in the soil may leach to ground water in this situation whereas the soil may be less likely to affect ground water when used as cover soil or fill in another area. If your staff needs further assistance on using this soil please contact me and I will work with them to help resolve this issue.

As we discussed on the telephone on Wednesday, October 14, the remediation of ground water on the site is still continuing because of dissolved product contamination found in the monitoring wells surrounding the excavation. I have reviewed the file and we do not have the sample analysis from the monitoring wells showing this contamination. Please forward this information to DEQ for our files.

The release of petroleum into waters of the state is a violation of Section 16.01.02850 of the Idaho Water Quality Standards and Wastewater Treatment Requirements. Under these regulations the responsible person in charge must:

Stop Continuing Spills. Make every reasonable effort to abate and stop a continuing spill.

IDAHO DEPARTMENT
OF HEALTH AND WELFARE

DIVISION OF
ENVIRONMENTAL QUALITY

1410 North Hilton, Statehouse Mail, Boise, ID 83720-9000, (208) 334-0502

Cecil D. Andrus, Governor

2/7/94

February 2, 1994

Tom Nigh, Supervisor
Worley Highway District
5805 W. Kidd Island Road
Coeur d'Alene, Idaho 83814

Re: Termination of Consent Order

Dear Mr. Nigh:

You have requested that the Consent Order between the Worley Highway District and the Department of Health and Welfare (Department) dated November 12, 1992 be terminated. Your request is based on the Worley Highway District having fulfilled all conditions of the Consent Order.

The Department has reviewed the cleanup of your site as well as the terms and conditions of the Consent Order and has concluded that termination of the Consent Order is appropriate. Thank you for your cooperation in resolving the petroleum contamination at the district shop.

Sincerely,

Walton C. Poole, Ph.D.
Assistant Administrator
Community Programs

c: Doug Conde, Deputy Attorney General
Lisa Prochnow, Water Quality Compliance Officer
file

Printed on Recycled Paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

October 20, 1997

Reply To
Attn Of: OW-137

Tom Nigh
Worley Highway District
5805 W Kidd Island Bay Road
Coeur d'Alene, Idaho 83814

RE: Permanent Closure of Underground Storage Tanks #1 and #2 at the Worley Highway District, Facility ID #2-100036 Coeur d'Alene Indian Reservation, Idaho

Dear Mr. Nigh:

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Based on the information submitted, EPA has determined that closure of tanks #1 and #2 appears to conform to the permanent closure requirements stated in 40 C.F.R. §§ 280.71 and 280.72, and that existing soil and water appear to meet the Idaho States cleanup levels for required petroleum releases. We are therefore closing the files for these tanks.

If you need additional information regarding this issue, please call me at (206) 553-2580.

Sincerely,

Katherine M. Holt

Katherine M. Holt
Underground Storage Tank Program

cc: David Barr, Tribal UST Coordinator

Printed on Recycled Paper

Facility # 2-100036

LUST

SITE

IDAHO DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENTAL QUALITY

IDAHO UST SITE CLOSURE EVALUATION FORM

7/91

(Please print or type)

Tank Owner Name: Worley Highway District
Site Name: Worley Highway District Shop
Site Address: W.5800 Kidd Island Bay Road Coeur d'Alene, ID
Site County: Kootenai
Contact Person: Tom Nigh Telephone: 208-664-0483
Facility ID (Notification) Number:
Fire District: Mica Kidd Island Fire (don Sosser 664-4872 Sec/Treas.)
Type of Facility (i.e., gas station, etc.): County Shop

Removal Date: 9/15/92 Name of Tank Remover: COEUR D'ALENE SERVICE STATION EQUIPMENT, INC
Tank Remover's Phone: 208 667 7414

Number of Tanks Removed or Closed in Place: 2

Type of Product in Each Tank: (1) DIESEL (2) GAS (3)____ (4)____ (5)____

Size of Tanks Removed: (1) 800 (2) 6000 (3)____ (4)____ (5)____

Tank Disposal/Destination: DICKSON STEEL SPOKANE
N. 907 Dyer Rd. Spokane, WA 99212

Indicate amount and disposal method (location) of any material removed from the tank, (i.e. water, product, sludge): OIL
remain on site,

Depth of Ground Water - if actually seen, or known: ONLY WATER TRAPPED IN HOLE. 300 GALS. SEE DRAWING

Type and Number of Samples Taken - soil/water - TPH, BTEX VOC, etc.:

Laboratory performing analysis: AWATER LABS Phone: 208-883-2839

Sampling Documentation: Rational for sampling locations; relationship between sampling locations and known areas of contamination; sampling collection procedures, preservation and storage; analytical results including sample dates, dates of analyses, and analytical methods. (ATTACH DOCUMENTATION)

Source of Contamination if found:

Tank____ Piping X Spill/Overfill X Unknown____

Location of Visual Contamination (i.e. below fill, pipe) related to each tank including the piping: (1) Both Top & Sides (2) Both Top & Sides (3)____ (4)____ (5)____

Removal of Contaminated Soil in Tank Pit (where and how stored): ON SIDE UNDER AND ON PLASTIC

