



Name of Facility: Union Pacific Railroad Company

Active Management Area: Tucson

Sub-basin: Upper Santa Cruz

Maximum annual withdrawals: 100 acre-feet per annum

Authorized Points of Withdrawal: As referenced in Tables 1 and 2

Authorized Place of Use  
for Groundwater Withdrawn: Section 12, Township 14 South, Range 13 East, and  
Sections 20 and 21, Township 14 South, Range 14 East of  
the GSRB&M.

Authorized Use of Groundwater: Water shall be reinjected to the subsurface to the maximum  
extent feasible for sites at 31<sup>st</sup> and 34<sup>th</sup> Street. For the  
Passenger Depot and 22<sup>nd</sup> Street sites, water will be  
discharged to a sanitary sewer system or reinjected into the  
subsurface.

Effective Date: June 1, 2007

Expiration Date: May 31, 2027

**Permit Conditions**

1. Poor quality groundwater may be withdrawn by the Permittee pursuant to individual remedial action plans, as approved by Arizona Department of Environmental Quality, which are related to the following seven sites: Passenger Depot Sites 1, 2, and 3; 22<sup>nd</sup> Street Site; 31<sup>st</sup> Street PFE and Mainline Sites; and 34<sup>th</sup> Street Site. The Arizona Department of Water Resources and the Permittee recognize that as a result of optimization of the ongoing remediation, withdrawal of poor quality groundwater may differ from the process currently specified in the ADEQ approved remedial action plans. To the extent that the withdrawal process of poor quality groundwater differs from the ADEQ approved remedial action plans, such withdrawal is permitted provided that the withdrawal is for remedial purposes and the Permittee timely requests approval from ADEQ of such amendment or modification.
  2. For the purpose of this permit, poor quality groundwater is defined as groundwater that does not meet the state of Arizona Aquifer Water Quality Standards (AWQSs) or water withdrawn in the course of remediation of groundwater that does not meet AWQS or to minimize the spread of free product. For the purposes of this permit, the AWQSs do not constitute a remediation standard.
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3. The issuance of this permit does not constitute endorsement of the assertions or findings of investigations and studies submitted by the Permittee as part of its applications, nor as part of its other efforts to date to delineate the area and extent of contamination or to delineate contamination source or responsibility.
4. This permit shall terminate when the activities performed pursuant to the remediation documents end. If the activities being performed will extend beyond the expiration date of this permit, the Permittee may submit an application to renew this permit within six months prior to the date of the expiration of this permit.

5. Monitoring Requirements:

a. Groundwater Withdrawal Monitoring:

For each site withdrawing groundwater listed in Permit Condition 1, the Permittee shall measure the volume of groundwater withdrawn with an approved water measuring device and method consistent with A.A.C. R12-15-903. The water quantity measuring devices and methods shall quantify flow accurately pursuant to A.A.C. R12-15-905.

b. Groundwater Injection Monitoring:

For each site injecting water listed in Permit Condition 1, the Permittee shall measure the volume of groundwater injected with an approved water measuring device and method consistent with A.A.C. R12-15-903. The water quantity measuring devices and methods shall quantify flow accurately pursuant to A.A.C. R12-15-905.

c. Groundwater Quality Monitoring:

The Permittee shall perform groundwater quality monitoring in accordance with the pertinent remedial action plans for the sites listed in Permit Condition No. 1 above. Monitoring results should allow ADWR to determine whether the groundwater withdrawn, because of its quality, has no other beneficial use. The Permittee shall notify ADWR of any changes to the groundwater quality data collection plans.

6. Reporting Schedule

The Permittee shall submit an "Annual Water Withdrawal and Use Report" as required under A.R.S. § 45-632, together with supplemental data reports described below, no later than March 31 following the end of each completed annual reporting period. The first reporting period shall be from the effective date of this permit through December 31, 2007. Subsequent reporting periods shall be from January 1 through December 31. Annual reports must be submitted regardless of whether groundwater has been withdrawn. If no groundwater is withdrawn during the reporting period, the Permittee

shall indicate that fact on the annual report and in the supplemental data report. **The Permittee shall send two (2) copies of all annual and supplemental data reports to the Information Management Unit, Arizona Department of Water Resources, 3550 North Central Avenue, Phoenix, Arizona 85012.**

7. Supplemental Data Reporting Requirements

The Permittee shall submit all monitoring data and analyses in the supplemental data reports as specified below. The supplemental data reports shall include:

a. Site Map:

The data reports shall include a site map showing the location of all monitoring points and relevant facility features such as extraction wells, injection wells, monitor wells, and water measurement devices. The site map shall include recent measured light non-aqueous phase liquid ("LNAPL") thicknesses relating to the known extent of LNAPL contamination. The data reports shall include the map data in electronic format.

b. Groundwater Withdrawal/Injection Data:

The data reports shall quantify all groundwater withdrawals and groundwater injections from the sites as specified in Permit Conditions 5.a and 5.b for the reporting period. The groundwater extraction data shall be presented in summary tables indicating the site (along with associated well registration numbers and the Permittee's well identifiers), beginning and ending flowmeter readings, and the volume of groundwater withdrawn in gallons and acre-feet. The groundwater injection data shall be presented in a summary table indicating the site, beginning and ending flowmeter readings and the volume of water injected in gallons and acre-feet for the reporting period. The data reports shall also include the data in electronic format such as a Microsoft Excel spreadsheet or Microsoft Access database.

c. Water Quality Monitoring Data:

The data reports shall contain all groundwater quality data collected pursuant to the remedial action plan for each site. The water quality data shall be presented in tables containing the following: monitoring point identifier, the sample date, the analyte, the laboratory method, the applicable regulatory level, and the sample result. Copies of the laboratory and supporting quality control reports shall be included in the data reports as an appendix and in electronic format such as a Microsoft Excel spreadsheet or Microsoft Access database.

