



# Oregon

Theodore R. Kulongoski, Governor

## Water Resources Department

North Mall Office Building  
725 Summer Street NE, Suite A  
Salem, OR 97301-1266  
503-986-0900  
FAX 503-986-0904

January 28, 2008

Jody Carpenter  
Carpenter Well Drilling  
11 South Goose Gap Road  
Benton City, WA 99320

RE: Special Standard Request for Army Depot Well No. 1

Dear Mr. Carpenter:

The special standard request you submitted for repairing the Army Depot Well No. 1 by running new 10" steel casing with a cementing to from land surface to a depth of 295 feet and circulating cement from 295 feet below land surface to the surface using a cement shoe is approved. You indicate the reason for the special standard request is because the well is located inside a building and is commingling aquifers. Your special standard request is enclosed for your information.

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 and/or landowner are responsible for ensuring that a well constructed in a manner that protects the ground water resources as required under Oregon Administrative Rules 690-200 through 690-240.

If you have any questions concerning this letter, I may be contacted at (503) 986-0852, or by e-mail at: [Juno.G.Pandian@ wrd.state.or.us](mailto:Juno.G.Pandian@ wrd.state.or.us).

Sincerely,

Ms. JUNO PANDIAN, Manager  
Well Construction & Compliance Section

Enclosure

cc: Scott White, Well Inspector

**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 of the order 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 and OAR 690-01-0005 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: 4-15-2008 Oral approval date (if applicable): Feb.

Bonded Well Constructor (name, license #, and mailing address): Jody L Carpenter

11 South Cascade Rd Benton City, Wa 99320 1669

(1) Location of Well: NW 1/4 SE 1/4 Tax lot 200 Section 22, Township 4 N, Range 27 E, Umatilla County. Address at well site: U.S. Army Depot, Umatilla OR.

(2) Start Card Number(s)(for work to be done): 146104 JW

(3) Name and Address of Land Owner:

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

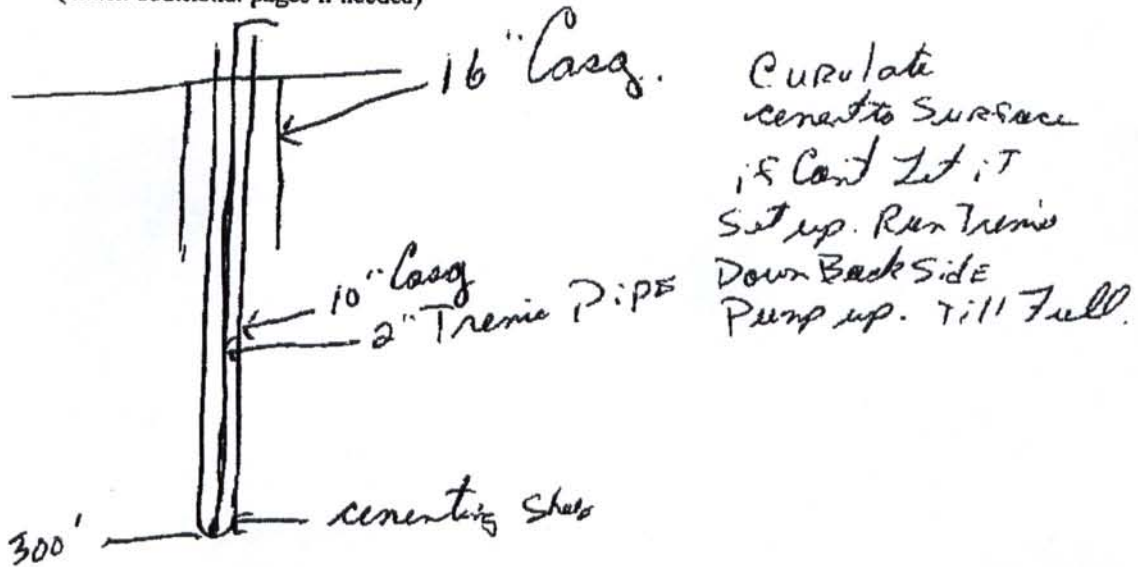
N.A.

