

BEFORE THE OREGON WATER RESOURCES DEPARTMENT

In the Matter of Special)	FINAL ORDER DENYING
Standard Request from)	REQUEST FOR
Darryl Metzger #10423)	SPECIAL STANDARD

Appeal Rights

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.

Findings of Fact

1. In December 2003, two monitoring wells were drilled for Albertson's c/o URS Corporation at 888 NE 25th Avenue in Hillsboro, Oregon. The wells are identified as MW1 and MW2.
2. In December 2011, two monitoring wells were drilled for ROIC Hillsboro LLC at 888 NE 25th Avenue in Hillsboro, Oregon. The wells are identified as MW3 and MW4.
3. The wells were installed to investigate contamination from leaking underground storage tanks.
4. The Albertson's Express No. 591 site is an Oregon Department of Environmental Quality (DEQ) regulated site, Site Number 34-11-1109. A No Further Action Determination letter was issued for the site on March 27, 2012.
5. On October 12, 2012, Darryl Metzger, Monitor Well Constructor, submitted Start Cards, recent analytical data, well logs and a request for written approval to abandon four monitoring wells (MW1, MW2, MW3 and MW4) in-place.
6. The request proposes to grout the wells from the bottom to the top of casing, remove the well monuments and place at least one foot of concrete at the surface.
7. The analytical data submitted shows that the wells were tested for TPH-G, TPH-D, TPH-O, Benzene, Toluene, Ethylbenzene, Total Xylenes, Methyl Tert-Butyl Ether, Naphthalene, 1,2,4-TriMethylBenzene, 1,3,5-TriMethylBenzene, IsoPropylBenzene, n-PropylBenzene, 1,2-Dibromoethane, 1,2-Dichloroethane and Total Lead.

8. The analytical data for well MW1 shows that the contaminant level for Methyl Tert-Butyl Ether exceeds the DEQ Appendix A: Table of RBC dated June 7, 2012.
9. The well report for MW1 shows that the well is constructed in a manner that is protective of the groundwater resource.
10. The analytical data for well MW3 shows that the contaminant level for TPH-G exceeds the DEQ Appendix A: Table of RBC dated June 7, 2012, and the contaminant level for Lead exceeds the EPA National Primary Drinking Water Regulations.
11. The well report for MW3 shows that the well is constructed in a manner that is protective of the groundwater resource.
12. The analytical data for well MW4 shows that the contaminant level for TPH-G exceeds the DEQ Appendix A: Table of RBC dated June 7, 2012, and the contaminant level for Lead exceeds the EPA National Primary Drinking Water Regulations.
13. The well report for MW4 shows that the well is constructed in a manner that is protective of the groundwater resource.
14. On October 30, 2012, a Special Standard was issued approving the request to abandon well MW2 in-place.
15. The approval is based on the fact that the well is constructed in a manner that is protective of the groundwater resource and there is no identified contamination in exceedance of either the EPA National Primary Drinking Water Regulations or the DEQ Appendix A: Table of Risk-Based Concentrations.

Conclusions of Law

OAR 690-240-0510(1) requires the following:

In areas where ground water contamination has been identified, except as described in number (4) below, abandonment shall require the borehole to be completely redrilled to a minimum of the original diameter. All casing, screen, annular sealing material, drill cuttings, debris and filter pack material shall be removed prior to sealing.

OAR 690-240-0510(2) provides that:

In areas where ground water contamination has not been identified, if it can be verified that the monitoring well was constructed in accordance with these rules, it shall be abandoned by filling the well from the bottom up with an approved sealant as described in OAR 690-240-0475. The casing shall then be removed below grade, as compatible with local site conditions and land practices. The following are acceptable methods of original well construction verification:

- (a) A well report in accordance with OAR 690-240-0395;
- (b) Well construction information submitted to the Oregon DEQ.
- (c) Information obtained through down-hole geophysical logging; or
- (d) Other information as approved by the Water Resources Department.

OAR 690-240-0510(4) provides that:

In contaminated areas where remediation has occurred, an approved special standard is required to abandon a well unless it is abandoned according to section (1) of this rule. Abandonment procedures will be considered on a case by case basis. The Department will consult with the state or federal agency that supervised the remediation in determining the appropriate abandonment method. In cases where there was no agency oversight, the Department will consider any information supplied by the licensed and bonded Monitoring Well Constructor in determining the appropriate abandonment procedure.

OAR 690-240-0410(11) provides that:

“[a]ny deviation from these rules requires special standard approval as specified under OAR 690-240-0006.”

OAR 690-240-0006(1) provides that:

Site conditions may require specific design, construction, and abandonment procedures to adapt to the existing local geologic and ground water conditions to fully utilize every natural protection to the state's ground water. Specific site conditions may require different design, construction, setback or abandonment standards than required by the Monitor Well or Geotechnical Hole construction rules. Alternative technologies or methods not addressed in these rules may also exist which could be effectively utilized in the construction or abandonment of a monitoring well or geotechnical hole. Prior to the completion of the well, a bonded constructor must request and receive approval from the Department to use methods or materials that do not meet the monitoring well or geotechnical hole construction standards. The Department may approve such requests either orally or in writing. If oral approval is granted, the written request must be submitted to the Department within three working days of the date of the oral approval. Failure to submit a written request as described above may void the prior oral approval. The proposed methods or materials shall provide at least the same level of resource protection as that which is provided by these rules.

Discussion

The evidence provided indicates the site conditions do not warrant the approval of a special standard to abandon wells MW1, MW3 and MW4 in-place. The request proposes to abandon the wells in-place based on the groundwater data and the No Further Action Determination letter.

OAR 690-240-0006 also contemplates that a special standard may be granted if a new technology or method is proposed. The well abandonment standard that Mr. Metzger is seeking is a special standard request from the requirement that “[i]n areas where ground water contamination has been identified,

except as described in number (4) below, abandonment shall require the borehole to be completely redrilled to a minimum of the original diameter. All casing, screen, annular sealing material, drill cuttings, debris and filter pack material shall be removed prior to sealing.”

OAR 690-240-0510(2) allows wells to be abandoned in-place if the wells are constructed in accordance with the rules and if there is no identified contamination. Based on the analytical data submitted, there is identified contamination in wells MW1, MW3 and MW4.

Based on the analytical data for wells MW1, MW3 and MW4, the proposed abandonment method does not offer the same level of resource protection. Removing all of the casing, screen, filter pack material and seal material ensures that the groundwater contamination will not move vertically within the casing or the annular space and will prevent the infiltration of surface water into the well bore (OAR 690-240-0510(1)).

The groundwater is contaminated on this site as provided in the analytical test results. In order to protect the resource from further degradation, wells MW1, MW3 and MW4 should be abandoned to the standard specified in OAR 690-240-0510(1). The method that has been proposed is not equally protective of the resource in areas where groundwater contamination has been identified or is unknown, for wells that are not constructed in a manner that is protective of the groundwater resource or for wells where the construction cannot be verified.

Order

It is hereby ORDERED that the Special Standard Request for monitor well numbers MW1, MW3 and MW4 (Start Card numbers 1018156, 1018158 and 1018159, respectively), submitted by Darryl Metzger, is Denied.

Dated this 28 Day of January, 2013.



Kristopher Byrd, Coordinator
Well Construction Program
Oregon Water Resources Department

BEFORE THE OREGON WATER RESOURCES DEPARTMENT

In the Matter of Special)	FINAL ORDER DENYING
Standard Request from)	REQUEST FOR
Darryl Metzger #10423)	SPECIAL STANDARD

Appeal Rights

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Findings of Fact

1. In December 2003, two monitoring wells were drilled for Albertson's c/o URS Corporation at 888 NE 25th Avenue in Hillsboro, Oregon. The wells are identified as MW1 and MW2.
2. In December 2011, two monitoring wells were drilled for ROIC Hillsboro LLC at 888 NE 25th Avenue in Hillsboro, Oregon. The wells are identified as MW3 and MW4.
3. The wells were installed to investigate contamination from leaking underground storage tanks.
4. The Albertson's Express No. 591 site is an Oregon Department of Environmental Quality (DEQ) regulated site, Site Number 34-11-1109. A No Further Action Determination letter was issued for the site on March 27, 2012.
5. On October 12, 2012, Darryl Metzger, Monitor Well Constructor, submitted Start Cards, recent analytical data, well logs and a request for written approval to abandon four monitoring wells (MW1, MW2, MW3 and MW4) in-place.
6. The request proposes to grout the wells from the bottom to the top of casing, remove the well monuments and place at least one foot of concrete at the surface.
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8. The analytical data for well MW1 shows that the contaminant level for Methyl Tert-Butyl Ether exceeds the DEQ Appendix A: Table of RBC dated June 7, 2012.
9. The well report for MW1 shows that the well is constructed in a manner that is protective of the groundwater resource.
10. The analytical data for well MW3 shows that the contaminant level for TPH-G exceeds the DEQ Appendix A: Table of RBC dated June 7, 2012, and the contaminant level for Lead exceeds the EPA National Primary Drinking Water Regulations.
11. The well report for MW3 shows that the well is constructed in a manner that is protective of the groundwater resource.
12. The analytical data for well MW4 shows that the contaminant level for TPH-G exceeds the DEQ Appendix A: Table of RBC dated June 7, 2012, and the contaminant level for Lead exceeds the EPA National Primary Drinking Water Regulations.
13. The well report for MW4 shows that the well is constructed in a manner that is protective of the groundwater resource.
14. On October 30, 2012, a Special Standard was issued approving the request to abandon well MW2 in-place.
15. The approval is based on the fact that the well is constructed in a manner that is protective of the groundwater resource and there is no identified contamination in exceedance of either the EPA National Primary Drinking Water Regulations or the DEQ Appendix A: Table of Risk-Based Concentrations.