8. General Provisions:

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- a. The issuance of this permit does not waive compliance with any federal, state, county or local government statutes, rules or permits.
- b. All ADWR agency notifications, other than annual and supplemental data reports, shall be addressed to the Arizona Department of Water Resources, Tucson Active Management Area, 400 West Congress, Suite 518, Tucson, Arizona 85701-1374.

WITNESS my hand and seal of office this 1st day  
of June, 2007.

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Sandra Fabritz-Whitney, Assistant Director

Table 1 - Extraction Wells

	ADWR		Well Identifier	Township	Range	Section	10 Acre			40 Acre			160 Acre			Well Depth (feet bgs)	Screen Interval (feet bgs)
	Registration Number						SE	SW	NE	SE	SW	NE	SE	SW	NE		
<b>Extraction Wells</b>																	
<b>Passenger Depot - 1</b>	55-574265	PT-1	14S	13E	12	NW	SW	SE	SE	SE	SE	SE	SE	83.5	63.5-83.5		
	55-574266	PT-2	14S	13E	12	NW	SW	SE	SE	SE	SE	SE	SE	80	65.0-80.0		
	55-574264	PT-3	14S	13E	12	NW	SW	SE	SE	SE	SE	SE	SE	82.5	62.5-82.5		
	55-583972	EW-PD-01	14S	13E	12	NW	NE	SW	SW	SW	SW	SW	SW	73.5	53.5 - 73.5		
	55-583971	EW-PD-02	14S	13E	12	NW	NE	SW	SW	SW	SW	SW	SW	74	54 - 74		
	55-583970	EW-PD-03	14S	13E	12	NW	NE	SW	SW	SW	SW	SW	SW	78	58 - 78		
	55-583969	EW-PD-04	14S	13E	12	NW	NE	SW	SW	SW	SW	SW	SW	82	62 - 82		
	55-583966	EW-PD-05	14S	13E	12	NW	NE	SW	SW	SW	SW	SW	SW	82	62 - 82		
	55-588782	EW-PD-06	14S	13E	12	NE	SW	SE	SE	SE	SE	SE	SE	83	63 - 83		
	55-588780	EW-PD-07	14S	13E	12	NE	SW	SE	SE	SE	SE	SE	SE	88.5	68.5 - 88.5		
	55-588779	EW-PD-08	14S	13E	12	NE	SW	SE	SE	SE	SE	SE	SE	89	69 - 89		
	55-593341	EW-PD-14	14S	13E	12	NW	SW	SE	SE	SE	SE	SE	SE	83	66 - 83		
	55-593342	EW-PD-15	14S	13E	12	NW	SW	SE	SE	SE	SE	SE	SE	84.5	69.5 - 84.5		
	55-593344	EW-PD-16	14S	13E	12	SE	SW	SE	SE	SE	SE	SE	SE	87.5	72.5 - 87.5		
<b>Passenger Depot - 2</b>	55-590042	EW-PD-09	14S	13E	12	SW	SE	SE	SE	SE	SE	SE	SE	93	73 - 93		
	55-590043	EW-PD-10	14S	13E	12	SW	SE	SE	SE	SE	SE	SE	SE	93	73 - 93		
	55-590044	EW-PD-11	14S	13E	12	SW	SE	SE	SE	SE	SE	SE	SE	93	73 - 93		
	55-590045	EW-PD-12	14S	13E	12	SW	SE	SE	SE	SE	SE	SE	SE	95	75 - 95		
	55-590046	EW-PD-13	14S	13E	12	SW	SE	SE	SE	SE	SE	SE	SE	90	75 - 90		
<b>22nd Street</b>	55-587534	EW-22-15	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599670	EW-22-16	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599671	EW-22-17	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599672	EW-22-18	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599673	EW-22-19	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599674	EW-22-20	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599669	EW-22-21	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599666	EW-22-22	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
	55-599675	EW-22-23	14S	14E	20	NW	NW	NW	NW	NW	NW	NW	NW	129	109 - 129		
<b>31st P.F.E.</b>	55-586136	EW-31-01	14S	14E	20	SE	NE	SE	SE	SE	SE	SE	SE	149	129 - 149		