Contaminated Soil Disposal Location: Worley Hyway district

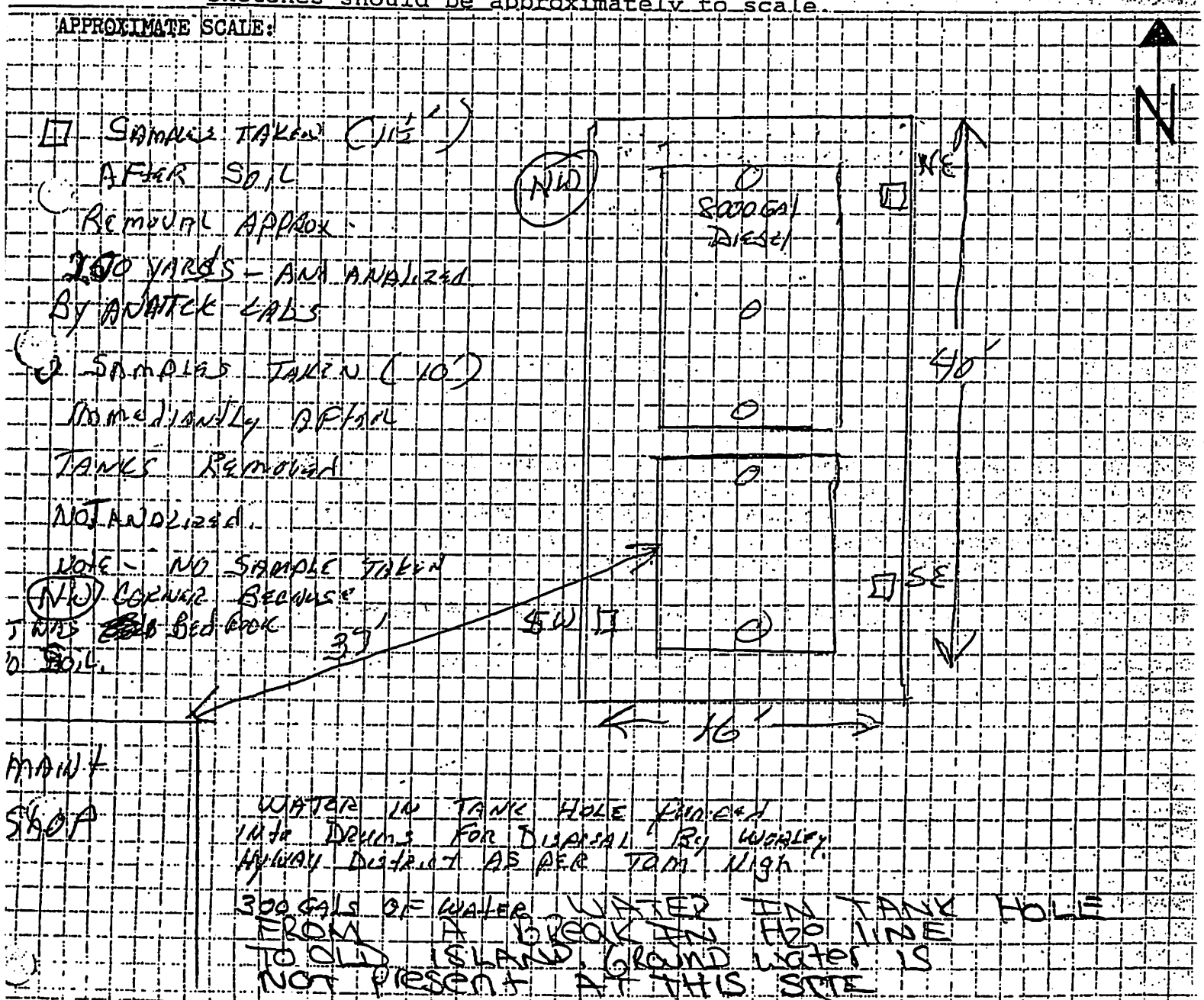
Pictures Taken: ✓ Yes ____ No.

Site Sketch. Show location of USTs removed or closed in place, adjacent buildings, structures, drainage ditches, streams, wells, sewer and water lines, location of samples (indicate depth), and other information which will help in accessing the extend of contamination. Add Township/Range location if available.

Show North Arrow and direction of ground water flow if available.

Sketches should be approximately to scale.

APPROXIMATE SCALE:



PREPARED BY (Please print): George Peacock

SIGNATURE: George M Peacock

Follow up

DIVISION OF ENVIRONMENT
RECEIVED
JUL 28 1992
RECEIVED
Coeur d'Alene Field Office

IDAHO UNDERGROUND STORAGE TANK
30 Day Notice of Closure Form

Site Owner/Operator: [redacted]
Site Address: W. 5800 KIDD ISLAND BAY ROAD, COEUR D'ALENE, ID 83814
Site County: KOOTENAI
Telephone: (208)664-0483 Facility ID (Notification) Number:
Fire District: MTCA KIDD ISLAND FIRE (DON SOUSSER 664-4872-SEC/TRES)

Dear Sirs:

In accordance with the Federal UST Regulations, we are notifying you of our intent to permanently close the following underground storage tanks* at the above referenced facility:

TANK#	PRODUCT	CAPACITY (gals.)	AGE
1	UNKNOWN	5,000 GAL	UNKNOWN
2	UNKNOWN	8,000 GAL	UNKNOWN

*Attach additional pages if needed.

We expect this closure to take place on or about AUGUST 28, 1992. A site assessment as required by the Federal UST Regulations will be performed before permanent closure is completed.

Please contact GUY BERNIER at (208) 667-7414 if you need any additional information.