Conclusions of Law

OAR 690-240-0510(1) requires the following:

In areas where ground water contamination has been identified, except as described in number (4) below, abandonment shall require the borehole to be completely redrilled to a minimum of the original diameter. All casing, screen, annular sealing material, drill cuttings, debris and filter pack material shall be removed prior to sealing.

OAR 690-240-0510(2) provides that:

In areas where ground water contamination has not been identified, if it can be verified that the monitoring well was constructed in accordance with these rules, it shall be abandoned by filling the well from the bottom up with an approved sealant as described in OAR 690-240-0475. The casing shall then be removed below grade, as compatible with local site conditions and land practices. The following are acceptable methods of original well construction verification:

- (a) A well report in accordance with OAR 690-240-0395;
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- (d) Other information as approved by the Water Resources Department.

OAR 690-240-0510(4) provides that:

In contaminated areas where remediation has occurred, an approved special standard is required to abandon a well unless it is abandoned according to section (1) of this rule. Abandonment procedures will be considered on a case by case basis. The Department will consult with the state or federal agency that supervised the remediation in determining the appropriate abandonment method. In cases where there was no agency oversight, the Department will consider any information supplied by the licensed and bonded Monitoring Well Constructor in determining the appropriate abandonment procedure.

OAR 690-240-0410(11) provides that:

“[a]ny deviation from these rules requires special standard approval as specified under OAR 690-240-0006.”

OAR 690-240-0006(1) provides that:

Site conditions may require specific design, construction, and abandonment procedures to adapt to the existing local geologic and ground water conditions to fully utilize every natural protection to the state's ground water. Specific site conditions may require different design, construction, setback or abandonment standards than required by the Monitor Well or Geotechnical Hole construction rules. Alternative technologies or methods not addressed in these rules may also exist which could be effectively utilized in the construction or abandonment of a monitoring well or geotechnical hole. Prior to the completion of the well, a bonded constructor must request and receive approval from the Department to use methods or materials that do not meet the monitoring well or geotechnical hole construction standards. The Department may approve such requests either orally or in writing. If oral approval is granted, the written request must be submitted to the Department within three working days of the date of the oral approval. Failure to submit a written request as described above may void the prior oral approval. The proposed methods or materials shall provide at least the same level of resource protection as that which is provided by these rules.

Discussion

The evidence provided indicates the site conditions do not warrant the approval of a special standard to abandon wells MW1, MW3 and MW4 in-place. The request proposes to abandon the wells in-place based on the groundwater data and the No Further Action Determination letter.

OAR 690-240-0006 also contemplates that a special standard may be granted if a new technology or method is proposed. The well abandonment standard that Mr. Metzger is seeking is a special standard request from the requirement that “[i]n areas where ground water contamination has been identified,

except as described in number (4) below, abandonment shall require the borehole to be completely redrilled to a minimum of the original diameter. All casing, screen, annular sealing material, drill cuttings, debris and filter pack material shall be removed prior to sealing.”

OAR 690-240-0510(2) allows wells to be abandoned in-place if the wells are constructed in accordance with the rules and if there is no identified contamination. Based on the analytical data submitted, there is identified contamination in wells MW1, MW3 and MW4.

Based on the analytical data for wells MW1, MW3 and MW4, the proposed abandonment method does not offer the same level of resource protection. Removing all of the casing, screen, filter pack material and seal material ensures that the groundwater contamination will not move vertically within the casing or the annular space and will prevent the infiltration of surface water into the well bore (OAR 690-240-0510(1)).

The groundwater is contaminated on this site as provided in the analytical test results. In order to protect the resource from further degradation, wells MW1, MW3 and MW4 should be abandoned to the standard specified in OAR 690-240-0510(1). The method that has been proposed is not equally protective of the resource in areas where groundwater contamination has been identified or is unknown, for wells that are not constructed in a manner that is protective of the groundwater resource or for wells where the construction cannot be verified.

Order

It is hereby ORDERED that the Special Standard Request for monitor well numbers MW1, MW3 and MW4 (Start Card numbers 1018156, 1018158 and 1018159, respectively), submitted by Darryl Metzger, is Denied.

Dated this _____ Day of January, 2013.

Kristopher Byrd, Coordinator
Well Construction Program
Oregon Water Resources Department

1018156 (mw1) ✓ (MTBE ^{Deq} 12/16/11)

1018157 (mw2) ✓ OK

1018158 (mw3) ✓ (TPH-g ^{Deq} 12/16/11) (Lead ^{EPA} 12/16/11)

1018159 (mw4) ✓ (TPH-g ^{Deq} 12/16/11) (Lead ^{EPA} 12/16/11)



Oregon

John A. Kitzhaber, MD, Governor

Water Resources Department

North Mall Office Building
725 Summer St. NE, Suite A
Salem, OR 97301
Phone: 503-986-0900
FAX: 503-986-0904
www.oregon.gov/owrd

October 30, 2012

DARRYL METZGER #10423
CASCADE DRILLING INC
13600 SE AMBLER RD
CLACKAMAS OR 97015

FINAL ORDER

Dear Darryl:

The Special Standards Request Form you submitted for owner: ROIC Hillsboro LLC, Start Card number 1018157 (MW2), is hereby approved for the following: You may abandon this monitoring well utilizing the method described in OAR 690-240-0510(2). *Bentonite grout may only be used to abandon the portion of the well that is below the static water level.* Above the static water level another approved sealing material must be used. Your Special Standards Request Form is enclosed. All other standards must be adhered to.

The Well Construction Standards serve to protect ground water resources. By approving and issuing this special construction standard the Oregon Water Resources Department is not representing that a well constructed in accordance with this condition will maintain structural integrity or that it meets engineering standards. The well constructor/or landowner is responsible for ensuring that a well is constructed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240.

If you have any questions regarding this letter, I may be contacted at (503) 986-0851, or by e-mail at Kristopher.R.Byrd@wrд.state.or.us.

Sincerely,

Kristopher Byrd, Coordinator
Well Construction Program
Well Construction and Compliance Section

enclosure

cc: Bill Ferber, W Region Manager
File

This is a final order in other than a contested case. This order is subject to judicial review under ORS 183.484. Any petition for judicial review must be filed within the 60 day time period specified by ORS 183.484(2). Pursuant to ORS 536.075 and OAR 137-004-0080 you may either petition for judicial review or petition the Director for reconsideration of this order. A petition for reconsideration may be granted or denied by the director, and if no action is taken within 60 days following the date the petition was filed, the petition shall be deemed denied.





Oregon Water Resources Department
 725 Summer Street NE, Suite A
 Salem Oregon 97301-1266
 (503) 986-0900
 www.wrd.state.or.us

Special Standards Request Form

REQUEST FOR WRITTEN APPROVAL TO USE CONSTRUCTION METHODS NOT INCLUDED IN OREGON ADMINISTRATIVE RULES 690-200 THROUGH 690-240

Before the request can be considered, this form must be completed. Requests shall be submitted to the Well Construction Program Coordinator, Water Resources Department, 725 Summer Street NE, Suite A, Salem OR 97301-1266. Requests may also be considered by the appropriate Regional Manager.

Date of request: 10/12/2012 Oral approval date (if applicable): _____

Bonded Well Constructor (name, license #, and mailing address): _____

Darryl Metzger - #10423 - 13600 SE Ambler Road, Clackamas, OR 97015

(1) Location of Well: SE 1/4 NE 1/4 Tax lot 400 Section 32,
 Township 1 N, Range 2 W, WASHINGTON County
 Address at well site: 888 NE 25TH AVENUE
HILLSBORO, OREGON

X4

(2) Start Card Number(s)(for work to be done): 1018156 - 1018159

(3) Name and Address of Land Owner: ROTC HILLSBORO, LLC
880 NE 25TH AVENUE HILLSBORO, OREGON 97124

(4) Distance to the nearest septic tank, drainfield, closed sewage line (if water supply well)
UNKNOWN

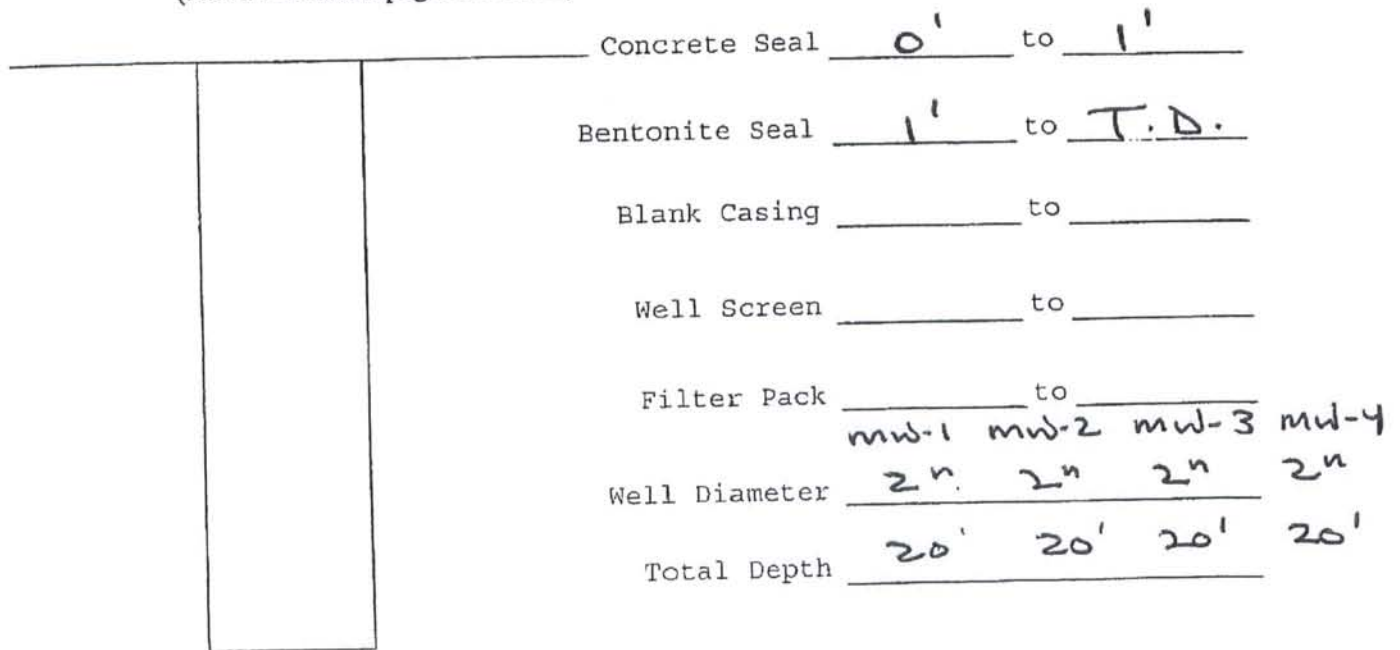
(5) The unusual site conditions which necessitate this request: OUR CLIENT
WOULD LIKE TO GRANT THESE FOUR WELLS
IN PLACE. GROUNDWATER DATA ATTACHED