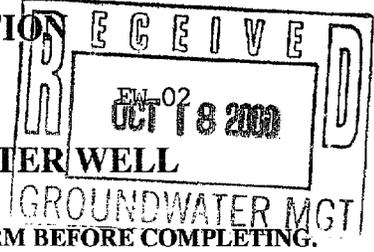
<b>ADWR</b>		<b>Well</b>	<b>Section</b>	<b>10 Acre</b>	<b>40 Acre</b>	<b>160 Acre</b>	<b>Well Depth</b>	<b>Screen Interval</b>
<b>Registration Number</b>	<b>Identifier</b>	<b>Well Identifier</b>	<b>Range</b>	<b>Township</b>	<b>Range</b>	<b>Township</b>	<b>(feet bgs)</b>	<b>(feet bgs)</b>
55-586134	EW-31-02	14S	14E	20	SE	NE	149	129 - 149
55-585109	EW-31-03	14S	14E	20	SE	NE	149	134 - 149
55-900531	EW-31-04	14S	14E	21	NE	SW	150	135 - 150
55-572970	MW-34-08	14S	14E	21	SE	NE	282	255-282

Table 2 - Injection Wells

<b>ADWR</b>		<b>Well</b>	<b>Section</b>	<b>10 Acre</b>	<b>40 Acre</b>	<b>160 Acre</b>	<b>Well Depth</b>	<b>Screen Interval</b>
<b>Registration Number</b>	<b>Identifier</b>	<b>Well Identifier</b>	<b>Range</b>	<b>Township</b>	<b>Range</b>	<b>Township</b>	<b>(feet bgs)</b>	<b>(feet bgs)</b>
<b>Injection Wells</b>								
<b>Passenger Depot - 1</b>	55-583968	IW-PD-01	13E	12	NW	NE	77	22 - 52, 62 - 77
	55-583967	IW-PD-02	13E	12	NW	NE	76	22 - 52, 61 - 76
	55-588781	IW-PD-03	13E	12	NE	SW	86	26 - 56, 66 - 86
	55-593343	IW-PD-06	13E	12	SE	SW	88	23 - 58, 68 - 88
<b>Passenger Depot - 2</b>	55-590040	IW-PD-04	13E	12	SW	SE	93	73 - 93
	55-590041	IW-PD-05	13E	12	SW	SE	93	73 - 93
<b>22nd Street</b>	55-587535	IW-22-24	14E	20	NW	NW	129	24 - 99, 109 - 129
	55-599668	IW-22-25	14E	20	NW	NW	129	24 - 99, 109 - 129
	55-599667	IW-22-26	14E	20	NW	NW	129	24 - 99, 109 - 129
<b>31st P.F.E.</b>	55-585110	IW-31-02	14E	20	SE	NE	148.5	118.5 - 148.5
	55-586135	IW-31-03	14E	20	SE	NE	149	24 - 119, 129 - 149
<b>31st Mainline</b>	55-585112	IW-31-01	14E	20	SE	NE	149	24 - 119, 129 - 149
<b>34th Street</b>	55-905288	IW-34-01	14E	21	SE	NE	98	18-98
	55-905289	IW-34-02	14E	21	SE	NE	98	18-98

**ARIZONA DEPARTMENT OF WATER RESOURCES  
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458  
FOR INFORMATION: CALL MONICA ORTIZ AT (602) 417-2470



**NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL**

PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING.

**1. Well/land Location:**

14 N(S) 13 E/W 12  
Township Range Section  
NW 1/4 NE 1/4 SW 1/4  
10 Acre 40 Acre 160 Acre

**2. Position location of the well on the land:**

Latitude 32 ° 13 ' 33 "  
Longitude 110 ° 58 ' 10 "

**3. County:** Pima

**4. Owner of the well:**

Union Pacific Railroad  
Name  
1416 Dodge Street, Room 930  
Mailing Address  
Omaha NE 68179  
City State Zip  
Telephone No. (402)271-6572

**5. Lessee of the land of wellsite:**

N/A  
Name  
Mailing Address  
City State Zip  
Telephone No.

**6. Owner of the Land of Wellsite:**

Union Pacific Railroad  
Name  
1416 Dodge Street, Room 930  
Mailing Address  
Omaha NE 68179  
City State Zip  
Telephone No. (402) 271-6572

**7. Consulting firm:**

ERM West  
Name  
Manfred Plaschke  
Contact Person  
Telephone No. (480) 998-2401

**8. Purpose of well drilled pursuant to this notice:**

Monitor X (remediation)  
Piezometer

**9. If for deepening or modifying, list well registration number:**

55-\_\_\_\_\_

**FOR DEPARTMENT USE ONLY**

File No. D(14-13)12 CAB  
Filed 10/18/00 By W/S  
Input \_\_\_\_\_ By \_\_\_\_\_

**DUPLICATE**  
Mailed 11/2/00 By W/S  
Registration 55- 583971  
AMA/INA TUCSON  
W/S 09 S/B 16  
mo. \_\_\_\_\_

*W-X*

**10. Will this proposed well be associated with a permit:** Yes \_\_\_\_\_ No X

If yes, Permit No. \_\_\_\_\_

**11. Construction will start:**

November 6 2000  
Month Day Year

**12. Period well will remain in use:**

10 Months/Years

**13. For monitoring wells, is pump equipment to be installed?**

Yes X No \_\_\_\_\_

(a) If yes, design pump capacity:

2 to 5 gpm

(b) What use will be made of the water:

remediate and reinject

**14. Drilling Firm:**

WDC  
Name  
7940 S Kolb Road  
Mailing Address  
Tucson AZ 85706  
City State Zip  
(520) 574-2904  
Telephone No.  
161  
DWR License Number  
102188 A-04  
ROC License Category

**15. Proposed method of abandonment of well after project is completed:** pressure grout

\_\_\_\_\_, pursuant to R12-15-816.

