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291-03845-HPD/HCL/FDW
January 11, 2008

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

Attention: Ms. Cynthia S. Campbell
Mr. Robert C. Casey
Ms. Ingrid Clark

Reference: Aquifer Protection Permit No. P-3507-100388

Dear Sir/Madam:

Subject: **Update to the Notification of Discharge of Non-hazardous Materials (Tritium) 90-Day Report**

PVNGS is submitting a 90-day status report regarding the Notification of Discharge of Non-hazardous Materials (Tritium) made on March 2, 2006. In order to keep ADEQ updated on the progress of the investigation and work plan schedule, periodic reports will be provided to ADEQ by the 15th of the month following the end of each calendar quarter until the investigation is complete or until the frequency is changed by ADEQ. These updates were discussed in Table 3 of the Tritium Investigation Work Plan and Schedule provided in the initial 30-day report submitted on April 3, 2006. These quarterly updates fulfill the requirements for providing additional information as required by the APP. This report provides an update on the status of the Tritium Investigation Work Plan and Schedule included as part of the initial 30-Day Report. The next scheduled update will be provided on April 15, 2008.

Schedule Status

Table 3 in the 30-day report summarizes the Tritium Investigation Work Plan and Schedule. From this Table, the following tasks have been completed or worked on since the last quarterly report:

- Task 4b has been completed with the issuance of the site Aquifer Protection Permit on October 23, 2007. Monitoring well APP-12, west of Unit 1, has been installed with the first sample collected January 4, 2008.

- Ambient monitoring of wells APP-9, APP-10, and APP-11 has been completed. The data is included in the report *Ambient Groundwater Monitoring Report for Wells APP-9, APP-10 and APP-11* dated December 27, 2007. This report was submitted to ADEQ with APS letter 291-03842-HPD/JCC. Neither tritium nor radioactivity was detected in these wells.

- APS installed 16 wells in the protected area. Details of well installation are provided in Attachment B. Ambient monitoring data from these shallow wells will be summarized after completion of ambient monitoring.

- Water level and tritium data available through the fourth quarter of 2007 is provided in Attachment A.

Project Status

- With respect to the recommended best management practices, paving has been completed in all three units. Application of the final seal coat of the repaved areas has been completed in all areas except over the Unit 1 pipe density tunnel. Sealing should be completed in the first quarter of 2008.

- APS discussed a preliminary plan with ADEQ to remove and dispose of the tritiated water from the test holes based on information collected during the installation of the test holes and additional monitoring wells. A formal request is being processed and will be forwarded to ADEQ upon completion of the paving and sealing in Units 1, 2 and 3. It is anticipated that a plan will be submitted prior to the end of the first quarter of 2008.

If you have any questions or require additional information, please contact me at (623) 393-6567 or Mr. Harvey Lesan at (623) 393-6490.

Sincerely,

HPD/HCL/FDW/hsc

Attachments

cc: Mr. H. Lesan, APS
Mr. F. Woodwick, APS

Attachment A

Unit Shallow Monitoring Well Radiological & Water Level Monitoring Results through the Fourth Quarter, 2007

SELECTED RESULTS FOR AQUEOUS SAMPLES COLLECTED AT PA TRITIUM WELLS

Well	Date	pH	Conductivity (uS/cm)	Tritium (pCi/L)	Cesium-137 (pCi/L)	Cobalt-60 (pCi/L)	Boron (mg/L)	Fluoride (mg/L)	Potassium (mg/L)	Chloride (mg/L)	Comment
U1-H0b	10/17/2007	7.60	303	1431 ± 178	75.2 ± 35.96	NA	NA	NA	NA	NA	Water was found in this well which is atypical. A sample was analyzed from thos well to evaluate whether the water was from a leak or from wash-down acitivites in the RCA yard.
U1-H0b	10/17/2007	NA	NA	1629 ± 184	69.9 ± 19.5	NA	NA	NA	NA	NA	duplicate
U2-H0a	12/20/06	No data	No data	1870	NA	NA	2.3	8.4	5.6	71 Q	pH and Conductivity missing from CLASS
U2-H0a	1/31/07	9.81	1326	1920 ± 194	<110	<200	NA	NA	NA	NA	
U2-H0a	2/22/07	9.97	1464	1964 ± 190	<110	<200	NA	NA	NA	NA	
U2-H0a	3/21/07	10.16	1139	1900 ± 189	<110	<200	1.5	7.3	3.7	68 Q	
U2-H0a	4/25/07	9.50	887	1205 ± 187	<110	<200	NA	NA	NA	NA	
U2-H0a	5/22/07	9.75	1120	1554 ± 183	<110	<200	NA	NA	NA	NA	
U2-H0a	6/20/07	9.64	1403	2291 ± 201	<110	<200	2.7	11 Q	7.5	76 Q	
U2-H0a	7/24/07	9.46	1510	2293 ± 202	<110	<200	NA	NA	NA	NA	
U2-H0a	8/23/07	9.43	1255	2130 ± 198	<110	<200	NA	NA	NA	NA	
U2-H0a	9/12/07	9.37	1185	1940 ± 187	<110	<200	2.0	8.8	4.7	70 Q	
U2-H0a	10/5/07	9.22	1158	1809 ± 191	<110	<200	NA	NA	NA	NA	
U2-H0a	11/7/07	9.15	1305	2114 ± 200	<110	<200	NA	NA	NA	NA	
U2-H0a	12/14/07	8.76	366	1511 ± 194	<110	<200	0.71	2.2	6.2	170 Q	
U2-H0b	12/20/06	No data	No data	1230	NA	NA	0.3	0.64	18	58 Q	pH and Conductivity missing from CLASS
U2-H0b-Dup	12/20/06	NA	NA	NA	NA	NA	0.28	0.65	10	59 Q	duplicate sample of U2-H0b
U2-H0b	1/31/07	8.38	601	520 ± 172	<110	<200	NA	NA	NA	NA	
U2-H0b	2/22/07	8.29	733	554 ± 167	<110	<200	NA	NA	NA	NA	
U2-H0b	3/21/07	8.33	809	618 ± 168	<110	<200	0.38	0.64	5.9	84 Q	
U2-H0b	4/25/07	8.09	1090	628 ± 179	<110	<200	NA	NA	NA	NA	
U2-H0b	5/22/07	8.26	950	1165 ± 181	<110	<200	NA	NA	NA	NA	
U2-H0b	6/20/07	8.15	1022	704 ± 177	<110	<200	0.47	0.52	7.2	120 Q	
U2-H0b	7/24/07	8.05	1040	537 ± 175	<110	<200	NA	NA	NA	NA	
U2-H0b	8/23/07	8.10	1150	850 ± 180	<110	<200	NA	NA	NA	NA	
U2-H0b	9/12/07	7.99	1158	862 ± 171	<110	<200	0.76	0.91	13	130 Q	
U2-H0b	10/5/07	8.02	1229	915 ± 177	<110	<200	NA	NA	NA	NA	
U2-H0b	11/7/07	8.06	1265	1047 ± 178	<110	<200	NA	NA	NA	NA	
U2-H0b	12/14/07	8.10	1010	1026 ± 178	<110	<200	0.8	2.6	5.7	76 Q	
U2-H10	12/19/06	NA	NA	<=1160	NA	NA	NA	NA	NA	NA	Not enough sample for all analyses
U2-H10	2/21/07	8.53	1277	NA	NA	NA	NA	NA	NA	NA	Not enough sample for Rad Analysis
U2-H2	12/19/06	NA	NA	<= 1100	NA	NA	NA	NA	NA	NA	Not enough sample for all analyses
U2-H2	2/21/07	8.14	4415	NA	NA	NA	NA	NA	NA	NA	Not enough sample for Rad Analysis
U2-H2	4/25/07	8.01	3829	416 ± 172	<110	<200	NA	NA	NA	NA	
U3-H0a	12/13/06	9.35	553	2340	<110	<200	1.2 J	3.6	7.3	28	
U3-H0a	1/31/07	9.19	575	4073 ± 229	<110	<200	NA	NA	NA	NA	
U3-H0a	2/20/07	9.20	551	4990 ± 231	<110	<200	NA	NA	NA	NA	
U3-H0a	3/20/07	9.20	548	21842 ± 388	<110	<200	1.6	4	3.1	34	