(6) The proposed construction methods that the bonded well constructor believes will be adequate for this well: (attach additional pages if needed)

CASCADE DRILLING, L.P. WILL GRANT EACH WELL
FROM THE BOTTOM UP TO TOC. REINFORCE THE
WELL MONUMENT AND PLACE AT LEAST ONE
FOOT OF CONCRETE AT THE SURFACE.

7226

- (7) Diagram showing the pertinent features of the proposed well design and construction:
(attach additional pages if needed)

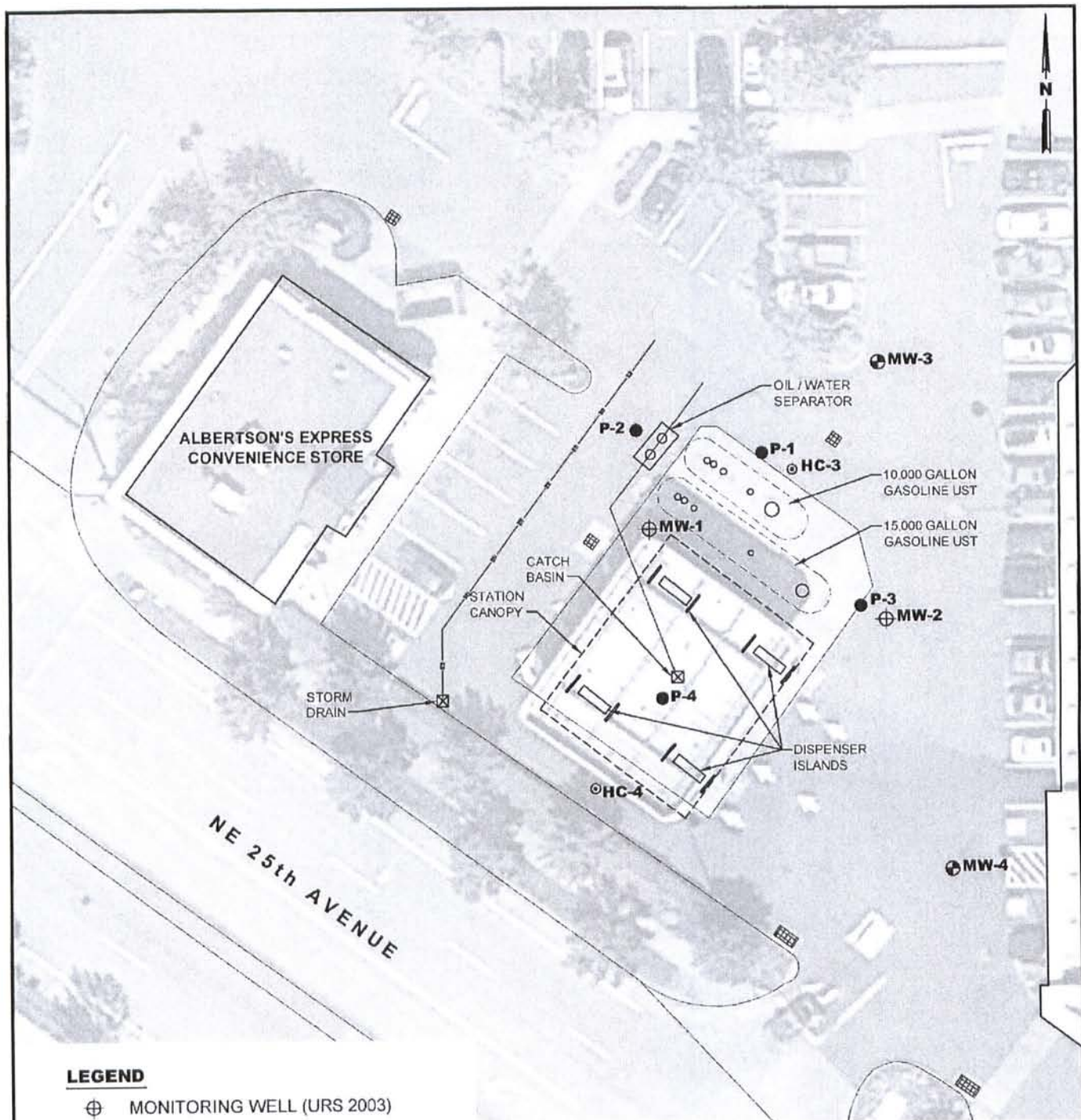


PLEASE NOTE:

- (1) The Well Construction Standards serve to protect ground water resources. By approving and issuing this special construction standard the Oregon Water Resources Department is not representing that a well constructed in accordance with this condition will maintain structural integrity or that it meets engineering standards. The well constructor/owner is responsible for ensuring that a well is constructed in a manner that protects ground water resources as required under Oregon Administrative Rules 690-200 through 690-240.
- (2) If it should be determined at some future date that the well, due to its construction, is allowing ground water contamination, waste or loss of artesian pressure, the undersigned shall return to the site and rectify the problem.
- (3) If oral approval was granted, a written request must be submitted to the Department either within three (3) working days of the date of oral approval or prior to the completion of the associated well work. Failure to submit a written request as described above may void prior oral approval.

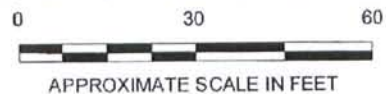
I have read and understand the above information. I further attest that the information provided is accurate to the best of my knowledge.

Bonded Constructor Signature: _____



LEGEND

- ⊕ MONITORING WELL (URS 2003)
- ⊕ MONITORING WELL (STANTEC 2011)
- SOIL BORING (HAHN 2003)
- ⊙ SOIL BORING (HART CROWSER 2011)
- STORM WATER DRAIN LINE




 Stantec 9400 SOUTH WEST BARNES RD STE 200 PORTLAND, OREGON 97225-6680 PHONE: (503) 297-1631 FAX: (503) 297-5429	FOR: ALBERTSON'S EXPRESS FACILITY NO. 591 (SUPERVALU) 888 NE 25th AVENUE HILLSBORO, OREGON		SITE PLAN WITH BORING LOCATIONS		FIGURE: 2
	JOB NUMBER: 212302790	DRAWN BY: JCR	CHECKED BY: JD	APPROVED BY: MAT	DATE: JAN. 2012

Table 2. Summary of Groundwater Elevations and Analytical Results - TPH, BTEX, RBDM VOCs, and Total Lead
 Albertsons Express #591
 888 NE 25th Avenue
 Hillsboro, Oregon

Well Number (TOC Elevation)	Sample Date	Static Water Level (feet AMSL)	TPH-D ¹ (µg/L)	TPH-D ² (µg/L)	TPH-O ² (µg/L)	BTEX ³ (µg/L)						VOCs ⁴ (µg/L)						Total Lead ⁵ (µg/L)	
						Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	naphthalene	1,2,4-Trimethylbenzene	1,3,5-Isopropylbenzene	p-Propylbenzene	1,2-Dibromoethane	1,2-Dichloroethane			
MW-1 (197.03)	12/16/11	189.41	<80.0	<94.3	<472	<0.200	<0.500	<0.500	<1.00	37.5	<2.00	<2.00	<1.00	<0.500	<2.00	<0.500	<0.500	<0.500	1.10
MW-2 (197.73)	12/16/11	188.53	<80.0	<94.3	<472	<0.200	<0.500	<0.500	<1.00	<2.00	<2.00	<1.00	<0.500	<2.00	<0.500	<0.500	<0.500	<0.500	3.66
MW-3 (187.86)	12/16/11	189.58	659 ⁶	<94.3	<472	<2.00	379	<6.00	<10.0	<20.0	<20.0	<10.0	<5.00	<20.0	<5.00	<5.00	<5.00	<5.00	25.1
MW-4 (187.73)	12/16/11	189.24	794 ⁶	<94.3	<472	<2.00	451	<5.00	<10.0	<20.0	<20.0	<10.0	<5.00	<20.0	<5.00	<5.00	<5.00	<5.00	21.5
Groundwater RBCs ₁₀₀ (µg/L)	Residential Receptor	NE	NE	NE	NE	2,800	NE	2,200	NE	239,000	3,100	NE	NE	NE	NA	NA	190	1,900	NA ⁸
Exposure Pathway: Volatilization to Outdoor Air	Urban Residential Receptor	NE	NE	NE	NE	7,600	NE	22,000	NE	610,000	8,400	NE	NE	NE	NA	NA	520	5,100	NA ⁸
Exposure Pathway: Volatilization to Outdoor Air	Occupational Receptor	NE	NE	NE	NE	14,000	NE	41,000	NE	1,100,000	15,000	NE	NE	NE	NA	NA	960	9,500	NA ⁸
Groundwater RBCs ₁₀₀ (µg/L)	Residential Receptor	NE	NE	NE	NE	190	NE	480	68,000	39,000	670	5,000	3,200	NE	NA	NA	46	250	NA ⁸
Exposure Pathway: Vapor Intrusion into Buildings	Urban Residential Receptor	NE	NE	NE	NE	510	NE	1,360	58,000	110,000	1,880	5,000	3,200	NE	NA	NA	130	680	NA ⁸
Exposure Pathway: Vapor Intrusion into Buildings	Occupational Receptor	NE	NE	NE	NE	2,800	NE	7,400	NE	660,000	10,000	NE	41,000	NE	NA	NA	950	3,800	NA ⁸
Groundwater RBCs ₁₀₀ (µg/L) Exposure Pathway: Groundwater In Excavation	Construction and Excavation Worker	13,000	NE	NE	NE	1,700	210,000	4,400	23,900	92,000	500	1,700	1,400	NE	NA	NA	28	630	NA ⁸