**16. Is this well to monitor existing contamination?** X Potential contamination: \_\_\_\_\_ Please explain: Well will be used to extract existing petroleum hydrocarbon-impacted groundwater.

**17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact?** Jeff Emde

**18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact?** N/A



**ARIZONA DEPARTMENT OF WATER RESOURCES  
GROUNDWATER MANAGEMENT SUPPORT SECTION  
500 North Third Street  
Phoenix, Arizona 85004**

**VARIANCE GRANTED**

**THIS AUTHORIZATION SHALL BE IN POSSESSION OF THE DRILLER DURING ALL DRILL OPERATIONS**

**WELL REGISTRATION NO: 55-583971**

**AUTHORIZED DRILLER: WATER DEVELOPMENT CORP. DBA WDC EXPLORATION LICENSE NO: 161**

**NOTICE OF INTENTION TO DRILL A MONITOR WELL(S) HAS BEEN FILED WITH THE DEPARTMENT BY:**

**WELL OWNER: UNION PACIFIC RAILROAD 1416 DODGE STREET RM930 OMAHA, NE 68179**

**The well(s) is/are to be located in the:**

**NW ¼ of the NE ¼ of the SW ¼ Section 12 Township 14 SOUTH Range 13 EAST**

**No. of wells in this project: 1**

**THIS AUTHORIZATION EXPIRES AT MIDNIGHT ON THE 17TH DAY OF OCTOBER, 2001**

**GROUNDWATER MANAGEMENT SUPPORT**

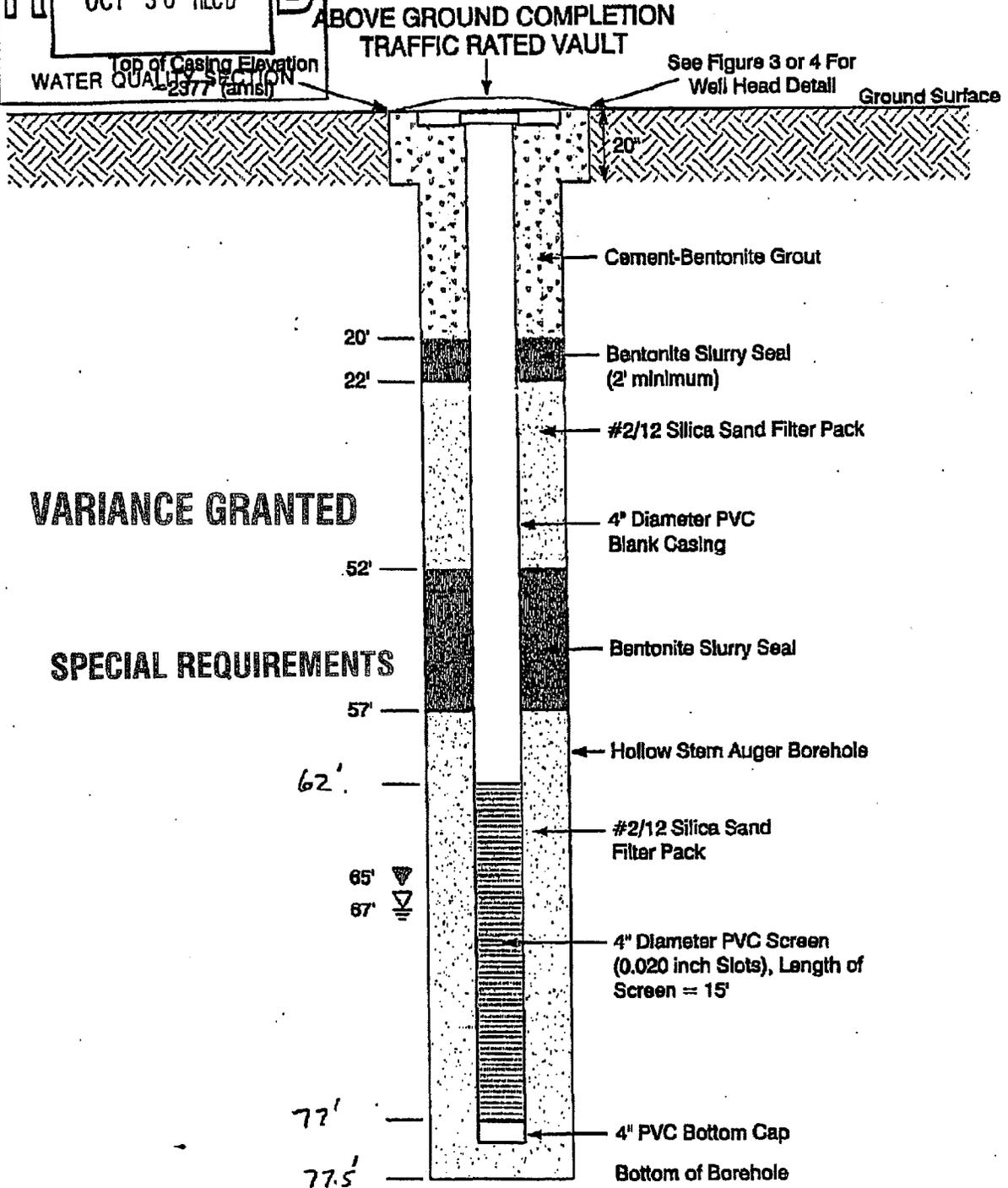
**THE DRILLER MUST FILE A LOG OF THE WELL  
WITHIN 30 DAYS OF COMPLETION OF DRILLING**