[redacted]

Return Completed form to:

UST Coordinator, Water Quality Bureau
Idaho Department of Health and Welfare
Division of Environmental Quality
450 W. State St.
Boise, Idaho 83720
Phone: (208) 334-5845

DIVISION OF ENVIRONMENT
RECEIVED
JUL 28 1992
RECEIVED
Coeur d'Alene Field Office

IDAHO DEQ

TANK INSTALLATION NOTICE

ABOVE GROUND TANK |__| UNDERGROUND TANK |XX|

SITE OWNER/OPERATOR: [redacted]

SITE ADDRESS: W 5800 KIDD ISLAND BAY ROAD, COEUR D'ALENE, ID 83814

SITE COUNTY: KOOTENAI

TELEPHONE: (208)664-0483 FACITITY ID _____

FIRE DISTRICT: MICA KIDD ISLAND FIRE (DON SOUSSA 664-4872-SEC/TRES)

WE ARE NOTIFYING YOU OF OUR INTENT TO INSTALL THE FOLLOWING STORAGE TANKS AT THE ABOVE REFERENCED FACILITY:

TANK#	PRODUCT	CAPACITY	AGE
1		8,000 GAL	NEW
2		6,000 GAL	NEW

WE EXPECT INSTALLATION TO TAKE PLACE ON OR ABOUT AUGUST 28, 1992.

PLEASE CONTACT GUY BERNTER AT 208-667-7414 IF YOU NEED ANY ADDITIONAL INFORMATION.

TEXT#INSTANK

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 2

To LISA	From Glenn
Co. DEQ	Co. CDA Service Station
Dept.	Phone # 667-7414
Fax # 667-4869	Fax # 664-0861

765-8338
Deputy Fire Marshal,

IDAHO DEPARTMENT OF HEALTH AND WELFARE

DIVISION OF ENVIRONMENTAL QUALITY

7/91

IDAHO UST SITE CLOSURE EVALUATION FORM
(Please print or type)

Tank Owner Name: Worley Highway District
Site Name:
Site Address: W. 9720 "B" Street Worley, ID
Site County: Kootenai
Contact Person: Thomas Nigh Telephone:
Facility ID (Notification) Number:
Fire District: Worley Fire District
Type of Facility (i.e., gas station, etc.): ~~Hwy District Maintenance~~ COEUR D'ALENE SERVICE STATION EQUIPMENT, INC

Removal Date: 11-12-91 Name of Tank Remover:
Tank Remover's Phone: 208 667 7414

Number of Tanks Removed or Closed in Place: 2 (REMOVED)

Type of Product in Each Tank: (1) UNLEAD (2) DIESEL (3)____ (4)____ (5)____

Size of Tanks Removed: (1) 1000 (2) 2000 (3)____ (4)____ (5)____

Tank Disposal/Destination: DICKSON STEEL SPOKANE WA.

Indicate amount and disposal method (location) of any material removed from the tank, (i.e. water, product, sludge): 10 gal
Sludge was left with customer

Depth of Ground Water - if actually seen, or known:

Type and Number of Samples Taken 3 soil/water TPH, BTEX, VOC, etc.: initially 3 TPH 11/14/91
2 - TPHG 11/26/91 2 - BTEX 12/11/91
2 - BTEX
Laboratory performing analysis: PRECISION ANALYTICS, INC Phone: 509 332 09

Sampling Documentation: Rational for sampling locations; relationship between sampling locations and known areas of contamination; sampling collection procedures, preservation uding sample dates, dates of
TTACH DOCUMENTATION)

Facility 2-100036
Tanks 1 & 2

rfill X Unknown

.e. below fill, pipe) related
) ENTIRE TANK HOLE (2)
(5)

c pit (where and how stored):
tk Plastic.

Adequate assessment - recommend closure
John E Osborn
9/24/97

Contaminated Soil Disposal Location: CUSTOMER WILL FARM ON THEIR SITE

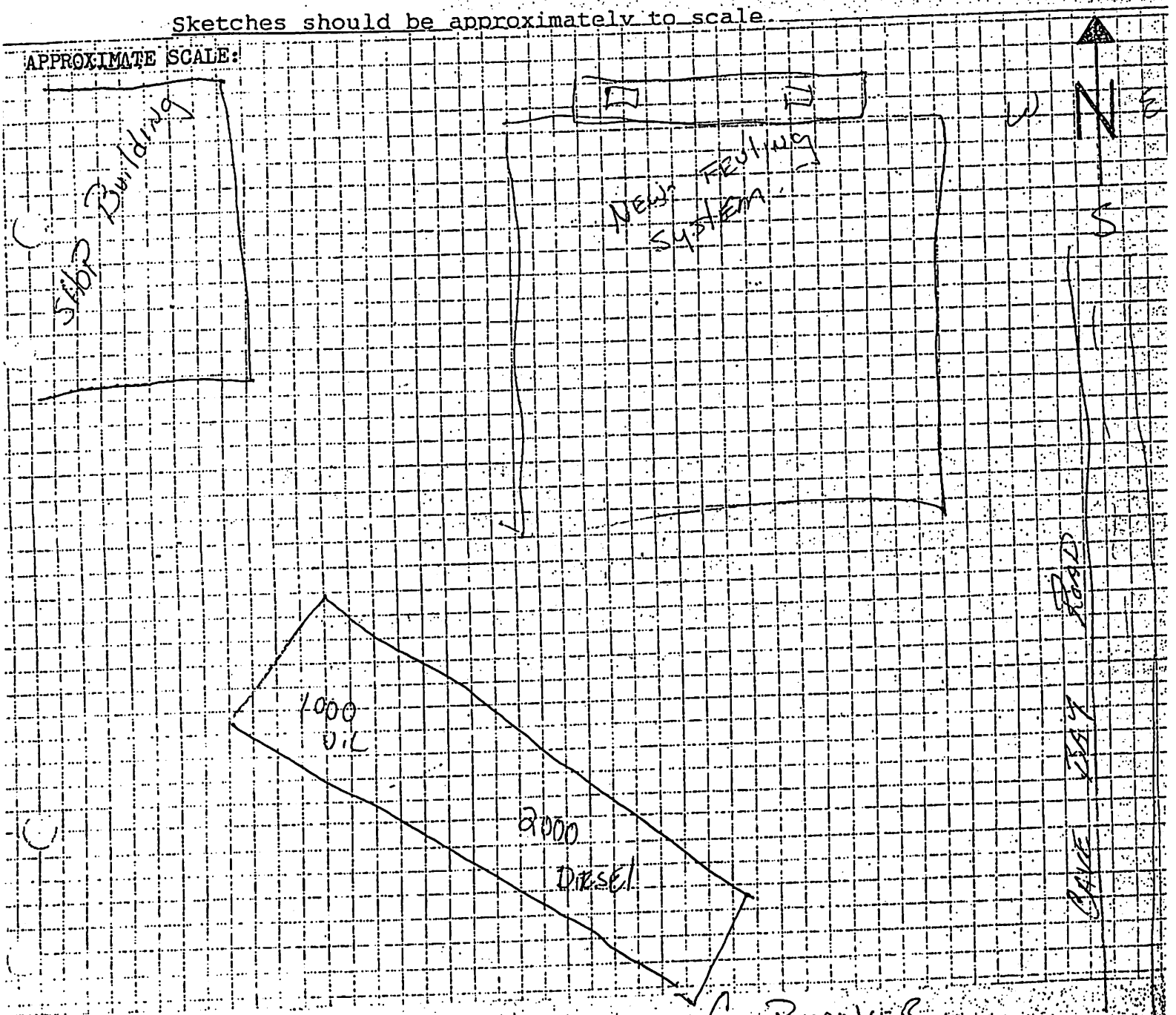
Pictures Taken: X Yes _____ No.