SELECTED RESULTS FOR AQUEOUS SAMPLES COLLECTED AT PA TRITIUM WELLS

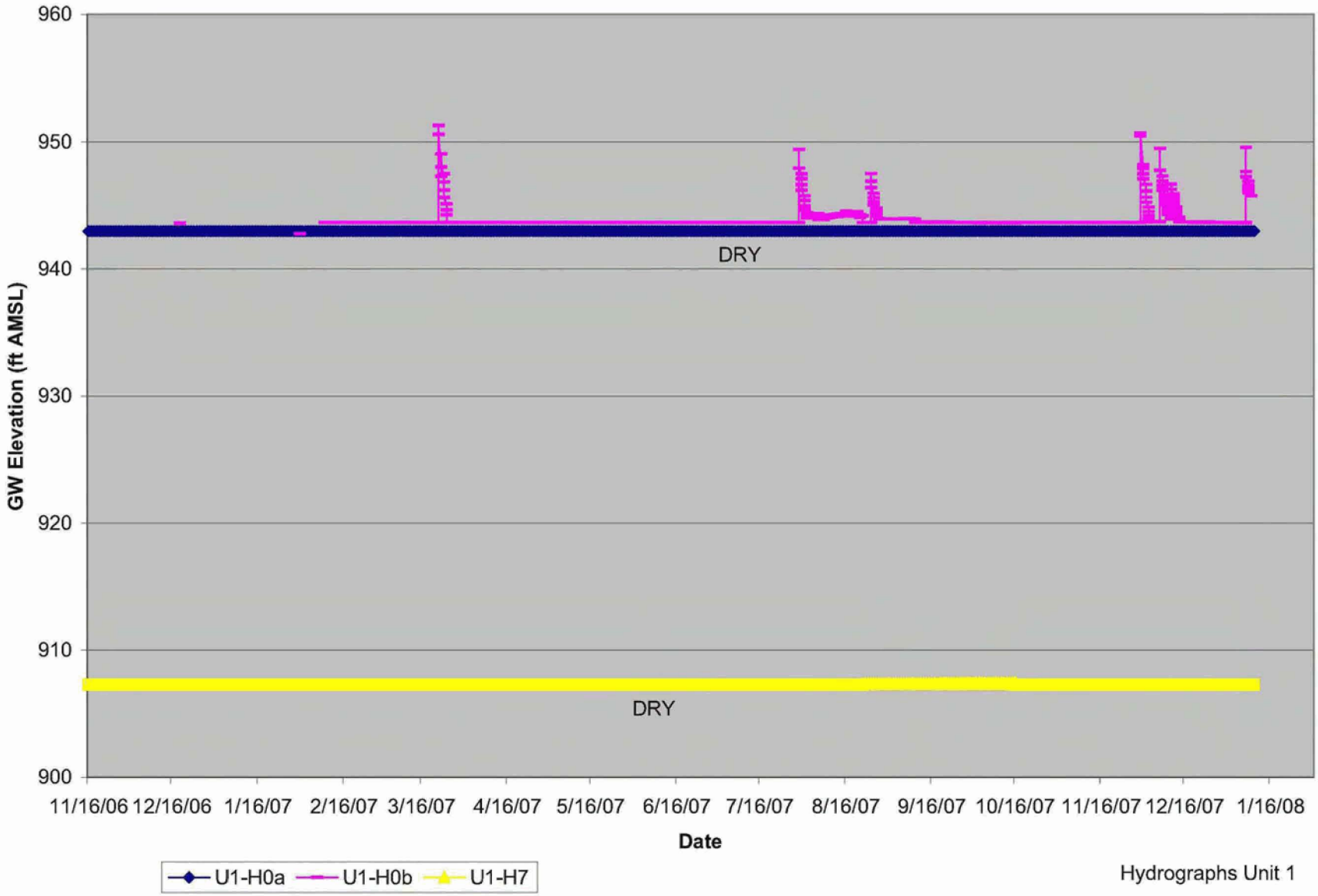
Well	Date	pH	Conductivity (uS/cm)	Tritium (pCi/L)	Cesium-137 (pCi/L)	Cobalt-60 (pCi/L)	Boron (mg/L)	Fluoride (mg/L)	Potassium (mg/L)	Chloride (mg/L)	Comment
U3-H0a	4/24/07	9.85	595	2062 ± 196	<110	<200	NA	NA	NA	NA	
U3-H0a	6/19/07	9.54	695	2181 ± 197	<110	<200	0.78	2.8	6.2	44	
U3-H0a	7/25/07	9.35	813	2443 ± 202	<110	<200	NA	NA	NA	NA	
U3-H0a	8/24/07	9.30	824.7	1999 ± 199	<110	<200	NA	NA	NA	NA	
U3-H0a	9/13/07	8.92	1208	2283 ± 195	<110	<200	2.4	2.7	6.3	78 Q	
U3-H0a	10/3/07	8.65	1457	1907 ± 189	<110	<200	NA	NA	NA	NA	
U3-H0a	11/9/07	9.22	928	2409 ± 193	<110	<200	NA	NA	NA	NA	
U3-H0a	12/12/07	9.40	1269	1668 ± 185	<110	<200	0.26	4.9	3.5	13	
U3-H0b	12/13/06	NA	NA	NA	NA	NA	NA	11 Q	NA	120 Q	Not enough sample for all analyses
U3-H0b	1/31/07	10.48	3624	729 ± 183	<110	<200	NA	NA	NA	NA	
U3-H0b	2/20/07	10.45	3642	984 ± 175	<110	<200	NA	NA	NA	NA	
U3-H0b	3/20/07	10.82	3880	763 ± 172	<110	<200	NA	NA	NA	NA	Not enough sample for all analyses
U3-H0b	4/24/07	11.32	No data	1131 ± 186	<110	<200	NA	NA	NA	NA	Conductivity missing from CLASS
U3-H0b	5/18/07	11.28	3947	1524 ± 188	<110	<200	NA	NA	NA	NA	
U3-H0b	6/19/07	11.27	4270	770 ± 174	<110	<200	2.7	9.2 G	7.4	130 Q	
U3-H0b	7/25/07	11.19	4399	713 ± 178	<110	<200	NA	NA	NA	NA	
U3-H0b	8/30/07	10.92	4601	777 ± 180	<110	<200	NA	NA	NA	NA	
U3-H0b	9/13/07	10.77	4421	815 ± 172	<110	<200	2.6	12 Q	5.0	150 Q	
U3-H0b	10/3/07	10.58	4422	847 ± 172	<110	<200	NA	NA	NA	NA	
U3-H0b	11/9/07	11.05	4797	1063 ± 173	<110	<200	NA	NA	NA	NA	
U3-H0b	12/12/07	11.64	5856	2203 ± 203	<110	<200	3.6	12 Q	4.2	100 Q	
U3-H11	12/13/06	9.43	700	11900	<110	<200	2.3 J	4.4	8	33	
U3-H11	1/31/07	9.43	748	50751 ± 577	<110	<200	NA	NA	NA	NA	
U3-H11	2/21/07	9.08	740	9772 ± 284	<110	<200	NA	NA	NA	NA	
U3-H11	3/20/07	9.10	754	6277 ± 249	<110	<200	2.5	4.8	5.6	36	
U3-H11	4/24/07	9.00	714	3249 ± 213	<110	<200	NA	NA	NA	NA	
U3-H11	5/17/07	9.23	689	4496 ± 229	<110	<200	NA	NA	NA	NA	
U3-H11	6/19/07	8.86	680	4424 ± 224	<110	<200	2.0	5.1	5.5	34	
U3-H11	7/25/07	9.03	768	3193 ± 216	<110	<200	NA	NA	NA	NA	
U3-H11	8/31/07	8.85	721	2411 ± 197	<110	<200	NA	NA	NA	NA	
U3-H11	9/14/07	9.18	718	3350 ± 210	<110	<200	2.4	4.9	6.3	36	
U3-H11	10/4/07	9.22	683	3180 ± 208	<110	<200	NA	NA	NA	NA	
U3-H11	11/9/07	9.54	734	3859 ± 215	<110	<200	NA	NA	NA	NA	
U3-H11	12/12/07	8.76	646	18082 ± 360	<110	<200	2.1	3.8	4.3	30	
U3-H12	1/31/07	10.47	918	810 ± 179	<110	<200	NA	NA	NA	NA	
U3-H12	2/21/07	10.40	887	884 ± 174	<110	<200	NA	NA	NA	NA	
U3-H12	3/19/07	10.45	879	NA	NA	NA	NA	NA	NA	NA	Not enough sample for all analyses
U3-H12	12/12/07	10.32	580	2062 ± 196	<110	<200	0.39	2.1	<3.0	9.5	
U3-H1b	12/13/06	8.34	970	1890	<110	<200	1.7 J	3.6	9.9	64 Q	
U3-H1b	1/31/07	7.47	1087	3011 ± 208	<110	<200	NA	NA	NA	NA	
U3-H1b	2/21/07	8.27	1142	2800 ± 203	<110	<200	NA	NA	NA	NA	
U3-H1b	3/20/07	8.07	1130	2352 ± 198	<110	<200	1.6	4.1	6.7	120 Q	
U3-H1b	4/24/07	7.78	1251	2216 ± 200	<110	<200	NA	NA	NA	NA	
U3-H1b	5/17/07	8.05	1190	2423 ± 202	<110	<200	NA	NA	NA	NA	