NOTES:
 1 Total Petroleum Hydrocarbons as gasoline-range hydrocarbons (TPH-G) per NWTPH-GK Method.
 2 Total Petroleum Hydrocarbons as diesel-range organics (TPH-D) and heavy-organics hydrocarbons (TPH-O) per NWTPH-DK Method.
 3 Benzene, toluene, ethylbenzene, and total xylenes (BTEX) analysis per EPA Method 8260B.
 4 Volatile Organic Compounds (VOCs) per EPA Method 8260B.
 5 Total lead per EPA 8000/7000 Series Methods.
 Risk-Based Concentrations (RBCs) from Appendix A (Revision on September 15, 2009): Table of Risk-Based Concentrations, Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites, Oregon DEQ.
 6 Gasoline analytical result flagged on lab report with qualifier A-Q1 = "Gasoline result due mostly to Toluene peak".
 7 Oregon DEQ considers all indirect groundwater exposure pathways to be incomplete exposure pathways based on volatility. Therefore, RBCs and RBCs are designated NA.
 8 Oregon DEQ does not consider this pathway applicable. Therefore, RBCs are designated NA.
 TOC = Top of Well Casing
 AMSL = Above Mean Sea Level
 -- = Not Analyzed
 µg/L = Micrograms per Liter
 NA = Not Applicable
 NE = The RBC for this indirect pathway is not printed, since it is assumed that it is not physically possible to exceed the unacceptable risk level by this pathway.



Oregon

John A. Kitzhaber, MD, Governor

Department of Environmental Quality

Northwest Region Portland Office

2020 SW 4th Avenue, Suite 400

Portland, OR 97201-4987

(503) 229-5263

Fax: (503) 229-6945

TTY: (800) 736-2900

27 March 2012

BOB DENNINO
ENVIRONMENTAL PROJECT MANAGER
SUPERVALU INC.
PO BOX 20, DEPARTMENT 72405
BOISE ID 83276

Re: No Further Action Determination
Albertson's Express No. 591
UST Cleanup File No. 34-11-1109

Dear Mr. DeNinno:

The Department of Environmental Quality (DEQ) has completed its review of the information submitted to date concerning contamination detected in the area of the underground storage tank (UST) fueling system at the Albertson's Express No. 591 station located at 888 NE 25th Avenue in Hillsboro, Oregon (site). DEQ has determined that the cleanup appears to have met the requirements of Oregon Administrative Rules (OAR) 340-122-0205 through 340-122-0360 and No Further Action is required at this time subject to any conditions described below. The site was evaluated using risk-based screening levels under occupational worker, construction worker and excavation worker exposure scenarios.

This determination is a result of our evaluation and judgment based on the regulations and facts as we now understand them:

SITE HISTORY/BACKGROUND

The site is located in a retail commercial development consisting of Taxlots 2100 (5.63 acres) and 2200 (8.96 acres) on Washington County Tax Map 1N 2 32AD (parent property). The parcels comprising the parent property are divided by NE 25th Avenue. The Albertson's Express No. 591 gasoline station is located along the southern boundary of Tax Lot 2100 and has an associated street address of 888 NE 25th Avenue (site). The site is improved with a retail building, UST fueling system and dispenser islands, canopy and associated asphalt-paved parking areas. The site is located in an area of mixed residential and commercial land use.

The site was utilized for agricultural purposes from the mid 1930s to the 1970s. Commercial development of the parent property was underway by July 2001, with construction of the Albertson's Express station completed by May 2002. Phase I and II Environmental Site

Assessments (ESAs) were completed for the site and parent property both prior to (2000) and following (2003, 2004, and 2008) site development.

In September 2011, as part of due diligence work associated with a real estate transaction, Hart Crowser completed Phase I/II ESAs at the site and parent property to evaluate potential environmental concerns associated with historic uses. A total of five borings were advanced at the parent property, of which two were completed in the area of the UST fueling system at the site. In addition, Hart Crowser sampled two monitoring wells previously installed in this area. Based on detections of gasoline-range hydrocarbons in groundwater samples collected from the site, a release was reported to DEQ on October 25, 2011 and UST Cleanup File No. 34-11-1109 was established.

UST DECOMMISSIONING

The current UST system (installed in April 2002) consists of one 10,000-gallon UST and one 15,000-gallon UST, both double-walled and constructed of fiberglass-reinforced plastic. The UST system incorporates spill prevention equipment including automatic tank gauging, interstitial monitoring, inventory control and a Veeder Root monitoring system. USTs at the site have not been decommissioned since construction of the Albertson's Express fueling station.

EXTENT OF CONTAMINATION DEFINED

In 2000, prior to construction, Dames & Moore completed a geophysical assessment of the parent property to identify possible heating oil USTs associated with former residences. Test pits were completed at five anomalies believed to represent potential USTs but none were found. Analysis of soil samples collected from the test pits reportedly did not reveal detectable levels of petroleum hydrocarbons.

In August 2003, Hahn & Associates, Inc. (HAI) advanced direct-push borings (P-1 through P-4) at the site to assess conditions in the area of the UST system. Analysis of a groundwater sample from boring P-1 (north of the UST pit) revealed benzene at a concentration of 1.1 micrograms per liter ($\mu\text{g/L}$). HAI concluded the low level of benzene in groundwater could not be positively attributed to a leak from the UST system. No other detections in soil or groundwater samples were reported by HAI.

In late 2003, URS Corporation (URS) installed two wells (designated 163314-1S and 163313-2N) to a depth of 20 feet below ground surface (bgs) generally east and west, respectively, of the USTs. As summarized by Hart Crowser (September 2011), URS reportedly installed the wells in native soil outside the UST pit. However, Hart Crowser tables and figures summarizing the URS data referred to these features as "observation wells". Analysis of a groundwater sample from well 163314-1S revealed toluene at a concentration of 1.0 $\mu\text{g/L}$. No other detections in soil or

groundwater samples were reported by URS. As with the previous direct-push investigation, the source of low-level gasoline constituents in groundwater was unclear.

In September 2011, Hart Crowser completed Phase II ESA work at the site. The Phase II ESA scope of work included borings (HC-3 and HC-4) advanced in the area of the USTs and pump islands. Analysis of a soil sample from boring HC-3 did not reveal gasoline, diesel or oil-range hydrocarbons or associated volatile organic compound (VOC) constituents at concentrations exceeding laboratory method reporting limits (MRLs). Analysis of the grab groundwater sample from boring HC-3 revealed only benzene (5.72 µg/L) and methyl tert butyl ether (MTBE) (6.87 µg/L). The Phase II ESA scope of work also included sampling of wells 163314-1S and 163313-2N. Analysis of the groundwater sample from well 163313-2N revealed gasoline and diesel-range hydrocarbons at concentrations of 606 µg/L and 292 µg/L, respectively. In addition, MTBE at a concentration of 35.7 µg/L was detected in well 163313-2N. Based on these findings, Hart Crowser recommended consultation with DEQ concerning whether the detections in groundwater constituted a reportable release. Based on the findings of the Hart Crowser investigation, a release was reported to DEQ on October 25, 2011 and UST Cleanup File No. 34-11-1109 was established.

In December 2011, Stantec Consulting Services, Inc. (Stantec) advanced two borings to a depth of 20 feet bgs at the site. The borings were converted to 2-inch monitoring wells (MW-3 and MW-4) to further evaluate subsurface conditions generally north and east, respectively, of the UST system. Analysis of soil samples collected from the monitoring wells did not reveal gasoline, diesel or oil-range hydrocarbons or associated VOCs at levels exceeding laboratory MRLs. In addition to sampling newly installed wells MW-3 and MW-4, Stantec sampled existing wells 163313-2N (renamed MW-1 by Stantec) and 163314-1S (renamed MW-2 by Stantec). The following contaminants were detected in groundwater samples from monitoring wells MW-3 and MW-4: gasoline-range hydrocarbons (699 µg/L and 794 µg/L, respectively) and toluene (379 µg/L and 454 µg/L, respectively). MTBE was also detected in groundwater from well 163313-2N (Stantec well MW-1) at a concentration of 37.5 µg/L. Lastly, total lead was detected in samples from all monitoring wells at concentrations ranging from 1.1 µg/L to 25.1 µg/L. Based on the investigation findings, Stantec concluded that further investigation was not warranted.

REMEDIAL ACTIONS AND COMPLIANCE MONITORING

Based on the generally low levels of gasoline and diesel-range hydrocarbons and VOCs detected in site groundwater, further compliance monitoring and/or cleanup was not deemed necessary by DEQ.