Site Sketch. Show location of USTs removed or closed in place, adjacent buildings, structures, drainage ditches, streams, wells, sewer and water lines, location of samples (indicate depth), and other information which will help in accessing the extend of contamination. Add Township/Range location if available.

Show North Arrow and direction of ground water flow if available.

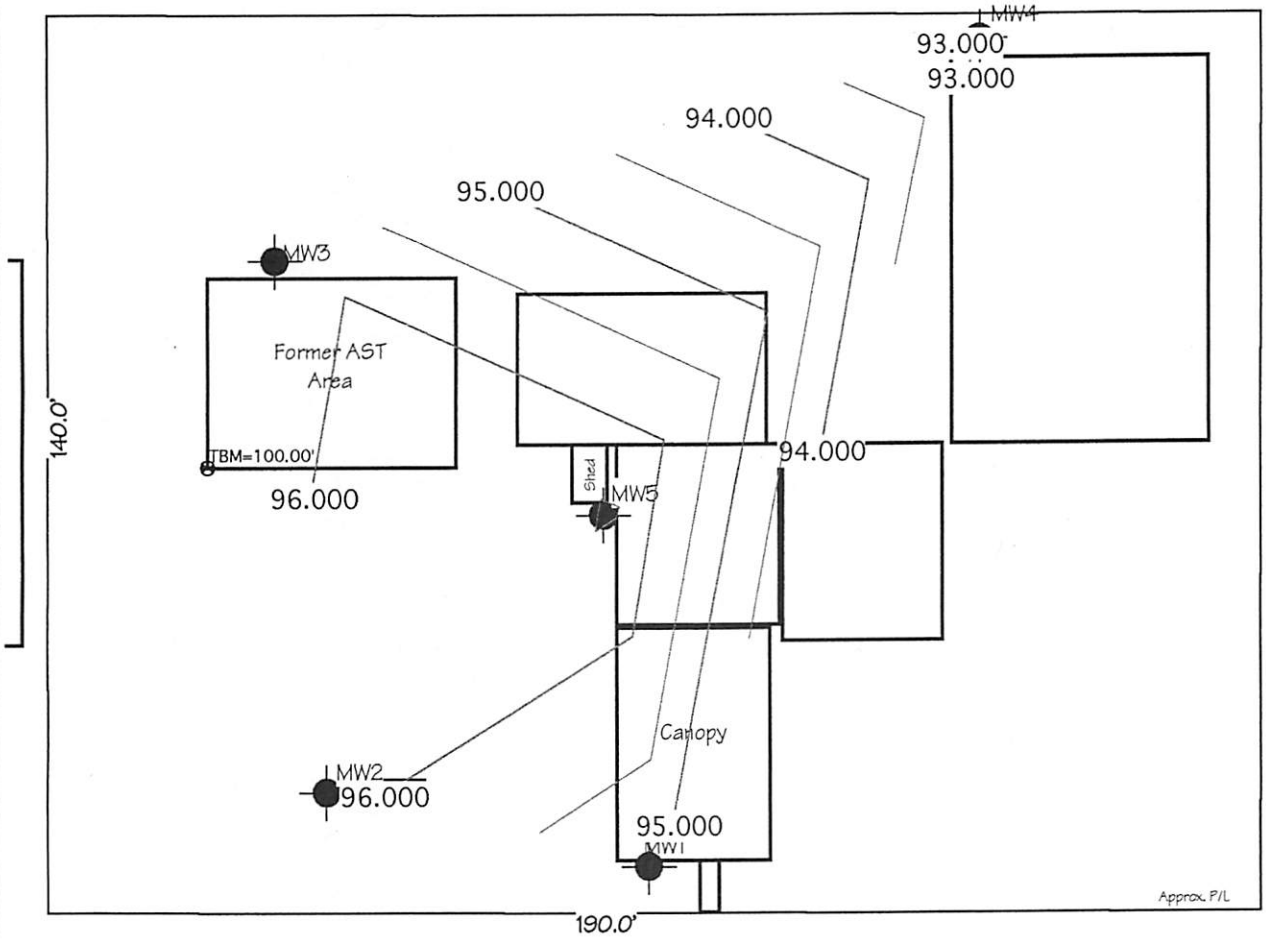
Sketches should be approximately to scale.