SELECTED RESULTS FOR AQUEOUS SAMPLES COLLECTED AT PA TRITIUM WELLS

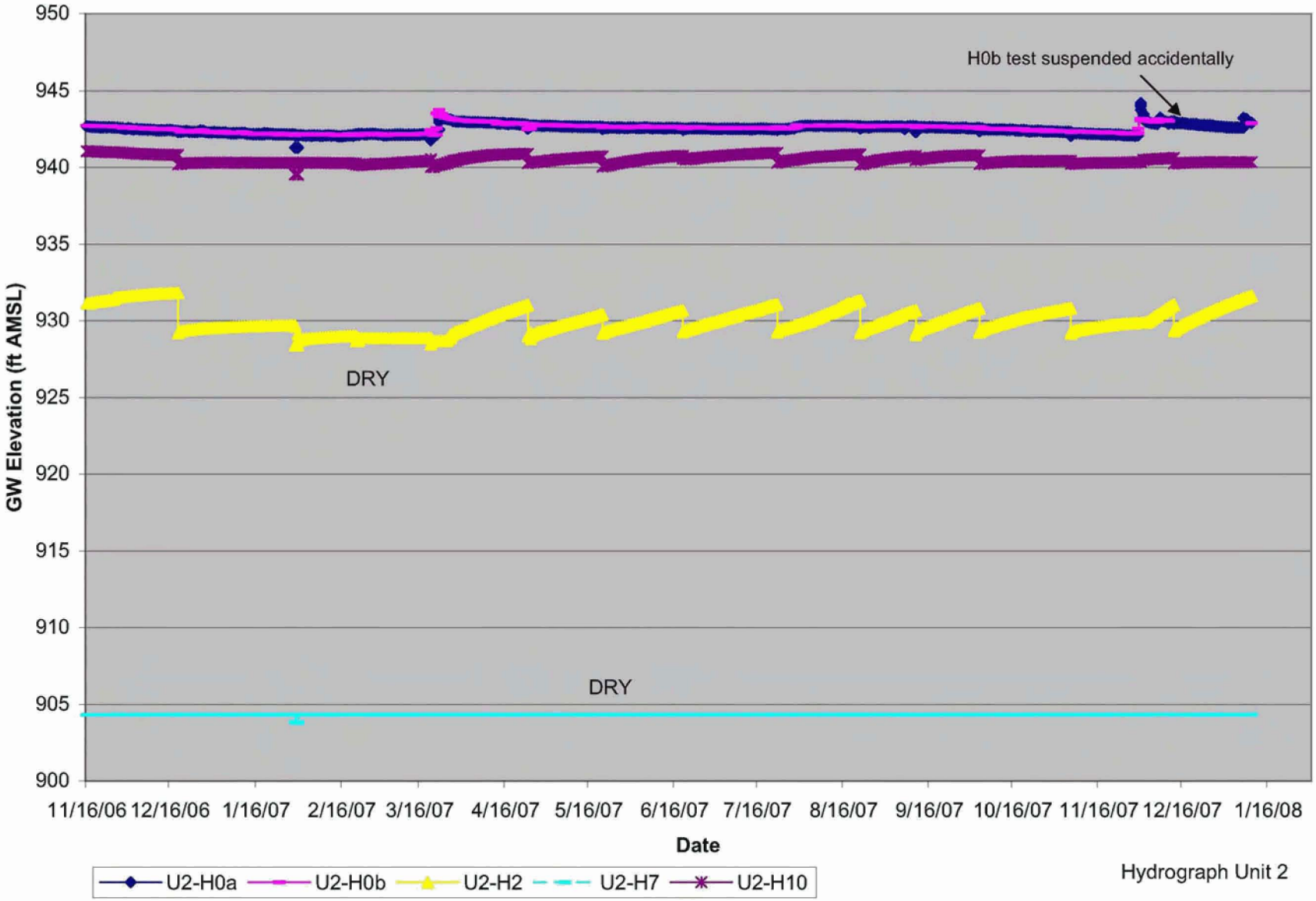
Well	Date	pH	Conductivity (uS/cm)	Tritium (pCi/L)	Cesium-137 (pCi/L)	Cobalt-60 (pCi/L)	Boron (mg/L)	Fluoride (mg/L)	Potassium (mg/L)	Chloride (mg/L)	Comment
U3-H1b	6/19/07	8.05	1155	2431 ± 201	<110	<200	1.7	3.6	8.1	120 Q	
U3-H1b	7/25/07	8.04	1069	2709 ± 208	<110	<200	NA	NA	NA	NA	
U3-H1b	8/31/07	7.54	1398	2538 ± 206	<110	<200	NA	NA	NA	NA	
U3-H1b	9/14/07	8.05	1327	2763 ± 202	<110	<200	1.8	3.9	9.6	130 Q	
U3-H1b	10/4/07	7.88	1305	2519 ± 199	<110	<200	NA	NA	NA	NA	
U3-H1b	11/9/07	8.11	1411	2551 ± 196	<110	<200	NA	NA	NA	NA	
U3-H1b	12/12/07	8.36	1101	1911 ± 187	<110	<200	1.0	1.0	9.5	90 Q	
U3-H2	1/31/07	7.48	732	661 ± 177	<110	<200	NA	NA	NA	NA	
U3-H2	2/20/07	7.62	6964	NA	NA	NA	NA	NA	NA	NA	Not enough sample for Rad Analysis
U3-H5b	12/13/06	9.12	1050	2490	<110	<200	2.5 J	5.2	5.5	45 Q	
U3-H5b	1/31/07	9.23	880	2542 ± 205	<110	<200	NA	NA	NA	NA	
U3-H5b	2/20/07	9.05	770	2982 ± 206	<110	<200	NA	NA	NA	NA	
U3-H5b	3/20/07	9.22	831	2749 ± 204	<110	<200	1.4	5.3	3.4	36	
U3-H5b	4/24/07	9.37	730	1575 ± 190	<110	<200	NA	NA	NA	NA	
U3-H5b	5/17/07	9.31	718	1894 ± 195	<110	<200	NA	NA	NA	NA	
U3-H5b	6/19/07	9.32	860	1512 ± 188	<110	<200	1.0	4.7	4.1	35	
U3-H5b	7/25/07	9.27	791	1663 ± 192	<110	<200	NA	NA	NA	NA	
U3-H5b	8/30/07	8.99	904	1577 ± 183	<110	<200	NA	NA	NA	NA	
U3-H5b	9/14/07	9.09	1065	1636 ± 184	<110	<200	2.0	5.3	5.1	47	
U3-H5b	10/3/07	9.18	1024	1703 ± 184	<110	<200	NA	NA	NA	NA	
U3-H5b	11/7/07	9.17	1053	1558 ± 190	<110	<200	NA	NA	NA	NA	
U3-H5b	12/12/07	9.01	1100	1693 ± 190	<110	<200	1.3	4.5	4.0	49 Q	

Initial groundwater samples were collected during December. December rad analyses were performed by Unit Labs and reported in CLASS
Ambient sampling began in January 2007. Starting January 2007, rad analyses performed by Central Lab and pH and Conductivity by Unit Labs
J = Estimated result. Result concentration exceeds calibration range. Q = Elevated reporting limit due to high analyte levels. NA = Not analyzed