(5) The unusual site conditions which necessitate this request:

Inside of Building 16" Casing Can't Be Removed

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

- (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/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.
- (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:

*Jody Carpenter*

# Proposal

Carpenter Drilling  
 11 South Goose Creek Rd  
 Benton City, Wa.  
 99320

Juno Tump  
 Army Depot well  
 # 1

Proposed Submitted: <i>Water Resources Dept.</i>	Job Name:	Job #:
Address:	Job Location:	
Phone #:	Date:	Date of Plans:
Fax #:	Architect:	

We hereby submit specifications and estimates for:

Clean out Hole to 327'  
 add Dia Gravel to 305'  
 Put Benach to 307'  
 Run in 10" Pipe to 300'  
 Circulate cement to surface w/ Cementing Shoe  
 Let it set for 72 HRS. Drill out  
 cementing shoe + cement - Clean out Hole  
 to 327'

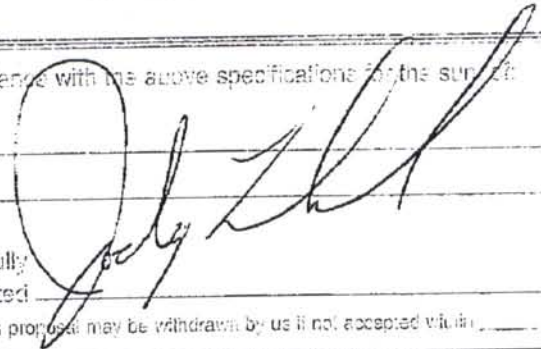
We propose hereby to furnish material and labor --- complete in accordance with the above specifications for the sum of

\$ \_\_\_\_\_ Dollars

with payments to be made as follows:

Any alteration or deviation from above specifications involving extra costs will be executed only upon written order and will become an extra charge over and above the estimate. All payments contingent upon strikes, accidents, or delays beyond our control.

Respectfully submitted



Note --- this proposal may be withdrawn by us if not accepted within \_\_\_\_\_ days.

### Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payments will be made as outlined above.

Signature \_\_\_\_\_

Date of Acceptance \_\_\_\_\_

Signature \_\_\_\_\_

# Fax

**Carpenter Drilling**  
**11 S. Goose Gap Road**  
**Benton City, WA 99320**  
**Fax: 509-628-3651**  
**Phone: 509-627-6642**

**Date:** April 15, 2008

**Pages including cover:** 2

**To:** Water Resources Dept

**Fax:** 503-986-0904

**RE:**

ATT# Junio T Rumpo

EXISTING

PROPOSED

Army Depot  
ATT. Jano

End of existing 16" casing @117'

End of existing 12.5" casing @147'-9"

BESALT

CEMENTED GRAVEL

This is a plan  
I can line Jody with

Proposed repairs as follows:

- 1 Water is charging at 178' to 275'
- 2 Fill existing well with gravel to 175' <sup>295'</sup>
- 3 Run new 10" casing with cementing shoe to 175' <sup>295'</sup>
- 4 Circulate cement from ~~175'~~ <sup>295'</sup> to surface in order to provide a seal at each aquifer
- 5 Wait minimum 72 hrs and clean hole to 280'
- 6 Run pump in new well to test for Nitrates
- 7 If Nitrate levels are above 10 parts per million this well will not be put on line for human consumption

End of proposed 10" casing @175' <sup>295'</sup>

Bottom of existing well @ 280'

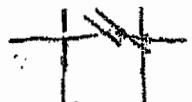
Bottom of proposed well @ ~~280'~~ <sup>325'</sup>

**RECEIVED**

JAN 18 2008

WATER RESOURCES DEPT  
SALEM, OREGON

SALEM, OREGON



well bottom 280'

STATE ENGINEER  
Salem, Oregon

UMAT  
1544

OBSERVATION WELL  
Well Record

STATE WELL NO. <sup>cad</sup> 4N/27-22pl  
COUNTY Umatilla  
APPLICATION NO. ....

OWNER: U.S. Army Installation

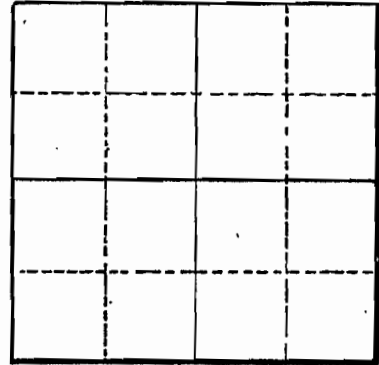
MAILING ADDRESS: .....

LOCATION OF WELL: Owner's No. 1

CITY AND STATE: .....

NE 1/4 SW 1/4 Sec. 22 T. 4 N. S., R. 27 E. W., W.M.

Bearing and distance from section or subdivision corner .....



Section .....

Altitude at well 585 ft.