**RECEIVED**  
 OCT 30 REC'D  
 Top of Casing Elevation  
 WATER QUALITY SECTION  
 2377 (amish)

Diagram for EW-1 through EW0c

Project No. 8222.05  
 Date: 10/16/00  
 Drawn By: D. Ludlum  
 CAD File: G:\8222\05\82220501.dwg



**VARIANCE GRANTED**

**SPECIAL REQUIREMENTS**

revised diagram

- 55-583969
  - 55-583970
  - 55-583971
  - 55-583972
- Water Table

0  
 NOT TO SCALE

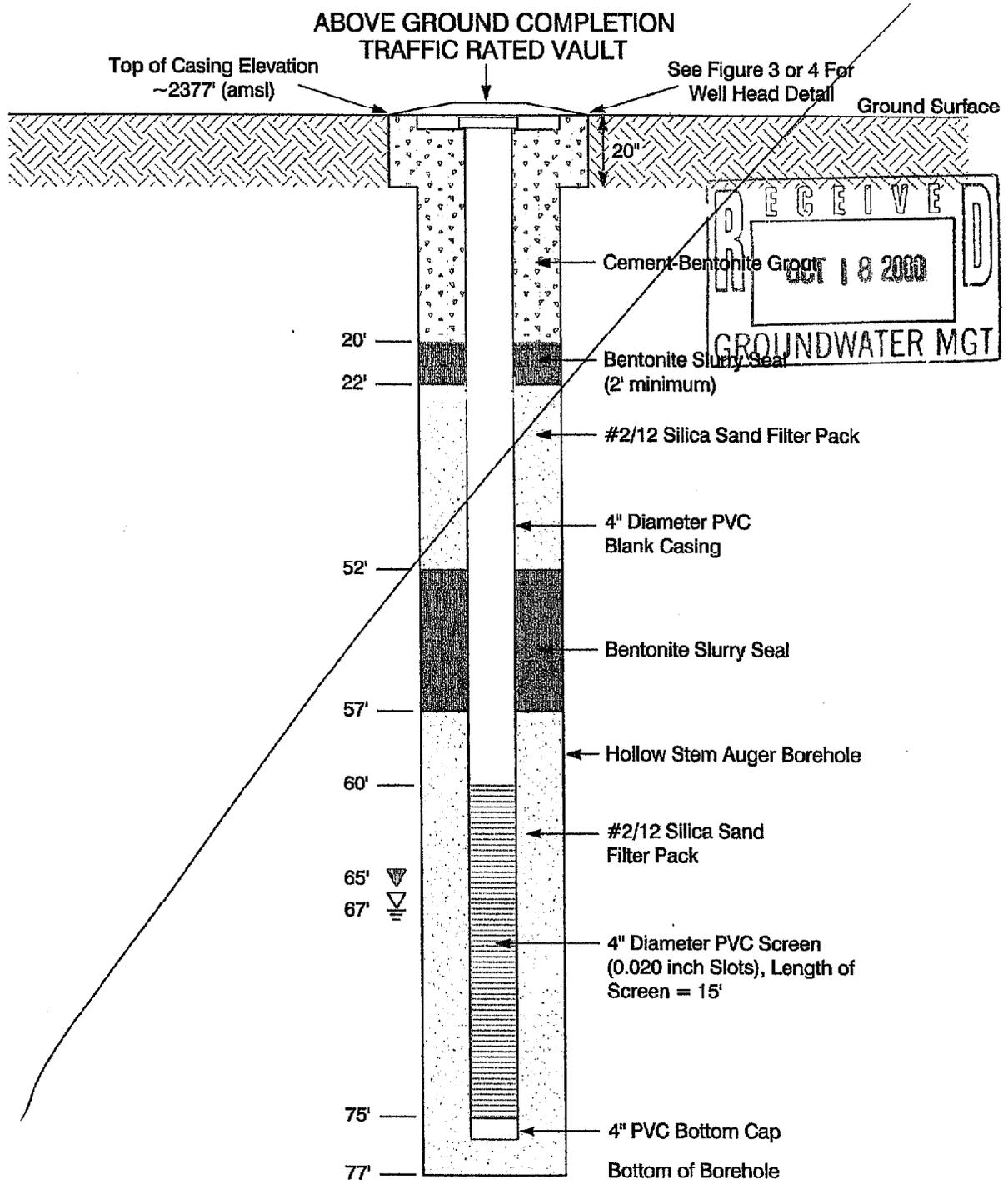
*Dual Phase Extraction Well Design*  
*Passenger Depot Site*  
*Union Pacific Railroad Company*  
*Tucson, Arizona*