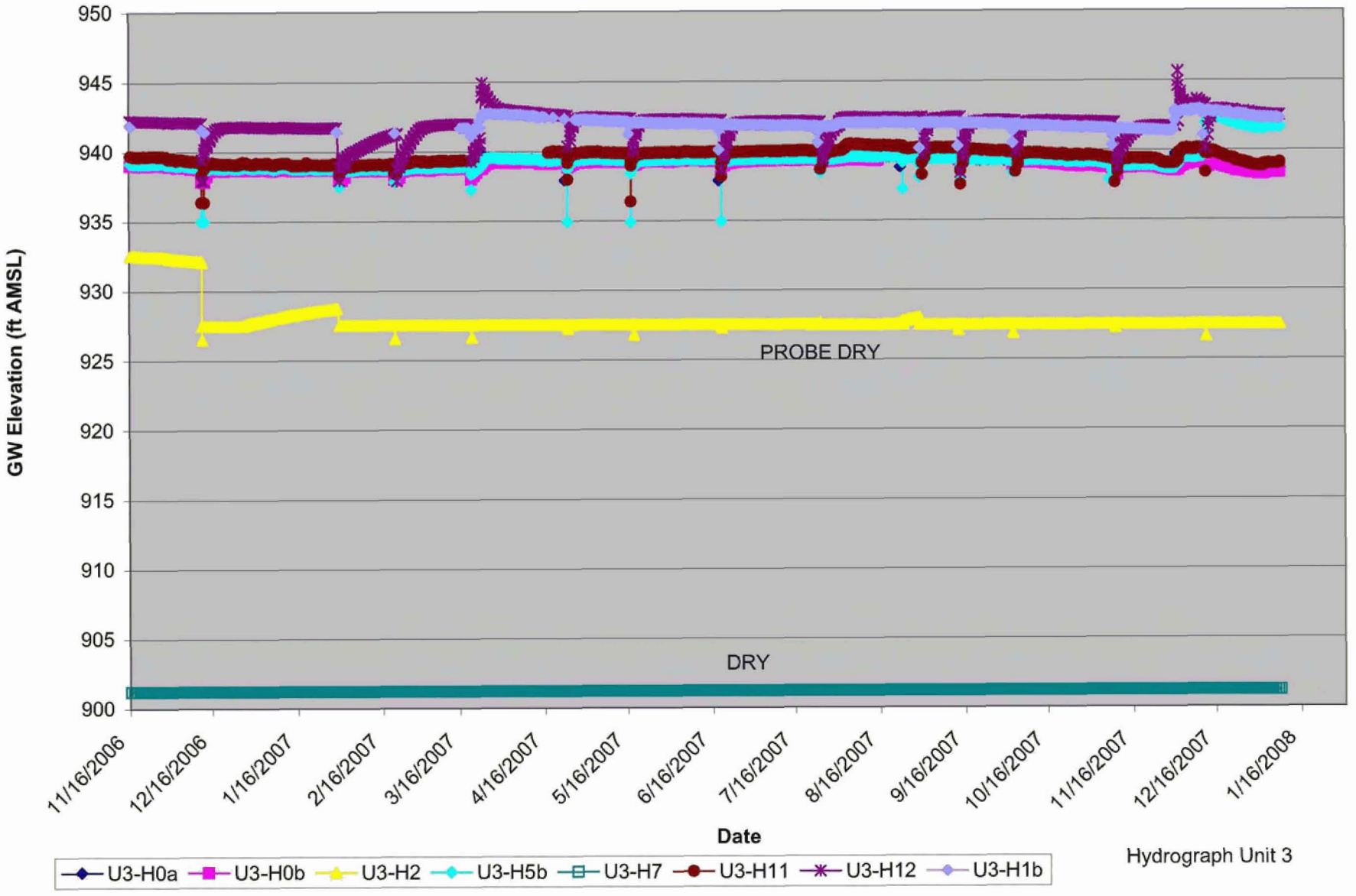
Preliminary Lab Data



Hydrographs Unit 1



Hydrograph Unit 2



Hydrograph Unit 3

Attachment B

Well Installation Report
Monitoring Wells

WELL INSTALLATION REPORT
MONITORING WELLS IN THE PROTECTED AREA

Prepared for

Arizona Public Service Company

December 20, 2007

WELL INSTALLATION REPORT
MONITORING WELLS IN THE PROTECTED AREA
PALO VERDE NUCLEAR GENERATING STATION

Prepared for
Arizona Public Service Company
5801 South Wintersburg Road
Tonopah, Arizona 85354-7529

December 20, 2007

Brown and Caldwell Project #: 134071.002

REGISTERED GEOLOGIST
CERTIFICATE NO.
31649
STEPHEN J.
BROOKS
Date Signed 12-31-07
ARIZONA, U.S.A.

BROWN AND CALDWELL
110 South Church Avenue, Suite 2300
Tucson, Arizona 85701

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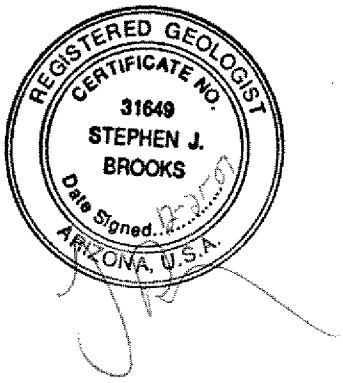

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LIST OF ACRONYMS

µg/L	Micrograms per liter
ACZ	ACZ Laboratories
ADEQ	Arizona Department of Environmental Quality
ADWR	Arizona Department of Water Resources
APS	Arizona Public Service
ASTM	American Society for Testing and Materials
AWQS	Aquifer Water Quality Standard
bgs	below ground surface
LAU	Lower Alluvial Unit
MFU	Middle Fine-Grained Unit
NOI	Notice of Intent
PA	Protected Area
PCE	tetrachloroethene
PVC	polyvinyl chloride
PVNGS	Palo Verde Nuclear Generating Station
R-SRL	Residential Soil Remediation Level
STL	Severn Trent Laboratories
UAU	Upper Alluvial Unit
USCS	Unified Soil Classification System
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

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1. INTRODUCTION

Brown and Caldwell has been contracted by Arizona Public Service Company (APS) to conduct environmental support and consulting services for the installation of monitoring wells as part of the corrective action associated with a Discharge of Non-hazardous Material reported on March 2, 2006. The installation of the monitoring wells was part of the Work Plan provided in the 30-day follow-up report submitted April 3, 2006. It has been developed in accordance with guidelines provided by the Arizona Department of Environmental Quality (ADEQ) and the Arizona Department of Water Resources (ADWR). The work described herein is based on the Work Plan submitted by Brown and Caldwell on June 30, 2006, and the Work Plan Addendum submitted by Brown and Caldwell on September 12, 2006.

1.1 Site Description and Background

The Palo Verde Nuclear Generating Station (PVNGS) began operations in 1985 and consists of an existing electric generating baseload plant utilizing nuclear fission for generation of electrical power. PVNGS is a standardized triple-unit nuclear power facility located near Wintersburg, Arizona, approximately 45 miles west of Phoenix (Figure 1). Low levels of tritium were identified in water discovered in utility trenches associated with the reactor units. This discovery resulted in the need to investigate shallow groundwater conditions in the area of the units.

Zones of shallow saturation are present within both the Upper Alluvial Unit (UAU) and the upper portions of the Middle Fine-grained Unit (MFU) at the PVNGS. Fine-grained, low permeability material represented by the top of the MFU and fine-grained subunits within the MFU appear to act as an aquitard, limiting downward migration of groundwater. The aquitard at the top of the MFU can be correlated in geophysical logs and cross-sections throughout the Hassayampa groundwater basin. Overall, the MFU is characterized as massive, laterally extensive layers of clays and silty clays interbedded with thinner layers of clayey silt, clayey sand, and silty sand. The lower portion of the MFU includes the regionally extensive Palo Verde Clay, which is located at a depth ranging from approximately 175 to more than 200 feet below ground surface (bgs) at the site, and ranges in thickness from 60 to 80 feet. All depths in this report are feet below ground surface unless noted otherwise. Based on evaluation of the borehole data for well APP-8, the depth to the top of the Palo Verde Clay near the reactor units was estimated at 200 feet.

Two saturated zones referred to as the Shallow Aquifer and the Palo Verde Clay Aquifer exist in the MFU overlying the Palo Verde Clay. Groundwater flow in the Shallow Aquifer appears to be radiating outward from the central portion of the PVNGS site. In the central portion of the site, the lower portion of the UAU is saturated; at the margins of the site, static water levels are within the MFU. In the area of the reactor units, groundwater levels are in the MFU and available data indicates groundwater in the MFU flows to the northwest.

The regional aquifer is located in the Lower Alluvial Unit (LAU) beneath the Palo Verde Clay sub-unit. Beneath the site, the regional aquifer is reported to be confined to semi-confined, with a potentiometric surface that is above the contact between the coarser grained LAU aquifer and the overlying MFU in many areas. Available water level elevation data from the area south of the evaporation ponds indicates that the flow direction in the regional aquifer is to the southwest to west. The direction of regional flow is attributed to extensive pumping for irrigated agriculture that historically occurred near the Centennial Wash, southwest of PVNGS.

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2. RATIONALE AND OBJECTIVES

The objective of this work was to investigate the lateral and vertical extent of impacted areas at Units 2 and 3 where water impacted with tritium and volatile organic compounds (VOCs) was detected and to evaluate similar areas in Unit 1. During drilling activities, changes to the Work Plan dated June 30, 2006 were submitted by Brown and Caldwell in an addendum dated September 12, 2006. The addendum revised drilling methodology for some boring locations, which limited data collection objectives outlined in the original work plan. Applicable objectives for field activities outlined in the work plan included:

- Collect soil samples from and convert existing air-knifed borings drilled under Arizona Public Service (APS) oversight to monitoring wells.
- Drill additional borings, collect soil samples, and convert to monitoring wells.
- Submit soil samples for chemical and geotechnical analysis to assess zones of saturation and impacted areas.
- Verify the depth to the base of fill material at Unit 3. Collect soil samples and submit for geotechnical analysis. Assess the spatial distribution of zones of high or low permeability and evaluate their potential to be laterally continuous and potentially affect contaminant transport.
- Verify that near-surface saturation observed at the Unit 3 RadWaste Yard is limited vertically and does not extend to the Shallow aquifer.
- Determine the depth to and elevation of the shallow aquifer in the vicinity of Unit 3.
- Assess the extent of VOCs in saturated soils at Unit 3 and identify whether or not VOCs are present at Units 1 and 2.