TYPE OF WELL: Drilled Date Constructed .....

Depth drilled 327 ft. Depth cased 150 ft.

CASING RECORD: 12 inches.

FINISH: .....

AQUIFERS: Basalt

WATER LEVEL: 18 ft. below land surface - 5/1/53

PUMPING EQUIPMENT: Type Turbine H.P. ....  
Capacity 1,000 G.P.M.

WELL TESTS:  
Drawdown ..... ft. after ..... hours ..... G.P.M.  
Drawdown ..... ft. after ..... hours ..... G.P.M.

USE OF WATER Industrial and Public Supply Temp. °F. ...., 19....

SOURCE OF INFORMATION USGS report - Umatilla River Basin

DRILLER or DIGGER .....

ADDITIONAL DATA:  
Log ..... Water Level Measurements ..... Chemical Analysis  ..... Aquifer Test .....

REMARKS: .....

UMAT  
1544

STATE ENGINEER  
Salem, Oregon

State Well No. LN/27-227A <sup>cad</sup>  
County UMATILLIT  
Application No. \_\_\_\_\_

## Well Log

Owner: U. S. Army Ordnance Depot Owner's No. 1

Driller: A. A. Durand and Son Date Drilled 1941

CHARACTER OF MATERIAL	(Feet below land surface)		Thickness (feet)
	From	To	
Dug pit, no record	0	4	4
<b>Glaciofluvial deposits:</b>			
Gravel and sand, loose	4	61	57
Gravel and boulders	61	63	2
Gravel	63	66	3
Gravel and clay	66	87	21
Gravel, fine	87	102	15
Gravel and sand	102	104	2
Gravel, fine, loose, and sand	104	149	45
"Shale"	149	151	2
Gravel	151	157	6
<b>Columbia River basalt:</b>			
Basalt, black	157	160	3
Gravel, cemented	160	180	20
Basalt, black	180	195	15
Basalt and clay	195	200	5
Basalt	200	206	6
Basalt, black, hard	206	263	57
Basalt, gray, hard	263	295	32
Basalt, black, with clay	295	301	6
Basalt, gray, hard	301	308	7
Basalt, black, honeycomb	308	318	10
Basalt, gray very hard	318	327	9

STATE ENGINEER  
Salem, Oregon

UMAT 1544

State Well No. <sup>cad</sup> 4N/27-22P1

County Umatilla

Application No. ....

### Chemical Analysis

OWNER U.S. Army Installation ..... OWNER'S NO. ....

ANALYST Chaffin Laboratories ..... Address Portland

Date of Collection 4/26/41

Point of Collection .....

	P.P.M.	P.P.M.
Silica (SiO <sub>2</sub> )	XX	
Iron (Fe) Total	.15	
Manganese (Mn)		
Calcium (Ca)	38.	
Magnesium (Mg)	11.	
Sodium (Na)		
Potassium (K)		
Bicarbonate (HCO <sub>3</sub> )	148.	
Carbonate (CO <sub>3</sub> )		
Sulfate (SO <sub>4</sub> )	11.	
Chloride (Cl)	11.	
Fluoride (F)		
Nitrate (NO <sub>3</sub> )		
Boron (B)		
Dissolved Solids		
Hardness as CaCO <sub>3</sub>	140.	
Specific Conductance (Micromhos at 25°C)		
pH	7.7	
Percent Sodium		
Sodium Absorption Ratio (S.A.R.)		
CLASS		

STATE ENGINEER  
Salem, Oregon

1 of 5

State Well No. 4N/27-22P.1

County UMATILLA

Application No. 1

### Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S.W. 1/4 Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (below Land Surface)	Remarks	Date	Water Level Feet (below Land Surface)	Remarks
Mar. 50	90		Jan 54	80	
Apr	90		Feb	80	
May	90		Mar	80	
Jun	90		Apr	81	
Jul	90		May	81	
Aug	90		Jun	80	
Sep	90		Jul	80	
Oct	90		Aug	84	
Nov	90		Sep	83	
Dec	90		Oct	84	
Jan 51	90		Nov	84	
Feb	90		Dec	84	
Mar	90		Jan 55	84	
Apr	90		Feb	85	
May	90		Mar	86	
Jun	90		Apr	86	
			May	85	
			Jun	85	

REMARKS: Records unavailable July 1951 thru December 1953  
No static levels recorded before March 1950.

STATE ENGINEER  
Salem, Oregon

State Well No. ....

County .....

Application No. 4 .....

### Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S.W. 1/4 Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (above) (below) Land Surface	Remarks	Date	Water Level Feet (above) (below) Land Surface	Remarks
Jul 55	85		Jan 57	84	
Aug	85		Feb	84	
Sep	84		Mar	84	
Oct	91		Apr	84	
Nov	92		May	84	
Dec	92		Jun	84	
Jan 56	85		Jul	83	
Feb	86		Aug	83	
Mar	86		Sep	83	
Apr	86		Oct	83	
May	86		Nov	83	
Jun	85		Dec	83	
Jul	85		Jan 58	84	
Aug	84		Feb	84	
Sep	84		Mar	84	
Oct	84		Apr		Pump Out
Nov	79		May		Air Line Out
Dec	84		Jun		Air Line Out

REMARKS:

STATE ENGINEER  
Salem, Oregon

#3 of 5

State Well No. \_\_\_\_\_

County \_\_\_\_\_

Application No. \_\_\_\_\_

### Water Level Record

OWNER: Umatilla Army Depot

OWNER'S NO. 1

Description of measuring point: S.W. 1/4 Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (above (below) Land Surface	Remarks	Date	Water Level Feet (above (below) Land Surface	Remarks
Jul 58		Air Line Out	Jan 60	90	
Aug	89		Feb	90	
Sep	89		Mar	90	
Oct	89		Apr	91	
Nov	89		May	91	
Dec	89		Jun	90	
Jan 59	90		Jul	89	
Feb	90		Aug	89	
Mar	91		Sep	88	
Apr	91-		Oct	89	
May	91		Nov	89	
Jun	90		Dec	89	
Jul	89		Jan 61	90	
Aug	89		Feb	90	
Sep	88		Mar	90	
Oct	88		Apr	91	
Nov	89		May	90	
Dec	89		Jun	89	

REMARKS: \_\_\_\_\_

STATE ENGINEER  
Salem, Oregon

State Well No. \_\_\_\_\_

County \_\_\_\_\_

Application No. 1

### Water Level Record

OWNER: Umatilla Army Depot OWNER'S NO. 1

Description of measuring point: S. W.  $\frac{1}{4}$  Sec. 22 T4N R27E Umatilla

Date	Water Level Feet (below) Land Surface	Remarks	Date	Water Level Feet (below) Land Surface	Remarks
Jul 61	89		Jan 63	92	
Aug	89		Feb	92	
Sep	89		Mar	92	
Oct	89		Apr	92	
Nov	89		May	91	
Dec	90		Jun	91	
Jan 62	90		Jul	90	
Feb	90		Aug	90	
Mar	91		Sep	91	
Apr	91		Oct	91	
May	90		Nov	91	
Jun	90		Dec	91	
Jul	90		Jan 64	92	
Aug	90		Feb	92	
Sep	89		Mar		Under Repair
Oct	91		Apr	90	
Nov	91		May	90	
Dec	91		Jun		Air Line Plugged

REMARKS: \_\_\_\_\_



M E M O

On January 27, 1964, Mr. Robert DeBow and myself contacted Mr. Williams at the U. S. Army Ordnance Depot at Ordnance, Oregon. We conducted a current meter survey of Well #~~X~~<sup>1</sup> in Building #25 at the Depot. The well ~~4N/27-2201~~<sup>(K-113364)</sup> was measured and found to be ~~360~~<sup>327</sup> feet deep not ~~360~~<sup>327</sup> feet as reported. The static water level was 78.64 feet below top of casing at land surface. The water level was reported to be 100 feet below land surface datum at date of construction in 1941. In 1951 the static level was reported 90 feet below land surface datum and in March 1963 it was 90 feet. It is not known whether or not these earlier measurements were made with air lines or tapes. The most recent depth of 78.64 was measured by electric tape and may represent the most accurate water level data in the area.

The well did not reveal any zones of detectable ground-water movement. The current meter was placed at numerous depth in the well and no water movement was noted.

Mr. Williams said that another well will be opened up in about 3 weeks and that they would like us to return for a similar test. This will be in the latter part of February 1964. Submersible pumps are being installed for lower pumping rates and lower horse power requirements.

I mentioned water rights on these wells and will send them the ground water usual literature.