Project No.  
8222.05

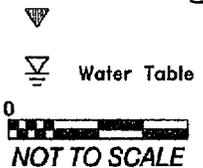
Date:  
10/16/00

Drawn By:  
D. Ludlam

CAD File:  
G:\8222\05\82220501.dwg



original diagram  
SS-583971



Dual Phase Extraction Well Design  
Passenger Depot Site  
Union Pacific Railroad Company  
Tucson, Arizona

UNION PACIFIC RAILROAD COMPANY

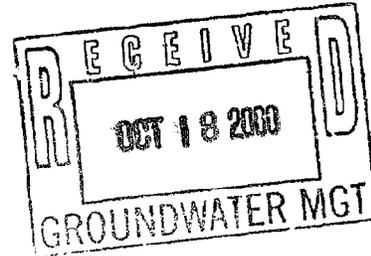


Joel R. Strafelda  
Program Manager  
(402) 271-6572  
(402) 271-4461 (Fax)  
jrstrafe@notes.up.com

UNION PACIFIC RAILROAD COMPANY

Environmental Management Group  
1416 Dodge Street, Room 930  
Omaha, NE 68179-0930

AZ Department of Water Resources  
GMSS, Notice of Intent Unit  
500 North 3<sup>rd</sup> Street  
Phoenix, AZ 85004-3921



RE: Delegation of Signature Authorization

Dear Department of Water Resources:

This letter confirms that Union Pacific Railroad Company has given its signature authority to Environmental Resources Management (ERM) for the purpose of well permitting.

If you have any questions, please do not hesitate to contact me.

Sincerely Yours,

A handwritten signature in black ink, appearing to read "J. R. Strafelda".

J. R. Strafelda  
Program Manager

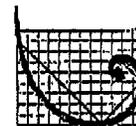
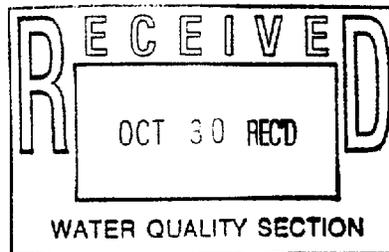


# Facsimile

**Environmental Resources Management**

**To:** Shannon Reif  
**Company:** Arizona Department of Water Resources  
 WQARF Section  
**Fax number:** (602) 417 2426  
**From:** Manfred Plaschke  
**File number:** 8222.05  
**Date:** 29 October 2000  
**Number of pages:** 5 including cover sheet

7975 North Hayden Rd.  
 Suite D-354  
 Scottsdale, AZ 85258  
 (480) 998-2401  
 (480) 998-2106 (fax)



**ERM.**

Dear Shannon,

Per your telephone call last Friday afternoon (27 October 2000), I would like to request that several minor changes be made to the seven Notices of Intent (NOI) to Drill/Install Monitor Wells for Union Pacific Railroad in Tucson, Arizona, submitted by ERM on 17 October 2000. The following changes are requested based on our discussions to make the NOI form consistent with the well construction diagram. In each case the well construction diagrams were correct and the NOI form (section F/filter pack should be charged to start at 22 feet to 52 feet and section G/performation start at 62 feet to 77 feet) (for each of the seven well proposed). The remaining items on the NOI's will not change. T

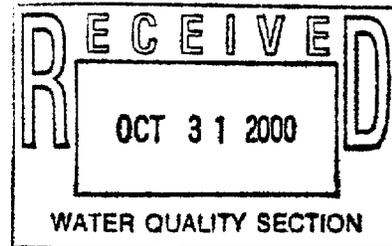
ERM Well ID // Township/Range/Section	ADWR Well ID
IW-01 //14S/13E/12	55-583966
IW-02 //14S/13E/12	55-583967
IW-03 //14S/13E/12	55-583968
EW-01 //14S/13E/12	55-583969
EW-02 //14S/13E/12	55-583970
<del>EW-03</del> //14S/13E/12 EW02	55-583971
EW-04 //14S/13E/12	55-583972

Also attached is a signature of well IW-03. A hardcopy of this faxed info will be mailed to your attention today. Thanks

Manfred



**WDC Exploration**



*Environmental, Mineral, Water and Geotechnical Drilling Services*

October 30, 2000

Hydrology Division  
Arizona Department of Water Resources  
500 North 3<sup>rd</sup> Street  
Phoenix, Arizona 85004

Attn: Ms. Shannon Reif

Reference: Request for Variance  
Groundwater Monitoring Wells, Union Pacific Railroad

Dear Ms. Reif,

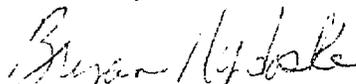
WDC Exploration respectfully requests variance of Arizona Administrative Code R12-15-811, "Minimum Well Construction Requirements," Subsection B, Item 1, on construction of 7 groundwater monitoring well at the Union Pacific Railroad, Tucson, AZ.

1. 7 wells will be constructed with 4" schedule 40 PVC rather than the required 20' of steel casing at the top of the well.
2. 7 wells will be constructed with flush, traffic rated boxes rather than the required above grade completion.

Registration number:      55-583966    55-583968    55-583970  
   55-583967    55-583969    55-583971    55-583972

Thank you for considering this request for variance. We look forward to your response. Should you have any questions please contact me at 1-800-914-7506.