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3. DRILLING FIELD ACTIVITIES

Yellow Jacket Drilling was subcontracted by Brown and Caldwell to drill the boreholes using the hollow-stem auger method, collect split-spoon samples, furnish and install the wells, develop the wells, and install surface completions. In addition, Johnson Environmental Technologies, Inc. was subcontracted to collect shallow soil samples using a push rig. Activities performed prior to mobilization for field tasks included locating all subsurface utilities by PVNGS in areas where invasive activities (e.g., drilling) were performed. Notice of Intention (NOI) to Drill a Monitor/Piezometer Well forms were submitted to ADWR, and are included in Appendix A. During on-site field activities, PVNGS safety procedures were followed. Standard Brown and Caldwell health and safety procedures and decontamination procedures were followed during drilling activities.

3.1 Drilling and Sampling

The drilling program was conducted from September 5 to October 17, 2006, and was performed in accordance with the procedures presented in the Work Plan dated June 30, 2006 and associated Addendum to the Work Plan dated September 12, 2006. Wells were installed in the three units at Palo Verde (Figures 2 through 4). ADWR NOIs and Well Drillers Reports are presented in Appendix A. Due to errors on the Well Driller Reports, Yellow Jacket will be resubmitting the reports with the corrected depth information, consistent with the well construction summary presented in Table 1. Three wells were installed in Unit 1, five wells were installed in Unit 2, and eight wells were installed in Unit 3. Ten of the wells were installed in existing soil borings that were advanced by the air-knife method by PVNGS. One well was converted from an existing soil boring that was advanced using combined air-knife and hollow-stem auger drilling techniques. Because of the proximity of the well locations to sensitive piping, all borings were advanced at shallow depths using the air-knife method. The air-knife method uses a considerable amount of water to aid the cutting of the soil. Aqueous samples were collected from the three water sources (one per unit) that were used during air-knifing.

Soil samples were collected using two techniques. Where appropriate, soil samples were collected using a split-spoon sampler containing 6-inch long brass sleeves. Other shallow soil samples were collected by using a push rig and sampler lined with an acetate sleeve. Soil samples were described by a geologist in accordance with the Uniform Soil Classification System (USCS), as defined by the guidelines contained in the American Society for Testing and Materials (ASTM) Standard Practice D 2488. Complete lithologic logs are presented in Appendix B. Soil samples that required shipment to a laboratory that could accept mixed waste were submitted to ACZ Laboratories (ACZ). ACZ analyzed the samples for metals including arsenic, barium, boron, cadmium, chromium, lead, mercury, potassium, selenium, silver, and zinc. Soil and aqueous samples that could be released from the Protected Area (PA) were submitted to Transwest Geochem, Inc. (Transwest) to be analyzed for VOCs and metals. The laboratory reports are provided on disc in Appendix C. Thirty-two soil samples collected from the borings of the PA wells were submitted to Terracon for geotechnical analysis including moisture content and grain-size distribution. The geotechnical testing results are presented in Appendix D.

3.2 Lithology and Estimated Saturation Levels

The lithology penetrated at each location was determined by evaluation of drilled cuttings and split-spoon samples. In general, engineered fill material composed of clayey sand was encountered from land surface to approximately 50 feet. Native soil composed of lean clay was encountered at approximately 50 feet.

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Due to the fine-grained nature of the materials and the drive sample method, estimation of in-situ moisture content from split-spoon samples may not be considered accurate. Any saturation was likely driven-out during the advancement of the split-spoon sampler or push-rig sampler. The average volumetric moisture content of soil samples submitted to Terracon was 11 percent.

3.3 Well Installation and Development

The wells were constructed with 4- or 6-inch diameter Schedule 40 polyvinyl chloride (PVC) casing and screen. The wells were screened with 0.020-inch wide slotted screen. No. 8-12 silica sand was installed from the bottom of the screen to approximately 2 feet above the top of screen. A 2- to 4-foot thick seal of bentonite chips was installed overlying the silica sand. The well was sealed with cement-bentonite grout to the ground surface; the well was covered with a traffic-rated well monument. Well construction diagrams are presented on Figures 5 through 20 and are summarized in Table 1.

Well development was conducted, to the extent possible, by bailing the wells to remove sediment from the well casing. Water quality parameters were not collected during development. Water generated during well development was managed by PVNGS.

3.4 Groundwater Sampling

Groundwater samples were collected on December 13 and 20, 2006 from the PA wells. Prior to purging, the depth to water in the wells was measured. The data is presented in Table 2. The wells were purged using disposable bailers.

Groundwater samples were collected from the following wells after purging and submitted to PV Central Laboratory for tritium analysis and Severn Trent Laboratories (STL) in Denver, Colorado, for the other analyses.

- U2-H0a
- U2-H0b (a duplicate sample also was collected from this well)
- U3-H0a
- U3-H0b
- U3-H11
- U3-H1b
- U3-H5b

The analyses requested were consistent with those listed in the Work Plan and included the following:

- VOCs using U.S. Environmental Protection Agency (USEPA) Test Method 8260B;
- Metals (arsenic, antimony, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, potassium, thallium, selenium, and zinc) using USEPA Test Method 200 series;
- One round of groundwater samples were submitted for cations and anions using USEPA Test Methods 200 and 300 series and SM 2320B; and
- Tritium using USEPA Test Method 906.

Samples that were characterized as mixed waste due to the presence of tritium and/or gamma radioactive compounds were not submitted for stable isotopes (i.e., O^{18} and deuterium) because PVNGS was unable to identify a stable isotope laboratory that possessed a licensed to accept mixed waste.

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3.5 Transducer Installation

Pressure transducers were installed in the PA wells on November 16, 2006 to monitor long-term water levels. Level Troll 500 transducers (manufactured by the In-Situ Company) were installed in each well as summarized in Table 2.

The transducers were programmed to collect water level data every 12 hours for the long-term monitoring program.

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4. SOIL AND GROUNDWATER TESTING RESULTS

Soil and groundwater samples were collected as indicated in the Work Plan dated June 30, 2006. Soil samples were collected during the drilling program and submitted to Terracon for geotechnical analysis of grain-size distribution and moisture content and to STL and ACZ for analytical testing for VOCs and select metals. Groundwater samples were collected with disposable bailers after the wells were purged; samples were submitted to STL for analysis.

4.1 Soil Geotechnical Results

Soil samples submitted for geotechnical analysis were selected based on the results of the lithology evaluated in the field. Soil geotechnical results are summarized in Table 3, the laboratory reports are presented in Appendix D.

Due to the drive sample method, measured moisture values are likely lower than the undisturbed aquifer deposits. Therefore, strict analysis of zones of saturation cannot be determined based on the soil moisture data. Additionally, water introduced during air-knifing may have affected the results. However, grain-size analysis results provide an estimation of hydraulic conductivity. Based on the geotechnical data for U3-H7, there is a layer of lower permeability between 15 and 35 feet bgs, and increased hydraulic conductivity below 40 feet bgs. As summarized in Table 3, the moisture content results for U3-H7 are higher at 15 feet bgs than for deeper samples.

4.2 Soil Analytical Results

Soil samples were submitted for analysis of VOCs and metals including arsenic, barium, boron, cadmium, chromium, lead, mercury, potassium, selenium, silver, and zinc. Laboratory results indicate that all VOCs tested were below the detection limits of the instrument. Chloroform detected in the soil sample for U2-H7-45 (0.077mg/kg) is likely associated with the facility supplied water used during air-knifing. The on-site water was tested for VOCs and chloroform was detected at a concentration of 0.79 micrograms per liter (µg/L). Chloroform detected in the domestic water supply is most likely a chlorination by-product from the disinfection process. The following metals were detected: arsenic, barium, boron, chromium, potassium, and zinc. The concentrations of these metals in the soil were below their respective residential soil remediation levels (R-SRL) except for arsenic (arsenic R-SRL equals 10.0 milligrams per kilogram [mg/kg]). The arsenic concentration in the 50-foot sample collected from the borehole for well U2-H7 was reported at 14 mg/kg. This result is consistent with arsenic soil sample results for APP-10 and APP-11, which ranged from non-detect to 11 mg/kg. The concentrations for metals in soil are summarized in Table 4a through 4c and analytical laboratory reports are presented in Appendix C.