By  
Wm. S. Bartholomew,  
Geologist

**Kris Byrd**

---

**From:** Donn Miller  
**Sent:** Monday, December 10, 2007 9:27 AM  
**To:** Kris Byrd  
**Subject:** FW: UMCD GW Contamination

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**From:** RICHERSON Phil [mailto:Richerson.Phil@deq.state.or.us]  
**Sent:** Monday, December 10, 2007 9:15 AM  
**To:** Donn Miller  
**Subject:** FW: UMCD GW Contamination

Hi Donn,

The surficial aquifer in that location is possibly contaminated with nitrate and other things. There have been many areas of investigation over the years, but the known major problems are elsewhere on the depot. I'm not sure how much detail you need, but am willing to dig further if you need specifics.

~Phil

-----Original Message-----

**From:** Donn Miller [mailto:millerdw@wrd.state.or.us]  
**Sent:** Saturday, December 08, 2007 2:03 PM  
**To:** RICHERSON Phil  
**Cc:** Kris Byrd  
**Subject:** UMCD GW Contamination

Hi Phil,

The Chemical Depot is seeking a special standard to repair a water supply well at the depot. The well is located at T4N/R27E-22dbc. Our well construction specialist, who is considering the request, has asked me if the shallow aquifer were contaminated at this location. Using a map that I obtained for the in the past, there was little or no RDX in gw at this location.

Please forward this inquiry as needed.

Thanks, Donn

4/28/2008

## Kris Byrd

---

**From:** Kris Byrd  
**Sent:** Wednesday, January 09, 2008 10:20 AM  
**To:** Donn Miller  
**Subject:** FW: Umatilla Army Well

Donn,

Just wanted to forward this as an FYI.

Kris

---

Kristopher Byrd  
Well Construction Program Coordinator  
Well Construction and Compliance Section  
(503) 986-0851 Voice  
(503) 986-0902 Fax  
Kristopher.R.Byrd@wrdd.state.or.us

---

-----Original Message-----

From: Juno Pandian  
Sent: Monday, January 07, 2008 3:43 PM  
To: Scott White; Kris Byrd  
Cc: Mike Ladd  
Subject: Army Well

FYI...I talked to Brian Mayer about this well and the repair Jody is proposing. We are both in agreement that this is better than just leaving the well as it is. I also spoke to Jody Carpenter today. He will be resubmitting a spec. standard request to me for the following: install 10" steel casing from a depth of 172-178' bls to land surface. This exceeds the last proposal of 170'. Pressure grout using a cementing shoe to land surface. Test for nitrates after cement has had a chance to cure (possibly 2 weeks). The well will be abandoned if the well tests positive. Jody will start working tentatively the end of February. He will let me know in the next couple of weeks what his time frame looks like. I will let you all know when I receive the request.

Although I presented the scenario of using 8" casing instead, they did not want to do that since they have already purchased the pump to go inside the 10" and the casing. I agreed to using 10" because if this does not work, they ARE willing to abandon the well.

Scott & Kris: Although I do not think it is necessary for both of you to be one site the entire time, I do think it would be beneficial for at least Kris to be there. Scott, please work with Mike Ladd on your schedule. There is some security measures that you will have to go through to gain admittance onto the base. It could possibly take about 1 week to process. Scott if you are in the area would you check and see what kind of info they need and pass that along to Kris with a cc to me?

Ms. Juno Pandian, Manager  
Well Construction and Compliance Section Water Resources Department  
725 NE Summer Street NE, Suite A  
Salem, OR 97301-1271

## Kris Byrd

---

**From:** Scott White  
**Sent:** Friday, January 18, 2008 3:04 PM  
**To:** Juno Pandian; Kris Byrd  
**Cc:** Mike Ladd  
**Subject:** RE: Army Well

Juno and Kris,

I just got off the phone with Jody and he told me that he went to Whitman College and got the well log for the hole out at The Depot. He said the log did not state if there was a seal at the top of the casing but the bottom of the casing was sealed with cement. This makes me wonder if the nitrates are coming from beneath the casing.

Anyhow, he said that he got permission from The Depot to plug the hole if the nitrate levels were still present after the construction. He said he was going to put it in writing and send it to me, but I told him to send it to you since you are the ones who have been working with him on this.

He said that he is planning on being on the hole in the next two to three weeks and would let me know about a week in advance on when he will be out there.

Best regards,  
Scott White

-----Original Message-----

**From:** Juno Pandian  
**Sent:** Monday, January 07, 2008 3:43 PM  
**To:** Scott White; Kris Byrd  
**Cc:** Mike Ladd  
**Subject:** Army Well

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Ms. Juno Pandian, Manager  
Well Construction and Compliance Section Water Resources Department  
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Salem, OR 97301-1271