APPROXIMATE SCALE:



PREPARED BY (Please print): GUY BERNIER

SIGNATURE: _____



Highway 95

Well ID	Well Head ** Elevation (ft.)	Static Depth 5/17/00 (ft. bgs)	Static Water* Elevation (ft.)	Static Depth 7/19/00 (ft. bgs)	Static Water Elevation (ft)
MW1	100.51	2.42	98.09	5.42	95.09
MW2	100.24	2.14	98.1	4.11	96.13
MW3	99.04	3.07	95.97	3.15	95.89
MW4	98.21	3.18	95.03	5.32	92.89
MW5***	100.44	5.24	95.2	3.91	96.53

*Static elevation taken on 5/17/00
**Based on TBM elevation=100.00
***Static elevation taken 5/22/00-not yet stabilized

QUANTUM Engineering and Geologic Consulting

ENGINEER:	Jim De Smet
DRAWN BY:	Jim De Smet
DATE:	6/28/00
SCALE:	1"=30'
SHEET NO.:	

Figure 4-1
Monitoring Well Locations
and Ground Water Contours
West 9821 F Street
Worley, Idaho

#2-100036 JRO 9/19/97

Worley Highway District

(11/12/91)

2 tanks removed in 91 & replaced in 91 by 2 new tanks.

Letter from Idaho DEQ 2/2/94 - to WHD

indicating adequate clean-up

Data in file indicates adequate remediation of land farmed PCS and ground water samples in compliance

Close

commercial property on Highway 95 and residential property outside of the corridor along Highway 95.

The site is located on relatively flat terrain with a slight slope to the north. The site is covered with asphalt and buildings with the exception of small areas.

3.2 Geologic and Hydrogeologic Setting

The site is located in the Palouse hills of northern Idaho. Soils are developed in deep layer of loess over layer of basalt. Soils near the site are mapped as Southwick Silt loam (USDA, 1981). The soil is very deep, moderately well drained and formed in loess. Permeability of this soil is slow and the available water capacity is high. The soil typically exhibits a perched water table at 31-36" of depth in the spring.

Soils of the Palouse Formation are underlain by basalt of the Columbia River Group. The Columbia River Group consists of relatively flat lying layers of basalt and interbeds of clay, silt and coarser deposits of sand and gravel.

The closest well to the subject property is a well for the City of Worley. This well is located approximately 750-800 feet south of the site. This well reveals approximately 14-feet of clay (Palouse Formation) underlain by another 20 feet of clay/basalt mixture. The remainder of the well was drilled to 204 feet of basalt layers with soft interbeds with one interbed of clay. Although the well yields 350 gpm, the drilling log does not report which interbeds produce water.

Gradient of the shallow perched aquifer is 0.020. Flow of the shallow perched aquifer is north-northeast. This shallow perched aquifer is not known to be used for potable uses, and is not known to discharge in the near vicinity to surface waters or wetlands. The volume, seasonal nature and shallow nature of this aquifer result in a low probability for use. It is highly probable that the aquifer would be considered a Class II groundwater according to the Risk Based Corrective Action-Guidance for Petroleum Releases (RBCA) (DEQ, 1996). Class II determination will need to be verified using the RBCA process.

1. INTRODUCTION

This Site Characterization Report (SCR) has been prepared at the request of Cooperative Supply for the former Worley Cooperative Supply facility located in Worley, Idaho. The Cooperative Supply sold the site in 1985 to the Linda Foulk and her former husband. Ms. Foulk and her former husband operated the site as a service station for unknown period following the purchase of the property. Ms. Foulk has since remarried to Jack Hodge. For purposes of this report, the current owners are Jack and Linda Hodge.

During the process of excavation for a water line, Mr. Hodge reported that gasoline contaminated soil was discovered. Mr. Hodge reported the situation to the local fire and regulatory agencies. The Idaho Division of Environmental Quality (DEQ) was contacted at that time. DEQ refereed the incident to the Environmental Protection Agency (EPA) because the site was located within the boundary of the Coeur d'Alene Indian Reservation.

On February 13, 1999 EPA conducted a magnetic survey of the subject property and discovered several magnetic anomalies. EPA felt that underground storage tanks may be present on the site and that the tanks may have been taken out of service before 1985 when Linda Hodge purchased the property. As such, EPA requested that the Cooperative Supply perform a site investigation of the property to determine the type and nature of the magnetic anomalies identified in the magnetic survey.

Quantum Engineering was retained to develop a Site Investigation Plan (SIP) and perform a site investigation of the property (Quantum, 2000). This Site Characterization Report summarizes the findings of the site investigation.

2. METHODOLOGY

Site characterization and sampling for this project were performed to industry standards and the prevailing site conditions. The procedures used by Quantum are described in detail in *Standard Operating Procedures-Environmental Site Characterization and Site Remediation.* These operating procedures are included as an Appendix to save unnecessary duplication of time in report preparation.