Respectfully,  
WDC Exploration

  
Bryan Nydoske  
Arizona District Manager

**ARIZONA DEPARTMENT OF WATER RESOURCES**

500 North Third Street, Phoenix, Arizona 85004

Telephone 602 417-2448

Fax 602 417-2425



JANE DEE HULL  
Governor

RITA PEARSON  
MAGUIRE  
Director

October 31, 2000

Bryan Nydoske  
WDC Exploration  
7940 S. Kolb Road  
Tucson, Arizona 85706

**Re: Variance for Seven Monitor Wells  
Well Registry Nos. 55-583966 through 55-583972  
T14S, R13E, Section 12 CAB**

Dear Mr. Nydoske:

The Arizona Department of Water Resources (ADWR) received your request on October 30, 2000, for a variance in the construction of seven groundwater monitor wells located in Pima County for Union Pacific Railroad. The purpose of these wells is to monitor potential contamination.

ADWR approves the request for the following variance:

- Thermoplastic inner casing (riser) with a watertight cap may be used in lieu of steel (R-12-15-811.B.1).

The following *special requirements* are conditions for this variance (R-12-15-821):

- The PVC inner casings (risers) shall comply with ASTM Standard Guide D5092, Section 6.5.
- The wells shall be constructed per the "Variance Granted" Notice of Intention to Drill.
- The wells shall be abandoned (decommissioned) per A.A.C. R-12-15-816.

Any questions should be directed to Shannon Reif at 602-417-2400, x7270.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Corkhill".

Frank Corkhill,  
Supervisor, Technical Support Section

cc: Owner  
File

**ARIZONA DEPARTMENT OF WATER RESOURCES**

Water Quality Assurance Program  
500 North Third Street, Phoenix, Arizona 85004  
Telephone 602 417-2473  
Fax 602 417-2426



**JANE DEE HULL**  
Governor

**RITA PEARSON  
MAGUIRE**  
Director

October 30, 2000

ERM West  
Attn: Manfred Plaschke  
7975 North Hayden Road  
Suite D-354  
Scottsdale, AZ 85258

RE: Well Registration Nos. 55-583966 through 55-583972

Dear Mr. Plaschke:

The Department of Water Resources recently received your Notice of Intention to Drill seven (7) monitor wells for Union Pacific Railroad in Township 14South, Range 13 East, Section 12. This location has been determined to be in proximity to a contaminated groundwater area known as the 7<sup>th</sup> Street and Arizona Avenue Water Quality Assurance Revolving Fund (WQARF) remedial site.

Please be advised that according to R12-15-851, you are required to notify the Department at least two (2) business days in advance of commencement of well drilling activities for the above referenced wells. You may submit this required notice to the Department by either letter or facsimile, and the Department must receive it at least two (2) business days prior to drilling.

Mailing Address:  
Water Quality Assurance Program  
Arizona Department of Water Resources  
500 N. 3<sup>rd</sup> Street  
Phoenix, AZ 85004

Facsimile Number:  
(602) 417-2426

If you have any questions, please contact the WQARF Section at (602) 417-2473.

Sincerely,

A handwritten signature in cursive script that reads "Shannon L. Reif".

Shannon L. Reif  
Water Quality Section

**ARIZONA DEPARTMENT OF WATER RESOURCES**

500 North 3rd Street, Phoenix, Arizona 85004

Telephone (602) 417-2470

Fax (602) 417-2422



November 02, 2000

**JANE DEE HULL**  
Governor

**RITA PEARSON MAGUIRE**  
Director

UNION PACIFIC RAILROAD  
1416 DODGE STREET RM930  
OMAHA, NE 68179

Registration No. 55-583971  
File No. D(14-13) 12 CAB

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill a well. This is returned to you as evidence of compliance with A.R.S. §45-596. A drilling card has been mailed to your designated driller. Prior to drilling he must have it in his possession.

Since this well is being drilled as a Monitor well, or for Cathodic Protection, Grounding, Geotechnical or Piezometer purposes, our standard driller report form is also being furnished to the driller. He is required to complete it and return it to the Department within 30 days after the completion of the well. A Completion Report form is being furnished for monitor wells where pump installation is authorized. This must be completed within thirty days of installation as required by A.R.S. §45-600.

A Change of Well Information form is enclosed for your future use. If you deem it necessary to change the location of the proposed well, please notify the Department on the enclosed form. A properly amended Drilling Card will then be issued and must be in possession of the driller before drilling begins. During the drilling of a new well, if it is determined that it must be abandoned, then a Well Abandonment Completion Report must be submitted per R12-15-816.F.

Per A.R.S. §45-593, the person to whom a well is registered shall notify this Department of a change of ownership of the well and/or information pertaining to the physical characteristics of the well, in order to keep the well registration file current and accurate.

Sincerely,

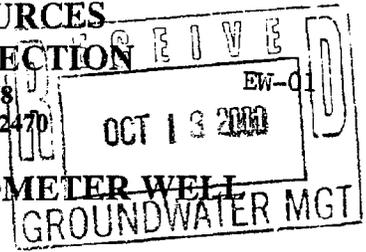
A handwritten signature in cursive script that reads "Toni Bergeman".