4.3 Groundwater Sampling Results

Results for groundwater samples collected in December 2006 indicated VOCs were detected in three of the groundwater samples. One detection of tetrachloroethene (PCE) exceeded the Aquifer Water Quality Standard (AWQS) of 5 µg/L. Several inorganic compounds including arsenic, barium, boron, calcium, chromium, chloride, fluoride, nitrate-nitrite (as nitrogen), potassium, sodium, and sulfate were reported above the detection limits. Arsenic, chromium, fluoride, lead, nickel, and nitrate (as nitrogen) were detected at concentrations above AWQS.

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Some VOCs (1,1,1-trichloroethane, 1,1-dichloroethane, chloroform, PCE, total trihalomethenes, *cis*-1,2-dichloroethene, and toluene) were detected at concentrations below their respective AWQS in three monitoring wells (U2-H0a, U2-H0a, and U3-H5b). PCE was detected above the AWQS (5 µg/L) in U3-H0a (9.4 µg/L).

As described in the memo from APS to ADEQ dated December 15, 2006, VOCs detected in the original test hole samples may have been associated with solvent cleaning of the buried pipe in the area prior to application of protective wrapping.

Arsenic was detected in six wells at concentrations ranging between 17 and 39 µg/L, which are all above the AWQS of 10 µg/L. Chromium was detected in one well (U2-H0b) above the AWQS of 100 mg/L, at a concentration of 160 µg/L; however, the duplicate result was 77 µg/L. Fluoride was detected in four wells, ranging from 4.4 to 11 mg/L. Lead was detected in one well (U2-H0b, 75 µg/L) above the AWQS of 50 µg/L; however, the duplicate result was 34 µg/L. Nickel was detected in one well (U2-H0b) above the AWQS of 100 µg/L, at a concentration of 120 µg/L; however, the duplicate result was 53 µg/L. Nitrate-nitrite was detected above the AWQS of 10 mg/L in one well (U3-H1b) at a concentration of 14 mg/L.

The difference in analytical results between the parent and duplicate samples for U2-H0b for chromium, lead, and nickel, is discussed in the case narrative of the laboratory analytical report. Based on the case narrative and Brown and Caldwell's discussion with the laboratory, the difference in results for the above listed metals is due to the presence of sediments in the sample containers which contained preservatives. In acid preserved samples with high turbidity or sediments, artificially increased results can be caused by the dissociation of metals from the solid phase. Variation in the results is likely due to the variation in solid phase in the sample.

Groundwater analytical results are summarized in Table 5, the laboratory reports are presented in Appendix C.

4.4 Survey Data and Groundwater Flow Condition

Water levels were measured in October 2006 prior to groundwater sampling. Water elevation data and APS surveyed well coordinate data are summarized in Table 6. In each Unit the H7 well was drilled to approximately 50 feet deep to determine whether vertical migration has occurred. The deep monitoring wells in each unit (U1-H7, U2-H7, and U3-H7) were all dry in October 2006. Therefore, vertical migration appears to be limited.

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5. SUMMARY

In support of further delineation of tritium and VOCs impacted areas, field investigation activities were conducted between September and December 2006. This report summarizes the PA well installation field activities and analytical results. A total of 16 monitoring wells were installed either from existing borings or newly drilled locations. Three monitoring wells were installed near Unit 1, five near Unit 2, and eight near Unit 3.

Soil samples were collected and submitted for geotechnical and chemical analysis. Soil moisture analytical results should be viewed as semi-quantitative due to the natural inclination for the drilling and sampling process to drive soil moisture out. Therefore, strict analysis of zones of saturation cannot be determined based on the soil moisture data. In each of the Units, native material was encountered at approximately 50 feet bgs. The monitoring wells installed in each Unit to approximately 50 feet bgs (H7 wells) did not have water and therefore it appears that vertical migration is limited.

Groundwater samples collected and analyzed for tritium in December 2006 did not exceed the AWQS. Some metals and nitrate-nitrite were detected above the AWQS but these are attributed to background concentrations and/or remnants from the former agricultural operations. PCE was detected above the AWQS in one well in Unit 3. Soil analytical data indicate that there was one exceedance of the arsenic R-SRL.

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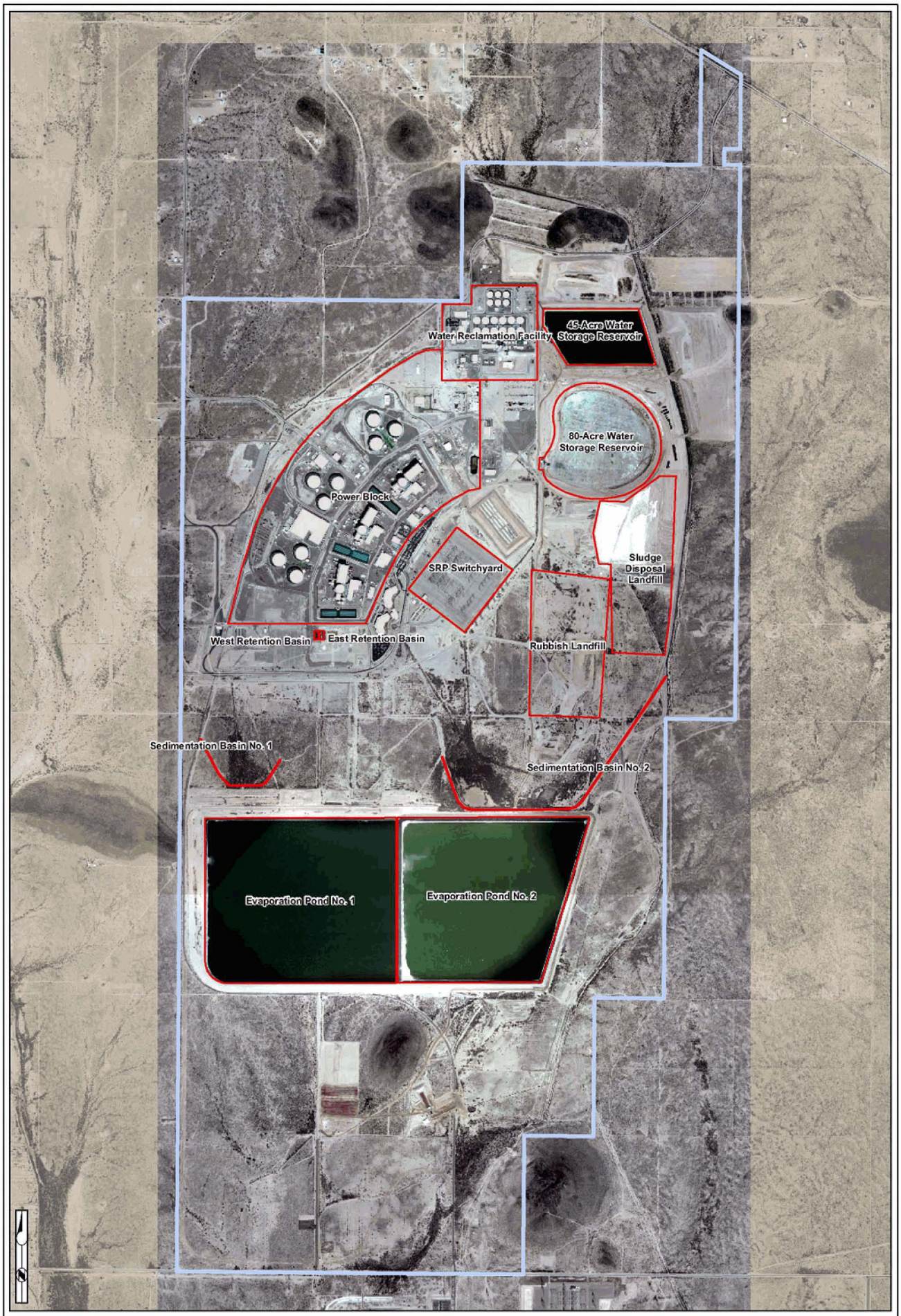
6. REPORT LIMITATIONS

This document was prepared solely for Arizona Public Service Company in accordance with professional standards at the time the services were performed and in accordance with the contract between Arizona Public Service Company and Brown and Caldwell dated June 24, 2005. This document is governed by the specific scope of work authorized by Arizona Public Service Company; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by Arizona Public Service Company and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.