3. SITE DESCRIPTION AND CHARACTERISTICS

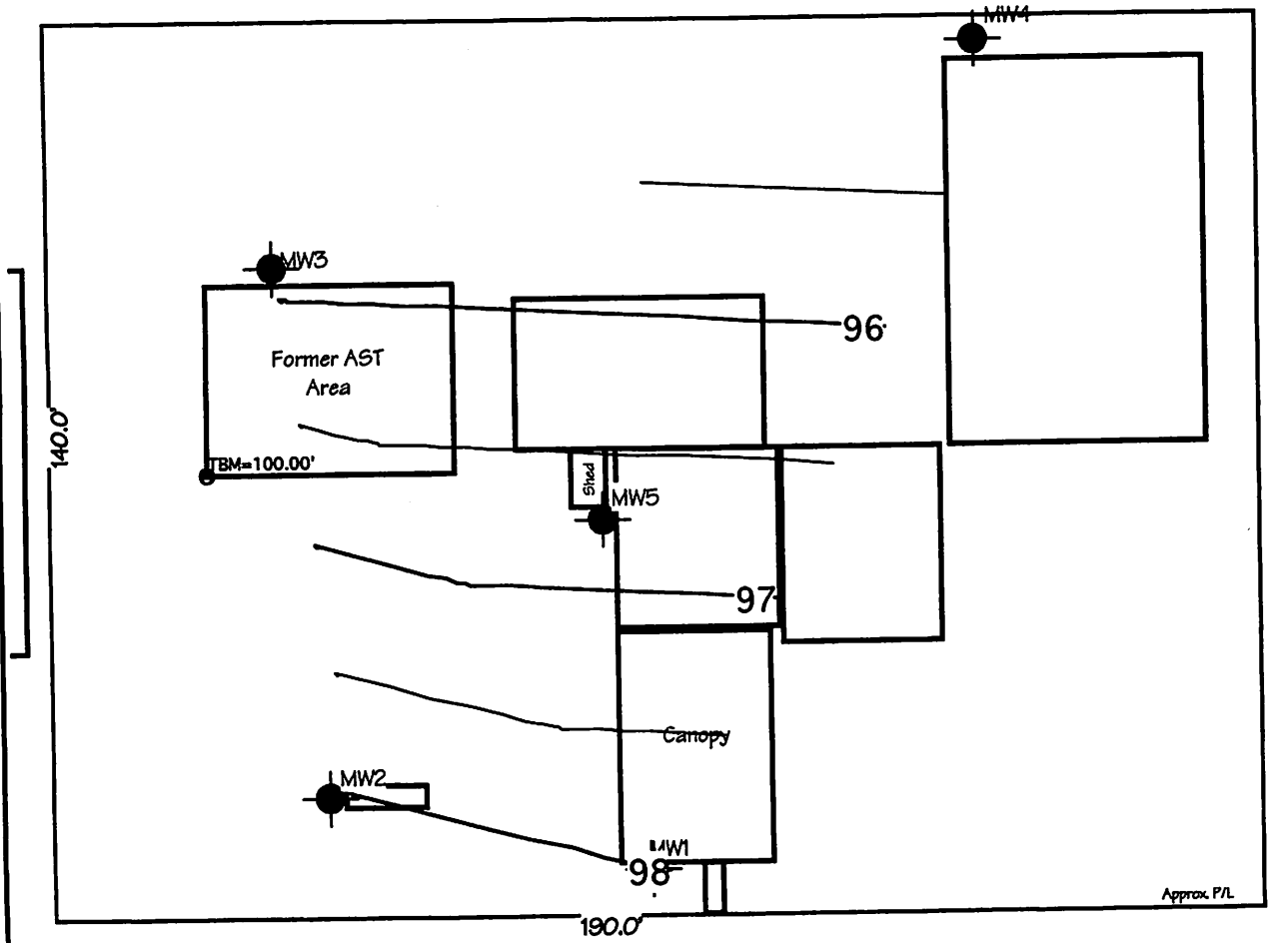
3.1 Site Location and Physical Setting

The site is located in Worley, Idaho. The physical address of the site is 9821 F Street, Worley Idaho. The property contains of approximately 0.611 acres. See Figure3.1 for location of the property on a site vicinity map. The site is located along the north side of Highway 95 in Worley. The site is surrounded by

See figure 4-1 for static water level data, location of the monitoring wells and the groundwater contours.

MW5 was measured on May 22, 2000 and found to contain only minimal water. It is likely that the static water level of MW5 has not yet stabilized. The static water level of MW5 was not included in the calculation of static water contours included in this report, but will be measured in the future and included in calculations at that time.

N



Highway 95

Well ID	Well Head ** Elevation (ft.)	Static Water Depth (ft. bgs)	Static Water* Elevation (ft.)
MW1	100.51	2.42	98.09
MW2	100.24	2.14	98.1
MW3	99.04	3.07	95.97
MW4	98.21	3.18	95.03
MW5***	100.44	5.24	95.2

*Static elevation taken on 5/17/00
**Based on TBM elevation=100.00
***Static elevation taken 5/22/00-not yet stabilized

See revised map on next page.