Toni Bergeman  
Water Resource Technician  
Groundwater Management Support Section

Enclosures

**ARIZONA DEPARTMENT OF WATER RESOURCES  
GROUNDWATER MANAGEMENT SUPPORT SECTION**

MAIL TO: P.O. BOX 458, PHOENIX, ARIZONA 85001-0458  
FOR INFORMATION: CALL MONICA ORTIZ AT (602) 417-2470



**NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL**

**PLEASE READ GENERAL INSTRUCTIONS AND CONDITIONS ON REVERSE SIDE OF THIS FORM BEFORE COMPLETING.**

**1. Well/land Location:**

14 NS 13 EW 12  
Township Range Section  
  
NW ¼ NE ¼ SW ¼  
10 Acre 40 Acre 160 Acre

**2. Position location of the well on the land:**

Latitude 32 ° 13 ' 33 "  
Longitude 110 ° 58 ' 10 "

3. County: Pima

**4. Owner of the well:**

Union Pacific Railroad  
Name  
1416 Dodge Street, Rm 930  
Mailing Address  
Omaha NE 68179  
City State Zip  
  
Telephone No. (402) 271-6572

**6. Owner of the Land of Wellsite:**

Union Pacific Railroad  
Name  
1416 Dodge Street, Rm 930  
Mailing Address  
Omaha NE 68179  
City State Zip  
  
Telephone No. (402)271-6572

**7. Consulting firm:**

ERM West  
Name  
Manfred Plaschke  
Contact Person  
  
Telephone No. (480) 998-2401

**8. Purpose of well drilled pursuant to this notice:**

Monitor X (remediation)  
Piezometer \_\_\_\_\_

**9. If for deepening or modifying, list well registration number:**

55- \_\_\_\_\_

**10. Will this proposed well be associated with permit: Yes \_\_\_\_\_ No X**

If yes, Permit No. \_\_\_\_\_

**11. Construction will start:**

November 6 2000  
Month Day Year

**12. Period well will remain in use:**

10 Months/Years

**13. For monitoring wells, is pump equipment to be installed?**

Yes X No \_\_\_\_\_

(a) If yes, design pump capacity:

2 to 5 gpm

(b) What use will be made of the water:

remediate and reinject

**14. Drilling Firm:**

C  
Name  
40 S Kolb Road  
Mailing Address  
CSON AZ 85706  
City State Zip  
  
20) 574-2904  
Telephone No.  
1  
R License Number  
2188 A-04  
C License Category

HEIDI V. KOHZ-WILLIAMS  
TODD L. WILLIAMS  
2434 E MARILYN RD.  
PHOENIX, AZ 85032

91-2153  
1221  
22461457

977

10/17/00  
Date

Pay to the order of ADWR \$ 70.00  
Seventy and 00/100 Dollars

**BANK ONE**  
Bank One, Arizona, NA  
McCormick Ranch Office (153)  
Scottsdale, Arizona

Memo 3222.05

pursuant to R12-15-816.

explain: Well will be used

to extract petroleum hydrocarbon-impacted groundwater.

17. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? Jeff Emde, URP

18. If construction plans have been coordinated with Arizona Department of Water Resources, who is the agency contact? N/A

Union Pacific 085406 -  
WELL REGISTRY No. 55-583972 -

CADASTRAL LOCATION: D(14-13)12 CAB

Date Received 10/18/00

Date to Water Quality 10/26/00

Date Returned to GMSS 10-31-00

Date to Hydrology 10-26-00

Variance Letter Received Yes  10-rec'd 10-31-00 SR No   
Well diagram Received Yes  No

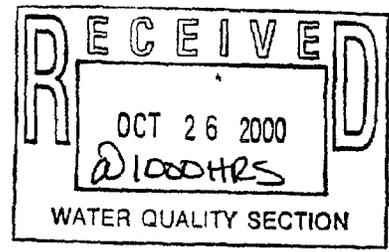
**TYPE OF WELL:**

Monitor/Piezometer 7 Other \_\_\_\_\_  
Domestic \_\_\_\_\_ NOI to Abandon \_\_\_\_\_  
Geotechnical \_\_\_\_\_

**WATER QUALITY - WOARF ANALYST COMMENTS:**

Dulling @ monitor wells located in the  
buffer zone of the "5th St + Az. Avenue"  
WOARF site in Tucson AMA

Site Map attached - Referred to Hydrologist   
Subbasin Map attached - Returned to GMSS



**WATER QUALITY APPROVAL:**

Granted   
Not granted \_\_\_\_\_  
Letter issued

Signature: Shannon L. Reef Date: 10-26-00

**HYDROLOGY DIVISION - WOARF HYDROLOGIST COMMENTS:**

10/26/00 ~~needed~~ to request a variance - rec'd 10-31-00 SR  
55-583966 through 55-583972 D(14-13)12 CAB  
Notes + well diagrams have been revised and resubmitted - copies  
are included in each of the

**HYDROLOGY DIVISION APPROVAL:**

Granted   
Not Granted \_\_\_\_\_  
Letter Issued \_\_\_\_\_

Variance  
Not Required \_\_\_\_\_  
Granted   
Not Granted \_\_\_\_\_  
Letter issued

Signature: Shannon L. Reef Date: 10-31-00 SR

SLR