CURRENT AND FUTURE GROUNDWATER BENEFICIAL USE DETERMINATION

The City of Hillsboro provides drinking water to the site and surrounding properties. The City obtains its primary drinking water supply from the upper Tualatin River during the wet season and from Hagg Lake and Barney Reservoir during the dry season. The City of Hillsboro does not currently use groundwater as a source of drinking water. However, a number of private domestic wells in the greater Hillsboro area are used as a source of potable water.

At the request of DEQ, Stantec reviewed Oregon Water Resource Department (WRD) records for the portions of Sections 32 and 33 of Township 1 North, Range 2 West of the Willamette Meridian and Baseline within an approximate 0.25-mile radius of the site to further evaluate potential risks to area receptors from groundwater containing low levels of gasoline hydrocarbons and associated constituents. The results of this search did not identify locatable water wells within an approximate 0.25-mile radius of the site.

Due to incomplete location information for the wells in the Township and Range sections of interest, as well as the use of properties in proximity to the site, DEQ requested that the following residential and commercial properties on Washington County Tax Map 1N 2 32AD be surveyed to confirm the absence of potable water wells:

- Taxlot 200 (commercial property at 809 NE 28th Avenue);
- Taxlot 300 (undeveloped property southeast of site);
- Taxlot 1200 (residential property at 2569 NE Grant);
- Taxlot 1300 (residential property at 2591 NE Grant);
- Taxlot 1700 (residential property at 2669 NE Grant);
- Taxlot 1800 (residential property at 2697 NE Grant).

Visual inspection of the undeveloped property southeast of the site did not reveal evidence of a well (e.g., wellhead or pumphouse). In addition, responses were returned for the commercial property at 809 NE 28th and three of four residential properties (2569, 2591 and 2669 NE Grant) surveyed. The residence at 2697 NE Grant is currently for sale and vacant. However, a sales flyer for the property indicates the dwelling is connected to City water services.

Collectively, these findings indicate shallow groundwater in the area of the site is not used as a current or likely future source of drinking water. As a result, the *Groundwater Ingestion & Inhalation from Tapwater* and *Soil Leaching to Groundwater* exposure pathways are considered incomplete and can be excluded from further consideration.

CURRENT AND FUTURE LAND USE DETERMINATION

The parent property including the site is zoned C-1 (General Commercial) by the City of Hillsboro. Properties north of the parent property which includes the site are zoned M-P for Industrial Park use; properties to the northeast are zoned M-2 for Industrial use; properties to the east are zoned SCFI for Fair Complex Institutional use; properties to the south are zoned R-7 for single family residential use; and properties to the west and northwest are zoned C-1 for General Commercial and C-4 for Neighborhood Commercial uses, respectively.

According to Section 54 of the City of Hillsboro Zoning Ordinance (No. 1945 –Volume I), outright permitted uses for properties zoned C-1 include any outright permitted uses under Neighborhood Commercial (C-4) zoning. Mixed residential and commercial use (residential in upper floors) is an outright permitted use under C-1 zoning. However, based on the strongly commercial use of properties in the immediate vicinity of the site, DEQ considers the potential for future residential use of the site to be limited.

CONTAMINANTS OF INTEREST (COIs)

Gasoline and diesel-range hydrocarbons and constituents including benzene, toluene, MTBE, and lead were detected in soil and/or groundwater samples historically collected from the site and are considered COIs for purposes of risk evaluation.

CONTAMINANTS OF POTENTIAL CONCERN (COPCs)

Concentrations of petroleum hydrocarbons and associated constituents detected in site soil and groundwater were compared to generic November 2011 Risk-Based Concentrations (RBCs) for complete exposure pathways to identify COPCs under current and/or likely future occupational worker, construction worker and excavation worker exposure scenarios.

Soil

Review of soil analytical data for borings advanced in the area of the UST fueling system at the site did not reveal COPCs for soil under the current and likely future occupational worker scenario and likely future construction worker and excavation worker exposure scenarios.

Groundwater

Gasoline and diesel-range hydrocarbons were detected in site wells at maximum concentrations (794 µg/L and 606 µg/L, respectively) exceeding generic RBCs for the *Groundwater Ingestion and Inhalation from Tapwater* exposure pathway under the current and likely future occupational worker scenario (420 µg/L and 360 µg/L, respectively). In addition, the maximum detected concentrations of benzene (5.92 µg/L) and lead (25.1 µg/L) exceeded generic RBCs for this

pathway under the current and likely future occupational worker scenario (2.2 µg/L and 15 µg/L, respectively). However, a beneficial use evaluation completed for the site demonstrated shallow groundwater in the area of the site does not have a current or likely future beneficial use as drinking water. As a result, the *Groundwater Ingestion and Inhalation from Tapwater* exposure pathway is considered incomplete under the current and likely future occupational worker exposure scenario and these detections can be excluded from further consideration.

CONCEPTUAL SITE MODEL AND RISK-BASED DETERMINATION

Based on zoning and current use of the site and surrounding properties, the following receptor scenarios were evaluated for this release: occupational worker (current and likely future use), construction worker (likely future use), and excavation worker (likely future use).

Visual observations and laboratory analysis of soil samples collected from site borings and wells did not reveal evidence of petroleum hydrocarbons within 5 feet of the surface. As a result, the *Soil Ingestion, Dermal Contact, and Inhalation* exposure pathway is incomplete under the current and likely future occupational worker exposure scenario. However, this pathway is potentially complete under current and likely future construction/excavation worker exposure scenarios.

Owing to the presence of petroleum hydrocarbons and volatile organic compound constituents in vadose zone soil and groundwater, the *Volatilization to Outdoor Air* and *Vapor Intrusion into Building* exposure pathways for soil and/or groundwater are potentially complete under the current and likely future occupational worker exposure scenario.

Shallow groundwater in the vicinity of the site was not found to have a current or likely future beneficial use as drinking water. As a result, the *Soil Leaching to Groundwater* and *Groundwater Ingestion and Inhalation from Tapwater* exposure pathways are considered incomplete under the current and likely future occupational worker exposure scenario.

During historic investigations at the site, groundwater was observed at depths (8 to 10 feet bgs) that could be encountered in future excavations for construction and/or maintenance. As a result, the *Groundwater in Excavation* exposure pathway is potentially complete under likely future construction/excavation worker exposure scenarios.

CONTAMINANTS OF CONCERN (COCs)

DEQ did not identify COCs for site soil and groundwater under current and likely future occupational worker, construction worker and excavation worker exposure scenarios.

RISK MANAGEMENT

Historic sampling in the area of the UST system revealed only gasoline-range hydrocarbons, diesel-range hydrocarbons and related constituents in groundwater exceeding groundwater ingestion RBCs under the current and likely future occupational worker scenario. However, a beneficial use evaluation showed that shallow groundwater in the vicinity of the site is unlikely to be used as a source of drinking water. The property is currently developed for commercial use and will likely remain so in the future. Groundwater impacted by low levels of gasoline and diesel-range hydrocarbons in the area of the UST system is unlikely to extend appreciably beyond the boundaries of the site.

As a result of these findings, site conditions are considered protective of human health and the environment and further risk management measures are not warranted.

ECOLOGICAL RISK EVALUATION

The site is located approximately in excess of 0.5 miles distance from the Columbia River and the Columbia Slough (north and south of the site, respectively). The majority of the site is occupied by buildings and asphalt pavement and is devoid of wildlife habitat. Based on the limited extent of groundwater contamination at the site, the 2011 release is unlikely to impact nearby surface water bodies or threaten wildlife.

PUBLIC NOTICE

Owing to the low levels of gasoline and diesel-range hydrocarbons detected in site groundwater in the area of the UST system, as well as the minimal level of risk to current and likely future occupational worker, construction worker and excavation worker receptors from this contamination, DEQ did not require additional investigation and/or cleanup. As a result, public comment was not deemed necessary.

NFA DETERMINATION

Contamination remains at the site. DEQ approves leaving this contamination because it does not present an unacceptable risk to human health, safety, welfare or the environment. DEQ's approval to leave contamination on the site was based upon present conditions, as described in documents in DEQ's files.

Any future work in the contaminated areas of the property, including any sampling, management, and disposal of contaminated soil and groundwater must be performed in accordance with DEQ regulations and policies.

Albertson's Express No. 591
March 27, 2012
Page 8 of 9

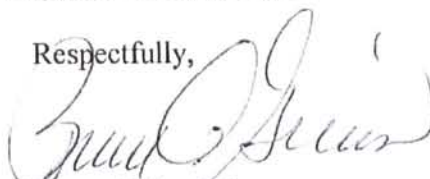
DEQ recommends that monitoring wells be properly decommissioned, since construction deficiencies can develop in monitoring wells, thereby creating a liability and a possible conduit for contaminant migration. Monitoring wells that are not maintained according to Oregon WRD standards must either be repaired or decommissioned in accordance with WRD regulations. Please coordinate with a WRD Regional Well Inspector regarding proper abandonment procedures and submit a copy of any monitoring well decommissioning reports to DEQ.

This determination will not apply if new or undisclosed facts show that the cleanup does not comply with the referenced rules. Specifically, this letter only applies to the UST release discussed above (unless otherwise noted) and does not apply to contamination that may have originated from Underground Injection Control systems (UICs), i.e. motor vehicle drains, septic systems, drain fields, cesspools, seepage pits, drywells, seepage trenches, and abandoned wells. It also does not apply to former pump islands or UST locations, hydraulic hoists, or other sources of contamination not addressed by this letter. If this facility has unregistered UICs you must register them with the DEQ and obtain from DEQ either Rule Authorization or a permit to operate the UIC. Please visit DEQ's website at www.deq.state.or.us/wq/groundwa/uichome.htm or call (503) 229-5945 for more information.

DEQ recommends keeping a copy of all of the documentation associated with this remedial action with the permanent facility records.

Your efforts to comply with the regulations to ensure that your facility has been adequately cleaned up have been appreciated. If you have any questions, please contact Jeff Schatz at (503) 229-5024 or the DEQ's Northwest Region office at (503) 229-5263.