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Figure 4-1
Monitoring Well Locations
and Ground Water Contours
West 9821 F Street
Worley, Idaho

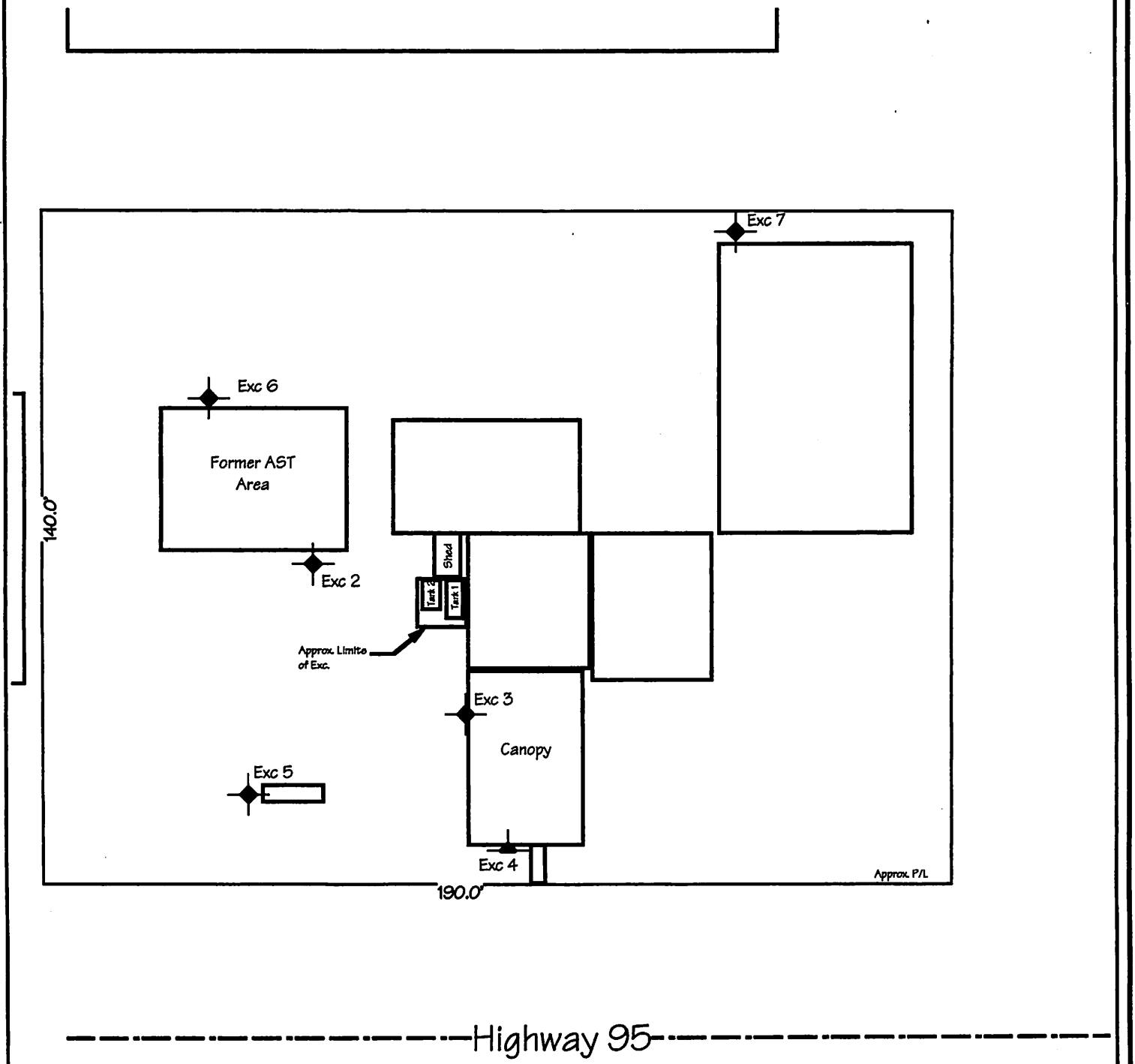

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Figure 3-2
Tank/Soil Test Pit Locations
West 9821 F Street
Worley, Idaho

4. SITE CHARACTERIZATION

4.1 Investigation of Magnetic Anomalies

On May 8, 2000, a site investigation was initiated to explore five magnetic anomalies that were identified by EPA during a previous investigation. The investigation was performed using a metal detector and a backhoe. The anomalies identified in the SIP are described in the table below.

Table 4-1 Summary of Magnetic Anomalies

Anomaly #	Description	Item Identified
#1	Linear object between ASTs and Pump Island #1	Presumed to be product lines as shown by metal detector.
#2	Linear object between southwest corner of shop and pump island #1	Presumed to be product line as shown by metal detector.
#3	Variable signal under the concrete pad near pump island #2	Found to be rebar as shown by the metal detector
#4	Strong rectangular object on south side of the AST containment	Excavated and found to be product lines leading from the AST containment
#5	Large metallic object on south west side of the shop	Excavated and found to be 2 USTs and associated piping.

Both underground tanks were found to be full of liquid. Tank #1 was full of water and Tank #2 was found to be essentially full of gasoline. Vent lines were still connected to both tanks and attached to the side of the building. Fill piping was broken from the tops of each tank, allowing free product to float from the tanks.

The underground storage tanks identified were not removed at this time and were covered again to minimize site liability for the property owner.

4.2 Installation of Monitoring Wells

On May 8, 2000, four monitoring wells were installed. The wells were installed using a 5-foot length of 2" PVC 10-slot well pipe equipped with a bottom cap, approximately 2-3 feet of blank pipe and locking tops. The overall depth of the wells is approximately 7-feet from the top of casing.

Monitoring wells were installed in test excavations using a backhoe. Pea gravel backfill was used for the screened interval of the wells, with the exception of MW5. This well was difficult to reach with pea gravel backfill and was backfilled with native material.

Wells were installed to provide points to measure static water surface elevations and sampling points for groundwater.

4.3 Underground Storage Tank Removal

On May 17, 2000, the previously identified USTs were removed by Coeur d'Alene Service Station Equipment. Tank #1 was approximately 550 gallons and was full of water. Tank #2 was a 500-gallon tank and was predominately full of fuel

The contents of both tanks were pumped by a waste oil contractor (Harbor Oil Co.) for disposal. After the tanks were emptied, the tanks were cleaned, the interior space was rendered inert and the tanks were removed.