0 1,000
Feet

BROWN AND CALDWELL

Legend

- Facilities
- Buildings
- Site Boundary

FIGURE 1
Palo Verde Nuclear Generating Station
SITE LOCATION MAP

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DRAFT
CONFIDENTIAL WORK PRODUCT

Feet
0 25 50 100

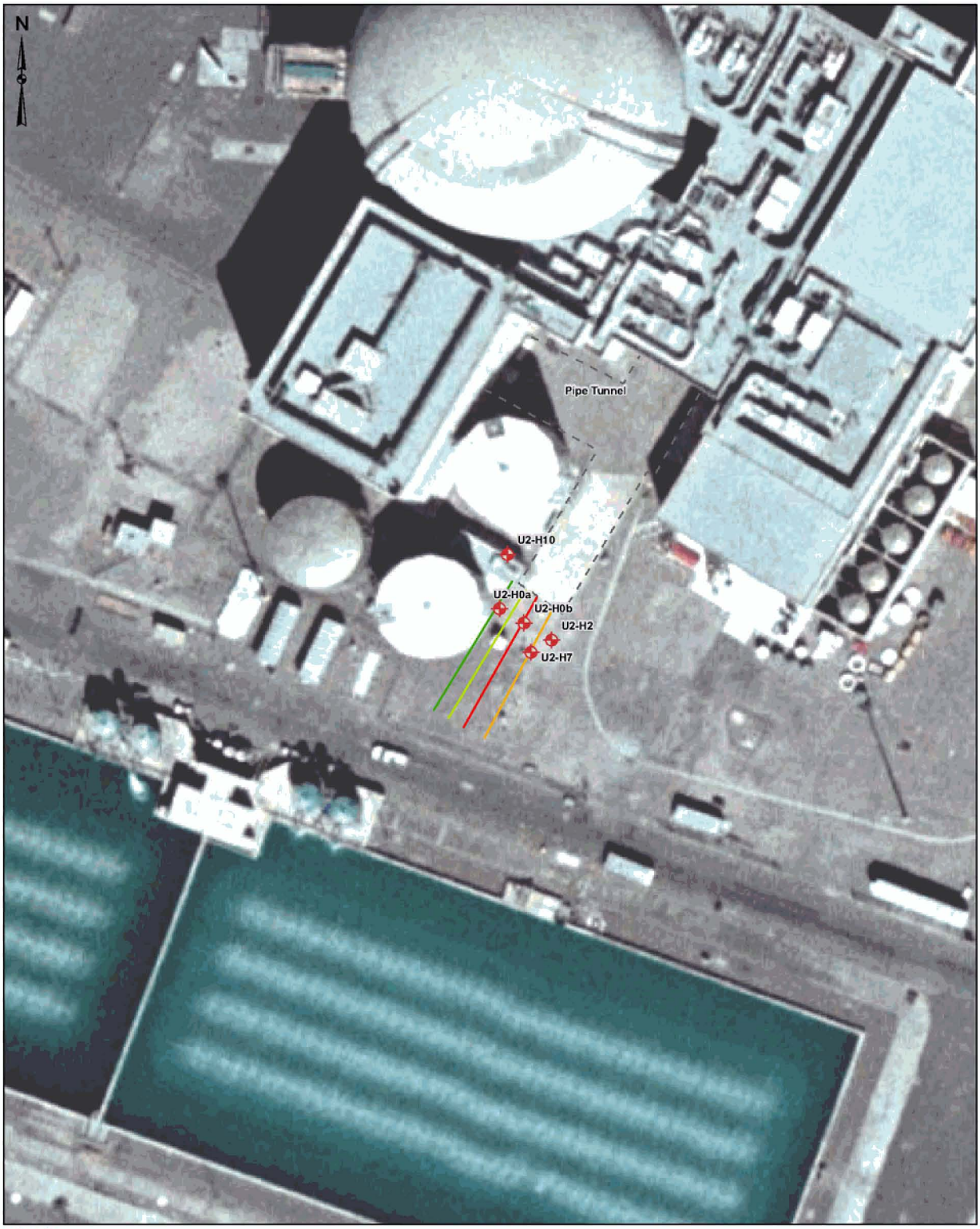
EXPLANATION

- PA Well Locations
- 24" SP A Return
- 24" SP A Supply
- 24" SP B Return
- 24" SP B Supply

BROWN AND CALDWELL

FIGURE 2
PROTECTED AREA (PA)
UNIT 1 WELL LOCATION MAP
PALO VERDE NUCLEAR GENERATING STATION
ARIZONA PUBLIC SERVICES

[BCTUC02]T:\APS-PVNGS\133071_PA_Well_Install\GIS\ARCMAPS\FIGURES



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CONFIDENTIAL WORK PRODUCT

Feet
0 25 50 100

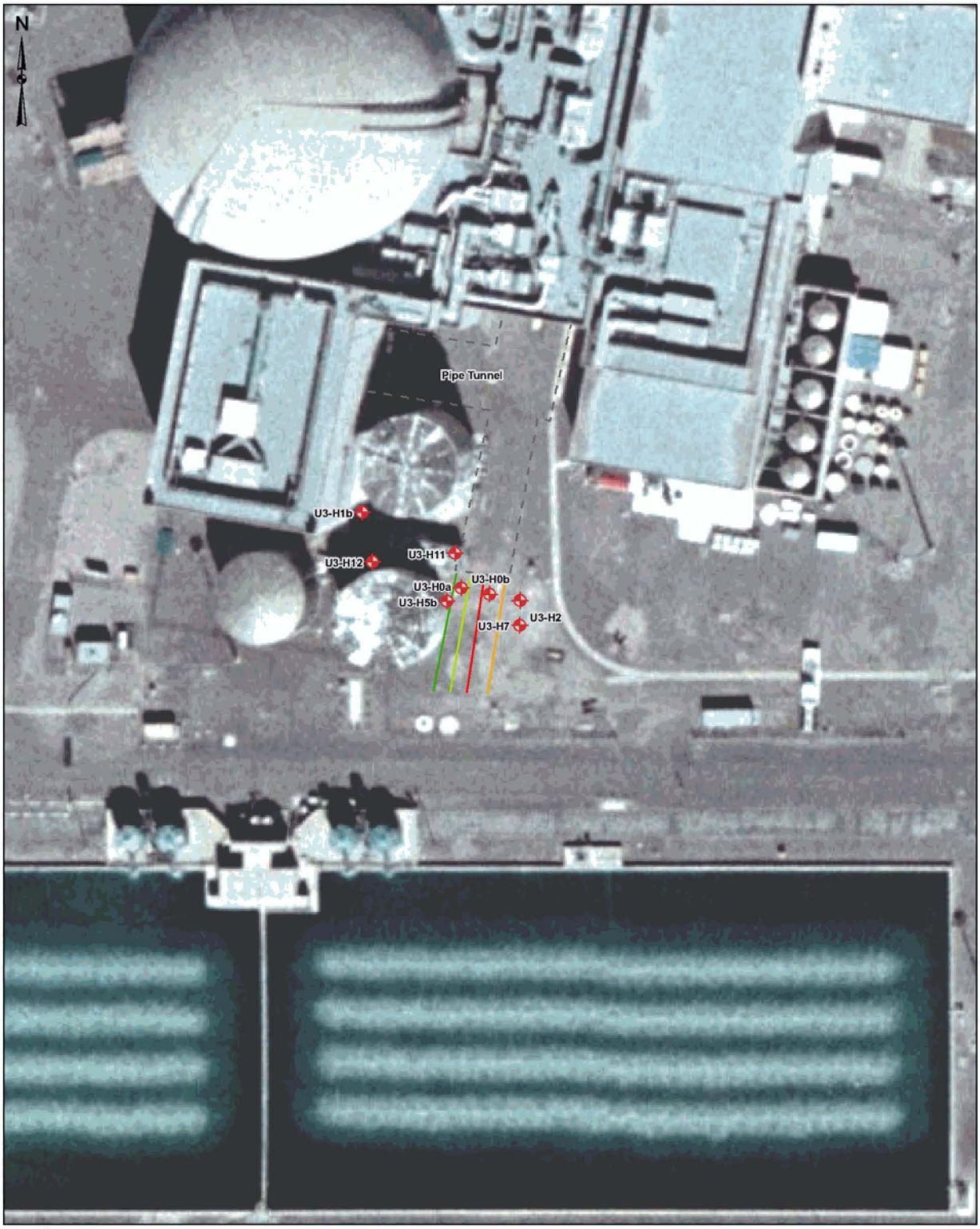
EXPLANATION

- PA Well Locations
- 24" SP A Return
- 24" SP A Supply
- 24" SP B Return
- 24" SP B Supply