Respectfully,



Bruce Gilles, Manager
Tanks, Cleanup and Emergency Response

cc: Rob Donovan
V.P., Environmental
Tesoro Refining and Marketing Company
3450 South 344th Way
Federal Way, WA 98801

Pat Vaughn
Senior Environmental Scientist
Stantec Consulting Services, Inc.
9400 SW Barnes Road, Suite 100
Portland, OR 97225-6690

Project: Albertsons Store #591
 Project Location: Hillsboro, Oregon
 Project Number:

Log of Boring MW-1-2003

Sheet 1 of 1

Date(s) Drilled	12/04/2003	Logged By	NJDM	Checked By	DJD
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	4 7/8-Inch O.D.	Total Depth of Borehole	21.5 feet
Drill Rig Type	Mobile B-57	Drilling Contractor	Cascade Drilling	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	7.6 feet bgs	Sampling Method(s)	Split Spoon Sampler	Hammer Data	140 lb. Hammer
Borehole Backfill	Monitoring Well Installed	Location	888 NE 25th Ave.		

Elevation, feet	Depth, feet	SAMPLES				Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	REMARKS
		Type	Number	Recovery, (FT)	PID				
0							Surface Condition: Asphalt 3.5" ASPHALTIC CONCRETE		
						ML-CL	CLAYEY SILT [ML-CL], low plasticity, brown, stiff, moist, no odor.	Top 5.0' of borehole excavated with Vac-U-Dig System	
5		1	1.25	0.0					
		2	1.25	0.0		CL	SILTY CLAY [CL], very fine grained, low plasticity, brown, stiff, wet, no odor.		
10		3	1.0	0.0					
15		4	1.25				2" to 3" lense of clayey silt beginning at ~15.3' bgs, moisture increases		
20		5	1.25				2" lense of gray silty sand at ~20.5' bgs		
25							Boring terminated at 21.5 feet bgs on 12/04/2003 and a monitor well was installed to 20.0 feet bgs upon completion.		

Report: PORT_ENV_PID: File: ALBERT.GPJ; 1/8/2004 MW-1-2003



Albertson's Express No. 591
March 27, 2012
Page 9 of 9

Stan Jones
Environmental Manager
Port of Portland
7000 NE Airport Way
Portland, OR 97218

(jks:JKS)

Project: Albertsons Store #591
 Project Location: Hillsboro, Oregon
 Project Number:

Log of Boring MW-2-2003

Sheet 1 of 1

Date(s) Drilled	12/04/2003	Logged By	NJDM	Checked By	DJD
Drilling Method	Hollow Stem Auger	Drill Bit Size/Type	4 7/8-Inch O.D.	Total Depth of Borehole	21.5 feet
Drill Rig Type	Mobile B-57	Drilling Contractor	Cascade Drilling	Approximate Surface Elevation	N/A
Groundwater Level and Date Measured	8.7 feet bgs	Sampling Method(s)	Split Spoon Sampler	Hammer Data	140 lb. Hammer
Borehole Backfill	Monitoring Well Installed	Location	888 NE 25th Ave.		

Elevation, feet	Depth, feet	SAMPLES				Graphic Log	Lithologic Log (USCS Code)	MATERIAL DESCRIPTION	REMARKS
		Type	Number	Recovery, (FT)	PID				
0							Surface Condition: Asphalt 3.5" ASPHALTIC CONCRETE Gravel backfill to 2.5' bgs	Top 5' 4" of borehole excavated with Vac-U-Dlg System	
						CL-ML	CLAYEY SILT [ML-CL], low plasticity, brown, stiff, moist, no odor.		
	5		1	1.5					
			2	1.5					
	10		3	1.5			SILTY CLAY [CL], very fine grained, low plasticity, brown, stiff, moist. Becomes wet at ~8.0 feet bgs	▽	
	15		4	1.5			1/2" lense of sandy silt at ~15.5' bgs		
	20		5	1.5			Grades to gray at 20.5' bgs		
	25						Boring terminated at 21.5 feet bgs on 12/04/2003 and a monitoring well was installed to a depth of 20.0 feet bgs upon completion.		

Report: PORT_ENV_PID; File: ALBERT.GPJ; 1/8/2004 MW-2-2003

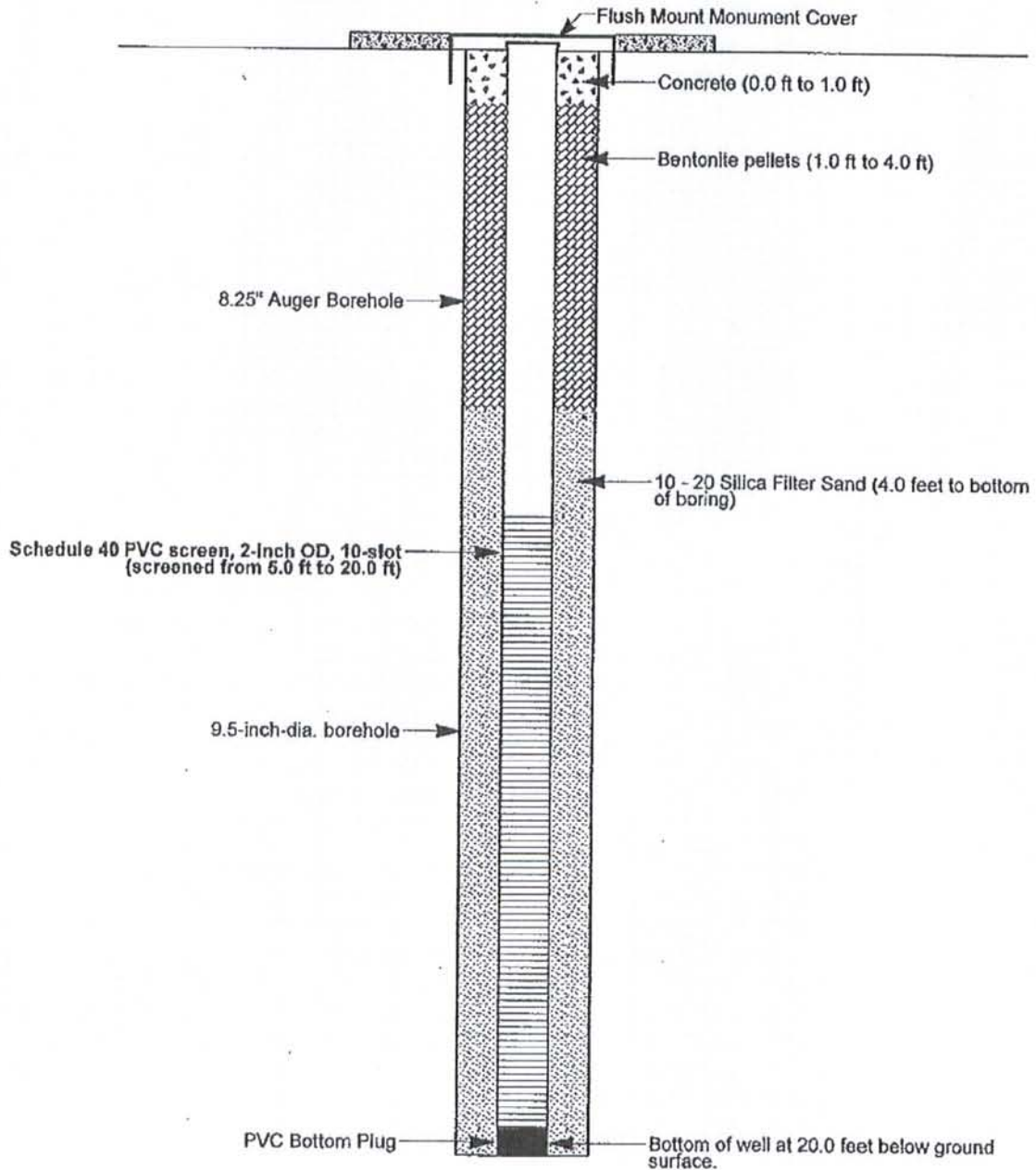
Project: Albertsons Store #591
Project Location: Hillsboro, Oregon
Project Number: 25695068.00002

WELL CONSTRUCTION LOG

Drilling Company: Cascade Drilling
URS Oversight: NJDM
Date Completed: 12/4/2003

Start Card Number: 163313, 163314

Well Diagrams for Monitoring Wells MW-1-2003 through MW-2-2003



Report: ENV_WELL_CONSTR_NOHEAD: F:\ALBERT.GPJ: 1/21/2004 MW-1-2003

FOR WATER RESOURCES DEPARTMENT USE ONLY

Date Prepared: _____ V 163313
 Date Hand Delivered: _____ OWRD Receipt # _____
 Date Region Office Received: _____ Date Fee Received: _____
 Check No. _____

START CARD
NOTICE OF BEGINNING OF WELL CONSTRUCTION
 (as required by ORS 537.762)

This form must be completed and the original mailed or delivered to the Water Resources Department, 725 Summer Street NE Suite A, Salem OR 97301-1271 for all new construction, conversion, alteration, deepening and abandonments. This original must be mailed or delivered before work is commenced. A \$125 fee shall accompany the original for all new well construction, conversion, and deepenings (make checks payable to the Water Resources Department). In addition, the constructor shall provide a legible copy of this notice to the region office within which the well is being constructed, converted, altered, deepened, or abandoned using one of the following methods: (a) by regular mail no later than three (3) calendar days (72 hours) prior to commencement of work; (b) by hand delivery, during regular office hours before work is commenced; or (c) by FAX before work is commenced. If method (c) is used, a legible copy of the start card shall also be mailed or delivered to the region office no later than the day work is commenced. The Water Resources Commission has authority to impose civil penalties for failure to submit the required \$125 fee with the start card, for failure to submit the \$125 fee in a timely manner, and for failure to timely submit start cards.