Soil was characterized beneath the tanks by collecting two samples beneath each tank. The remainder of the excavation was characterized by collecting a composite sample from each of the four sides of the excavation. See the site plan for locations of the tanks.

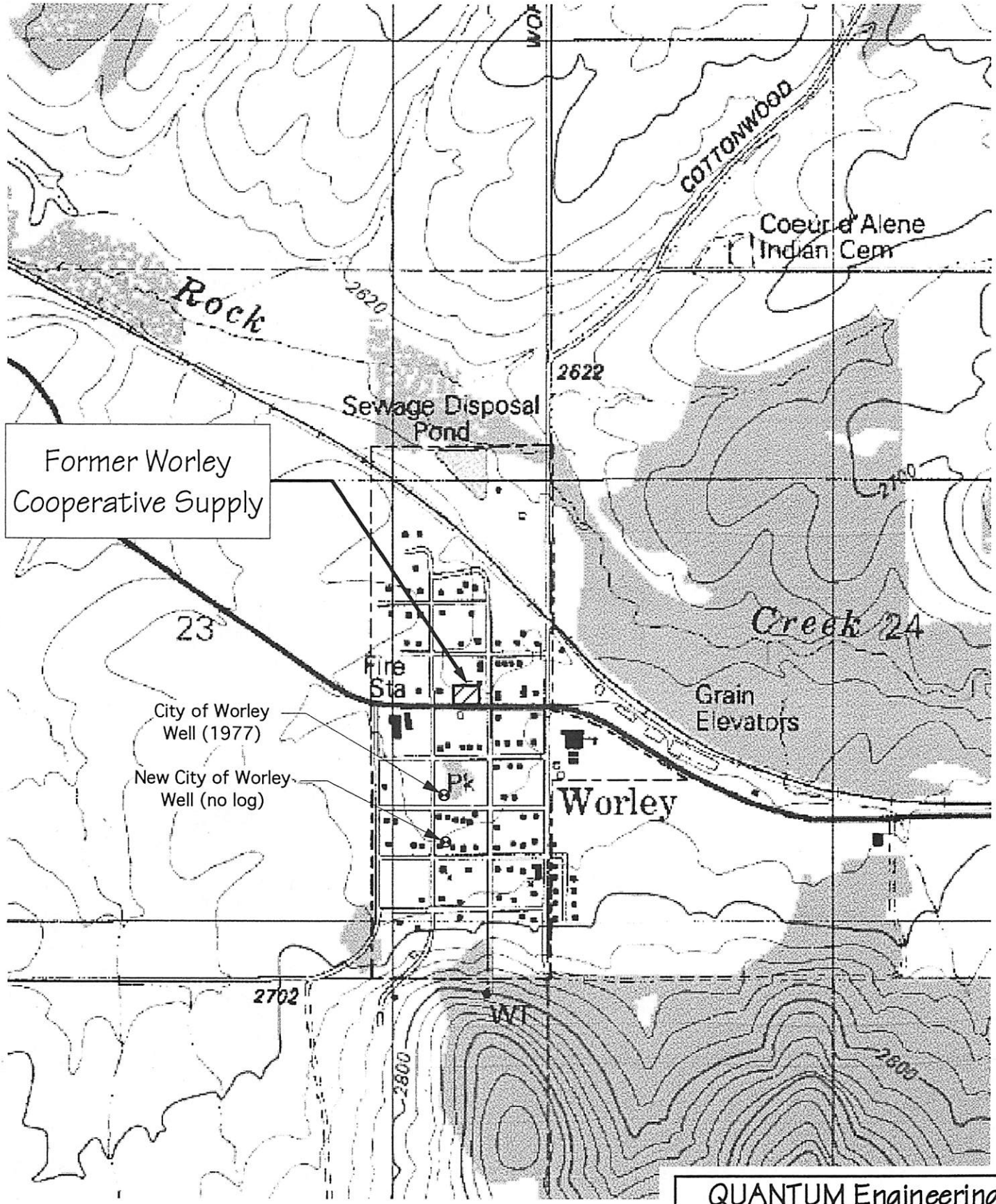
Prior to backfill of the tank excavation, a 2" monitoring well was installed in the north east corner of the excavation. The excavation was then backfilled with the native backfill associated with tank removal.

On May 17, 2000, the previously installed monitoring wells were surveyed for static water levels and wellhead elevations. The monitoring wells were also purged and sampled as described according to the attached methodology. All wells were sampled for benzene, toluene, ethylbenzene and xylene (BTEX), methyl-tertiary-butyl ether (MTBE), naphthalene and poly aromatic hydrocarbons (PAH). Sampling techniques and laboratory methodology were performed according to industry standards and EPA approved methods.

On May 22, 2000 MW5 (the well installed on May 17 at the UST location) was purged and sampled. The well was sampled BTEX, MTBE and naphthalene. The yield of the well was insufficient to obtain a sample for PAH compounds associated with diesel fuel.

4.4 Well and Static Water Elevation Survey

Wellhead elevations and static water levels were measured prior to purging and sampling of monitoring wells. Wellhead elevations and static water levels were used to calculate static water surface elevations. Static water surface elevations were used to generate groundwater contours. Based on the groundwater contours generated, the flow of shallow groundwater is to the north-northeast.



Map Source: USGS-Worley Quad

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Figure 3-1
Site Vicinity Map
9821 F Street
Worley, Idaho