Owner's name and mailing address: Albertson's Store #59196 URS
 Home Phone: () n/a 111 SW Columbia Ste 900
 Work Phone: () n/a Portland, OR 97201

Type of work: Fee New Construction No Fee Alteration (Repair/Recondition)
 Required: Conversion Required: Abandonment Orig. Start
 Deepening Orig. Start Card No. _____
 Card No. _____

Proposed Commencement Date: 12-4-03

Existing or Proposed Well Depth: 25' Diameter: 2" Original Well I.D. Label Number: _____

Use: Domestic Community (Public System) Industrial Irrigation
 Thermal Injection Monitoring Other _____

Proposed Well Location:
 County Washington Township 110 Range 21W Section 32 Tax Lot 4100
North or South East or West

1/4 SE 1/4 NE Or Latitude _____ Longitude _____

Street Address of well, if not assigned, nearest address:
888 10E 25th Ave Hillsboro, OR

We have read the back of this form and the information provided is accurate to the best of our knowledge.
 Owner/Agent Name Bruce W. Brown Bonded Water Supply/Monitor Well Constructor Name [Signature] License No. 10024
 Date Signed 12-5-03 Company CWI URS Date Signed 12-3-03

OWNER PLEASE NOTE: This is not a water right application. The owner is responsible for obtaining a water right through the Water Resources Department, if required. The Oregon Health Division requires plans to be submitted and approved prior to construction if the well is to be used as a public system.

ADDITIONAL IMPORTANT INFORMATION ON BACK.

UR3207-16

Date Postmarked

W 163314

Date Hand-Delivered

OWRD Receipt

Date Region Office Received

DRR Fee Received

Check No.

START CARD

NOTICE OF BEGINNING OF WELL CONSTRUCTION (as required by ORS 537.762)

This form must be completed and the original mailed or delivered to the Water Resources Department, 725 Summer Street NE Suite A, Salem OR 97301-1271 for all new construction, conversion, alteration, deepening and abandonments. This original must be mailed or delivered before work is commenced. A \$125 fee shall accompany the original for all new well construction, conversion, and deepening (make checks payable to the Water Resources Department). In addition, the constructor shall provide a legible copy of this notice to the region office within which the well is being constructed, converted, altered, deepened, or abandoned using one of the following methods: (a) by regular mail no later than three (3) calendar days (72 hours) prior to commencement of work; (b) by hand delivery, during regular office hours before work is commenced; or (c) by FAX before work is commenced. If method (c) is used, a legible copy of the start card shall also be mailed or delivered to the region office no later than the day work is commenced. The Water Resources Commission has authority to impose civil penalties for failure to submit the required \$125 fee with the start card, for failure to submit the \$125 fee in a timely manner, and for failure to timely submit start cards.

Owner's name and mailing address: American Store #591 9/0 URS
Home Phone: () n/a 111 SW Columbia Ste 900
Work Phone: () n/a Portland, OR 97201

Type of work: Fee New Construction No Fee Alteration (Repair/Recondition)
Required: Conversion Required: Abandonment Orig. Start
 Deepening Orig. Start Card No. _____
Card No. _____

Proposed Commencement Date: 12-4-03

Existing or Proposed Well Depth: 25' Diameter: 2" Original Well I.D. Label Number: _____

Use: Domestic Community (Public System) Industrial Irrigation
 Thermal Injection Monitoring Other _____

Proposed Well Location:
County Washington Township 110 Range 2W Section 32 Tax Lot 400
North or South East or West
1/4 SE 1/4 10E Or Latitude _____ Longitude _____

Street Address of well, if not assigned, nearest address:
888 10E 25th Ave Hillsboro, OR

We have read the back of this form and the information provided is accurate to the best of our knowledge.
Bruce Dismeyer [Signature] 10024
Owner/Agent Name Bonded Water Supply/Monitor Well Constructor Name License No.
12-3-03 CDI-Oregon 12-3-03
Date Signed Company Date Signed

OWNER PLEASE NOTE: This is not a water right application. The owner is responsible for obtaining a water right through the Water Resources Department, if required. The Oregon Health Division requires plans to be submitted and approved prior to construction if the well is to be used as a public system.

ADDITIONAL IMPORTANT INFORMATION ON BACK.

OK 3027-16

STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-0951)

OR3227-16

Well ID# L64737
Start Card # 163515

Instructions for completing this report are on the last page of this form.

(1) OWNER/PROJECT Name: Albertson's c/o URS Corporation WELL NO: MM-1
Address: 111 SW Columbia St, Suite 900
City: Portland State: OR Zip: 97201

(6) LOCATION OF WELL By legal description:
County: Washington Latitude: _____ Longitude: _____
Township: 1N (N or S) Range: 2W (E or W) Section: 32
SE 1/4 of NE 1/4 of above section.

(2) TYPE OF WORK
 New construction Alteration (Repair/Recondition)
 Conversion Deepening Abandonment

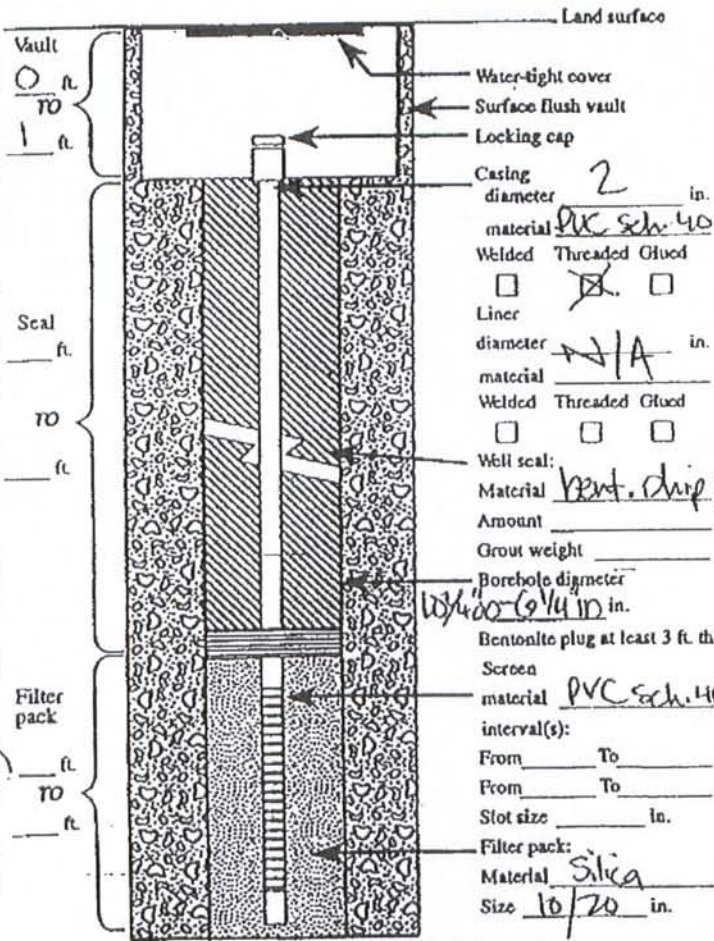
Street address of well location: 888 NE 25th Ave Hillsboro, OR
Tax lot number of well location: 400
ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(3) DRILLING METHOD
 Rotary Air Rotary Mud Cable
 Hollow Stem Auger Other _____

(7) STATIC WATER LEVEL:
_____ Ft. below land surface. Date: 04 Dec 03
Artesian Pressure _____ lb/sq. in. Date: _____

(4) BORE HOLE CONSTRUCTION:
Special Standards Yes No
Depth of Completed Well _____ ft.

(8) WATER BEARING ZONES:
Depth at which water was first found _____



From	To	Est. Flow Rate	SWL
<u>7'</u>	<u>20'</u>	<u>2.6 gpm</u>	

(9) WELL LOG:
Ground Elevation _____

Material	From	To	SWL
<u>Asphalt</u>	<u>0'</u>	<u>.5'</u>	
<u>Silty clay</u>	<u>.50</u>		

Date started 04 Dec 03 Completed 04 Dec 03

(5) WELL TESTS:
 Pump Bailor Air Flowing Artesian
Permeability _____ Yield _____ GPM
Conductivity _____ PH _____
Temperature of water: 56 °F/C Depth artesian flow found _____ ft.
Was water analysis done? Yes No
By whom? _____
Depth of strata to be analyzed. From _____ ft. to _____ ft.
Remarks: _____
Name of supervising Geologist/Engineer: _____

(unbonded) Monitor Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
Signed: Samuel Metz MWC Number: 10423
Date: 04 Dec 03

(bonded) Monitor Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
Signed: _____ MWC Number: 10024
Date: 12/9/03

STATE OF OREGON
MONITORING WELL REPORT
(as required by ORS 537.765 & OAR 690-240-095)

OR3227-16

Well ID# L64738
Start Card # 163314

Instructions for completing this report are on the last page of this form.

(1) OWNER/PROJECT
Name Albertson's c/o URS Corporation
Address 111 SW Columbia St, Suite 900
City Portland State OR Zip 97201
WELL NO. MW-2

(6) LOCATION OF WELL By legal description:
County Washington Latitude _____ Longitude _____
Township 11N (N or S) Range 2W (E or W) Section 32
SE 1/4 of NE 1/4 of above section.

(2) TYPE OF WORK

- New construction Alteration (Repair/Recondition)
 Conversion Deepening Abandonment

Street address of well location
888 NE 25th Ave Hillsboro, OR
Tax lot number of well location 400
ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(3) DRILLING METHOD

- Rotary Air Rotary Mud Cable
 Hollow Stem Auger Other _____

(7) STATIC WATER LEVEL:

7 Ft. below land surface. Date 04 Dec 03
Artesian Pressure _____ lb/sq. in. Date _____

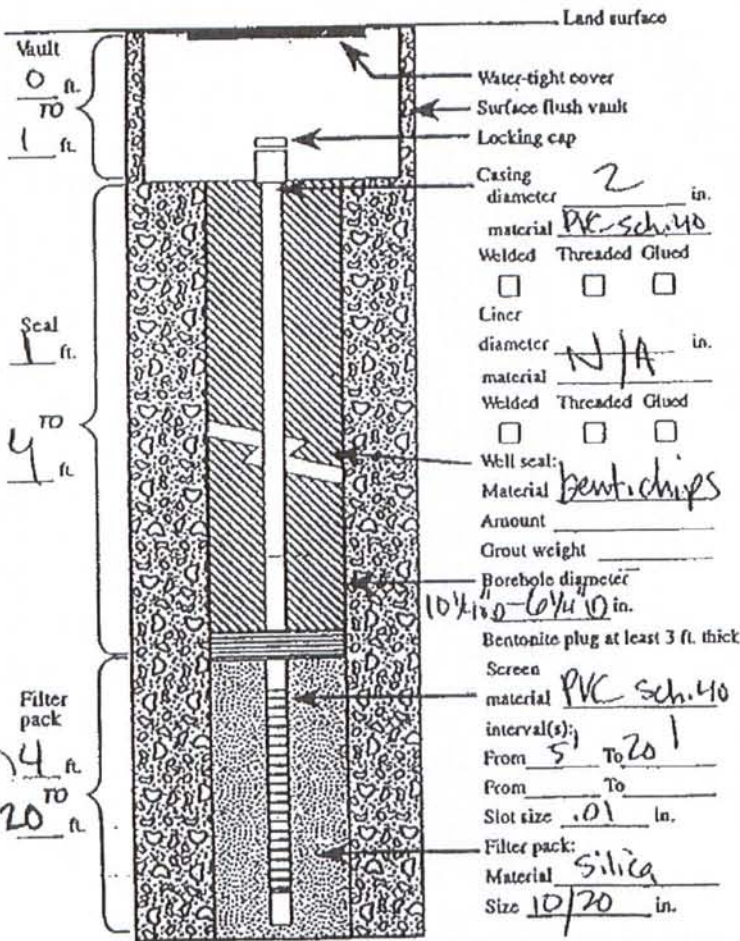
(4) BORE HOLE CONSTRUCTION:

Special Standards Yes No
 Depth of Completed Well 20 ft.

(8) WATER BEARING ZONES:

Depth at which water was first found _____

From	To	Est. Flow Rate	SWL
<u>7'</u>	<u>20'</u>		



(9) WELL LOG:

Ground Elevation _____

Material	From	To	SWL
<u>Asphalt</u>	<u>0'</u>	<u>.5'</u>	
<u>Silty clay</u>	<u>.5'</u>		

(5) WELL TESTS:

- Pump Bailor Air Flowing Artesian
- Permeability _____ Yield _____ GPM
Conductivity _____ PH _____
Temperature of water 56° °F/C Depth artesian flow found _____ ft.
Was water analysis done? Yes No

Date started 04 Dec 03 Completed 04 Dec 03

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

Signed Kenneth Mety MWC Number 10423
Date 04 Dec 03

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

Signed _____ MWC Number 10024
Date 12/9/03

By whom? _____
Depth of strata to be analyzed. From _____ ft. to _____ ft.
Name of supervising Geologist/Engineer _____
ORIGINAL COPY - WATER RESOURCES DEPARTMENT FIRST COPY - CONSTRUCTOR SECOND COPY - CUSTOMER

PROJECT: **Albertsons Express #591**
 LOCATION: **888 NE 25th Avenue, Hillsboro, Oregon**
 PROJECT NUMBER: **212302790**

WELL / PROBEHOLE / BOREHOLE NO:

MW-3 PAGE 1 OF 1



DRILLING / INSTALLATION:
 STARTED **12/15/11** COMPLETED: **12/15/11**
 DRILLING COMPANY: **Cascade Drilling**
 DRILLING EQUIPMENT: **Air Knife/CME 75**
 DRILLING METHOD: **HSA**
 SAMPLING EQUIPMENT: **Hand Auger/Split Spoon**

NORTHING (ft): **688,764** EASTING (ft): **7,572,979**
 LAT: **45° 31' 46.8"** LONG: **122° 57' 18.9"**
 GROUND ELEV (ft): **198.30** TOC ELEV (ft): **197.86**
 INITIAL DTW (ft): **12.5** WELL DEPTH (ft): **20.0**
 STATIC DTW (ft): **8.50** BOREHOLE DEPTH (ft): **20.0**
 WELL CASING DIA. (in): **2.0** BOREHOLE DIA. (in): **8.25**
 LOGGED BY: **JD** CHECKED BY: **MT**

GEO FORM 304 HILLSBORO MW-3 AND MW-4.GPJ STANTEC ENVI/RO TEMPLATE 010509.GDT 1/19/12

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
1045			4" Asphalt 8" Gravel Road Base							
1105		CL	CLAY ; CL; 10YR 4/3 brown; low plasticity; very stiff; dry; no HC odor; silt 30%		1105 NS				0.0	Cement Seal
1140			10YR 4/6 dark yellowish brown; soft; moist; silt 20%		1140 MW-3-3'				0.0	Bentonite 2" Dia. PVC (Blank)
1155			Silt 30%		1155 NS				0.0	
1525		ML	SILT ; ML; 10YR 4/6 dark yellowish brown; low plasticity; soft; wet to saturated; no HC odor; clay 10%		1525 NS		3 2 2		0.0	
1530			10YR 4/4 dark yellowish brown; low plasticity; soft; moist; fine sand 10%		1530 MW-3-10'		3 3 3		0.0	
1540			2.5Y 3/1 very dark gray; saturated; fine sand 15%; clay 5%		1540 NS		4 5 7		0.0	
1550			Fine sand 30%		1550 NS		5 6 8		0.0	
1550			Borehole terminated at 20 feet.						0.0	
									20	10/20 Sand 2" Dia. PVC (0.010" Slot)

PROJECT: **Albertsons Express #591**
 LOCATION: **888 NE 25th Avenue, Hillsboro, Oregon**
 PROJECT NUMBER: **212302790**

WELL / PROBEHOLE / BOREHOLE NO:

MW-4 PAGE 1 OF 1

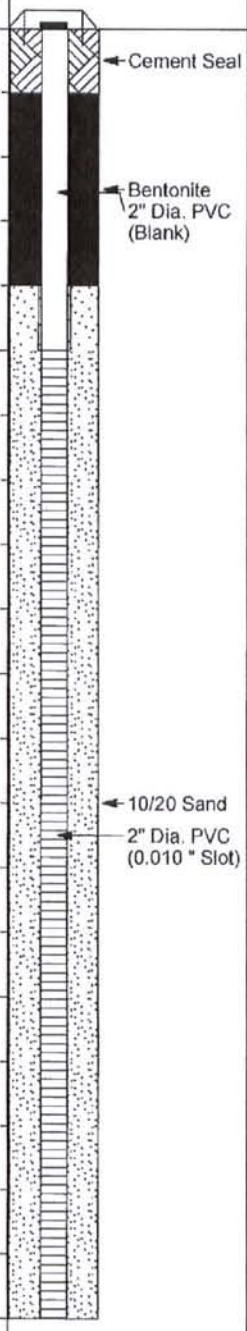


DRILLING / INSTALLATION:
 STARTED **12/15/11** COMPLETED: **12/15/11**
 DRILLING COMPANY: **Cascade Drilling**
 DRILLING EQUIPMENT: **Air Knife/CME 75**
 DRILLING METHOD: **HSA**
 SAMPLING EQUIPMENT: **Hand Auger/Split Spoon**

NORTHING (ft): **688,646** EASTING (ft): **7,572,990**
 LAT: **45° 31' 45.7"** LONG: **122° 57' 18.7"**
 GROUND ELEV (ft): **198.05** TOC ELEV (ft): **197.79**
 INITIAL DTW (ft): **6.0** WELL DEPTH (ft): **20.0**
 STATIC DTW (ft): **8.55** BOREHOLE DEPTH (ft): **20.0**
 WELL CASING DIA. (in): **2.0** BOREHOLE DIA. (in): **8.25**
 LOGGED BY: **JD** CHECKED BY: **MT**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
910			8" Asphalt							
			10" Gravel Road Base							
920		CL	CLAY ; CL; 10YR 4/3 brown; low plasticity; very stiff; dry; no HC odor; silt 20%		920 NS			0.0		
950			10YR 4/6 dark yellowish brown; soft; moist; low-medium plasticity; silt 10%		950 MW-4-3'			3.3		
1005			Low plasticity; silt 30%		1005 MW-4-5'			1.4		
1250		ML	SILT ; ML; 10YR 4/6 dark yellowish brown; low plasticity; soft; saturated; no HC odor; clay 20%		1250 NS		2 1 3	0.0		
1258			10YR 4/3 brown; wet		1258 NS			0.0		
1300					1300 NS		1 1 2 3 2 1	0.0		
1310			10YR 4/4 dark yellowish brown; saturated; fine sand 20%		1310 NS		1 2 4	0.0		
1330			2.5Y 3/1 very dark gray; fine sand 30%		1330 NS		8 10 13	0.0		
1330			Borehole terminated at 20 feet.							

GEO FORM 304 HILLSBORO MW-3 AND MW-4.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 1/19/12



1018156 (mw1) ✓ (MTBE ^{Deq} 12/16/11)

1018157 (mw2) ✓ OK

1018158 (mw3) ✓ (TPH-g ^{Deq} 12/16/11) (Lead ^{EPA} 12/16/11)

1018159 (mw4) ✓ (TPH-g ^{Deq} 12/16/11) (Lead ^{EPA} 12/16/11)