BROWN AND CALDWELL

FIGURE 3
PROTECTED AREA (PA)
UNIT 2 WELL LOCATION MAP
PALO VERDE NUCLEAR GENERATING STATION
ARIZONA PUBLIC SERVICES

[BCTUC02]T:\APS-PVNGS\133071_PA_Well_Install\GIS\ARCMAPS\FIGURES



DRAFT
CONFIDENTIAL WORK PRODUCT

Feet
0 25 50 100

EXPLANATION

- PA Well Locations
- 24" SP A Return
- 24" SP A Supply
- 24" SP B Return
- 24" SP B Supply

BROWN AND CALDWELL

FIGURE 4
PROTECTED AREA (PA)
UNIT 3 WELL LOCATION MAP
PALO VERDE NUCLEAR GENERATING STATION
ARIZONA PUBLIC SERVICES

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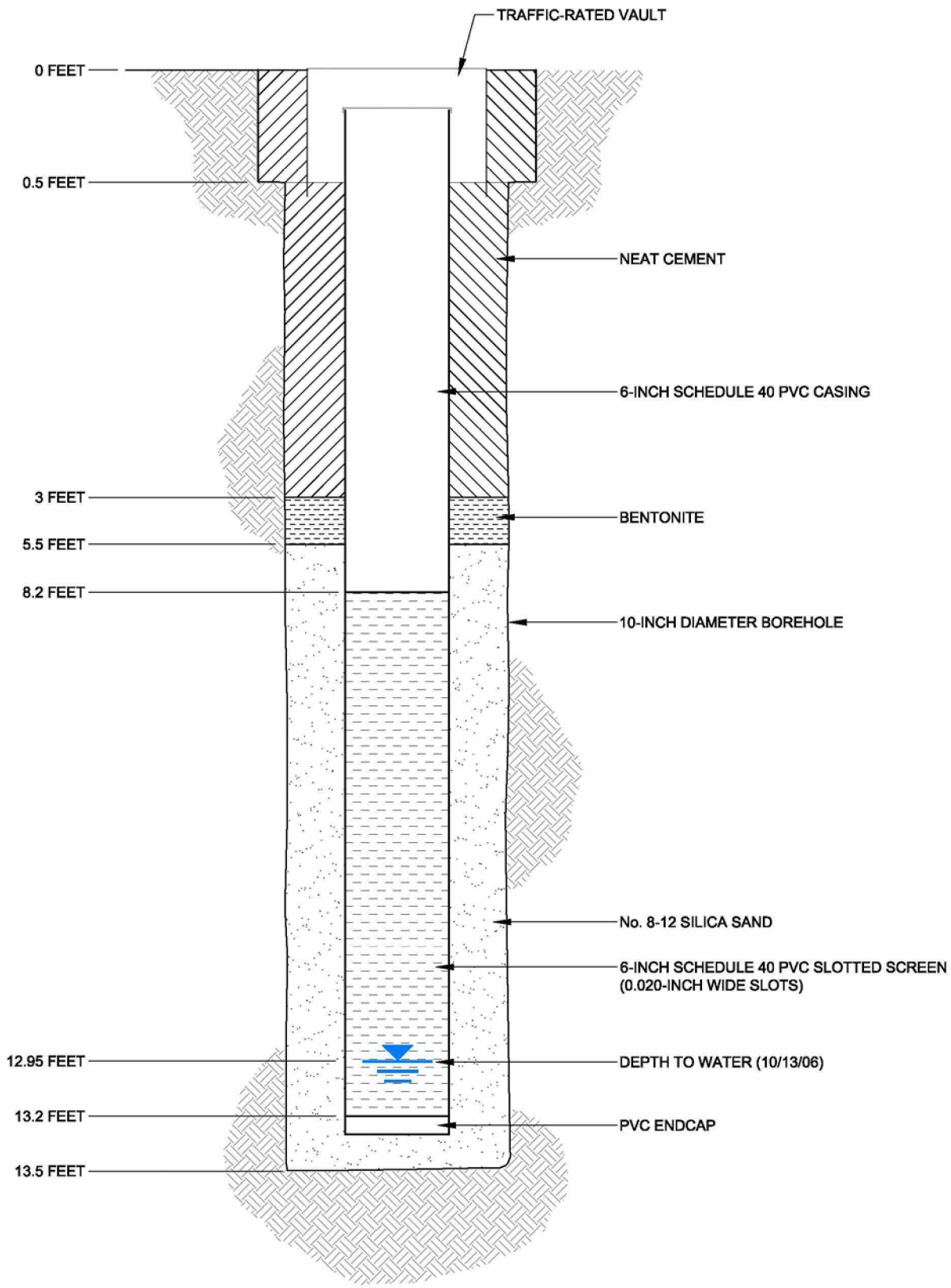

NOT TO SCALE

ADWR REGISTRATION No. 55-905185
CADASTRAL LOCATION B(1-6)34BAC

BROWN AND CALDWELL

Figure 5

U1-H0a AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

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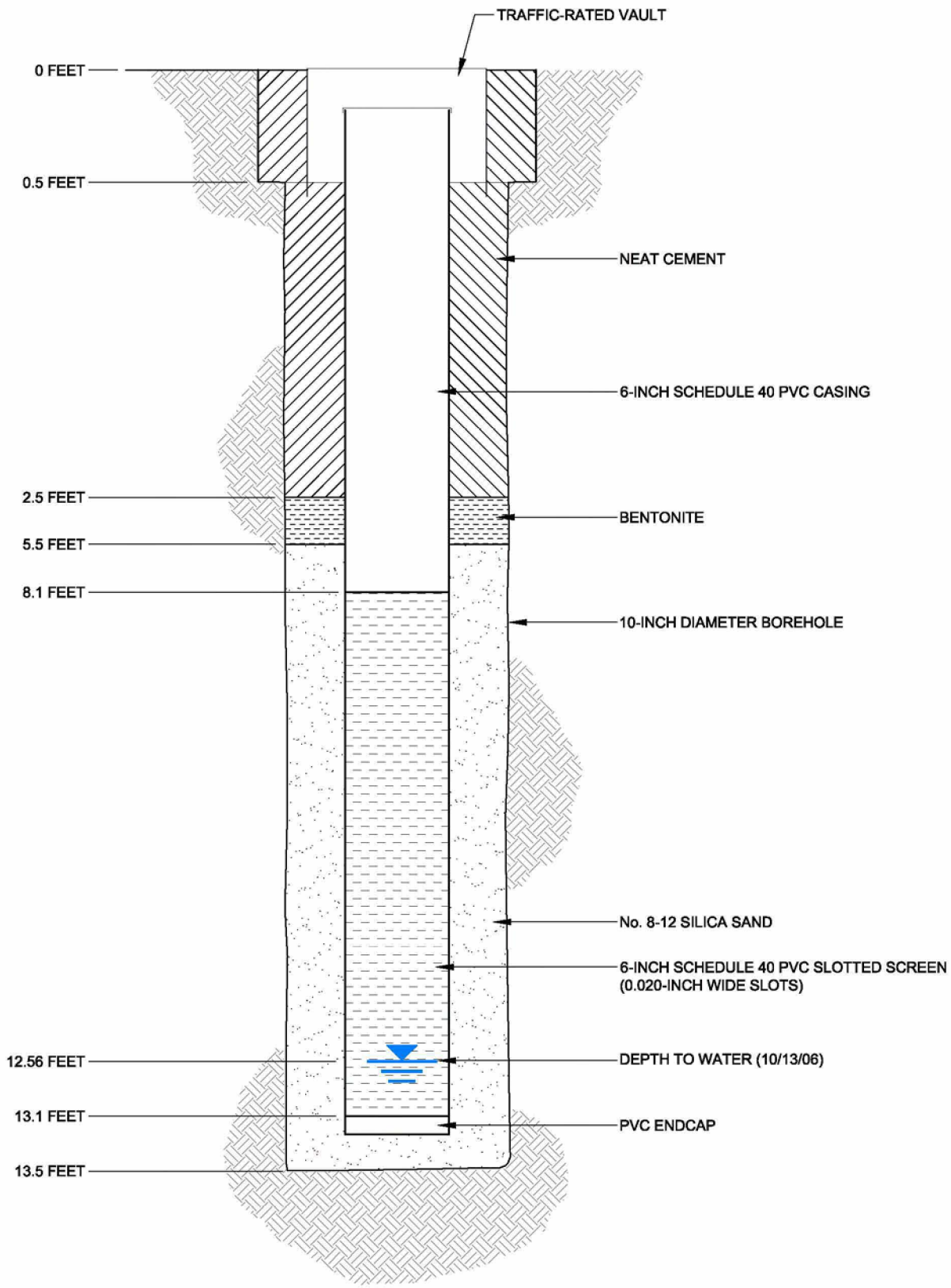

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ADWR REGISTRATION No. 55-905186
CADASTRAL LOCATION B(1-6)34BAC

BROWN AND CALDWELL

Figure 6

U1-H0b AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

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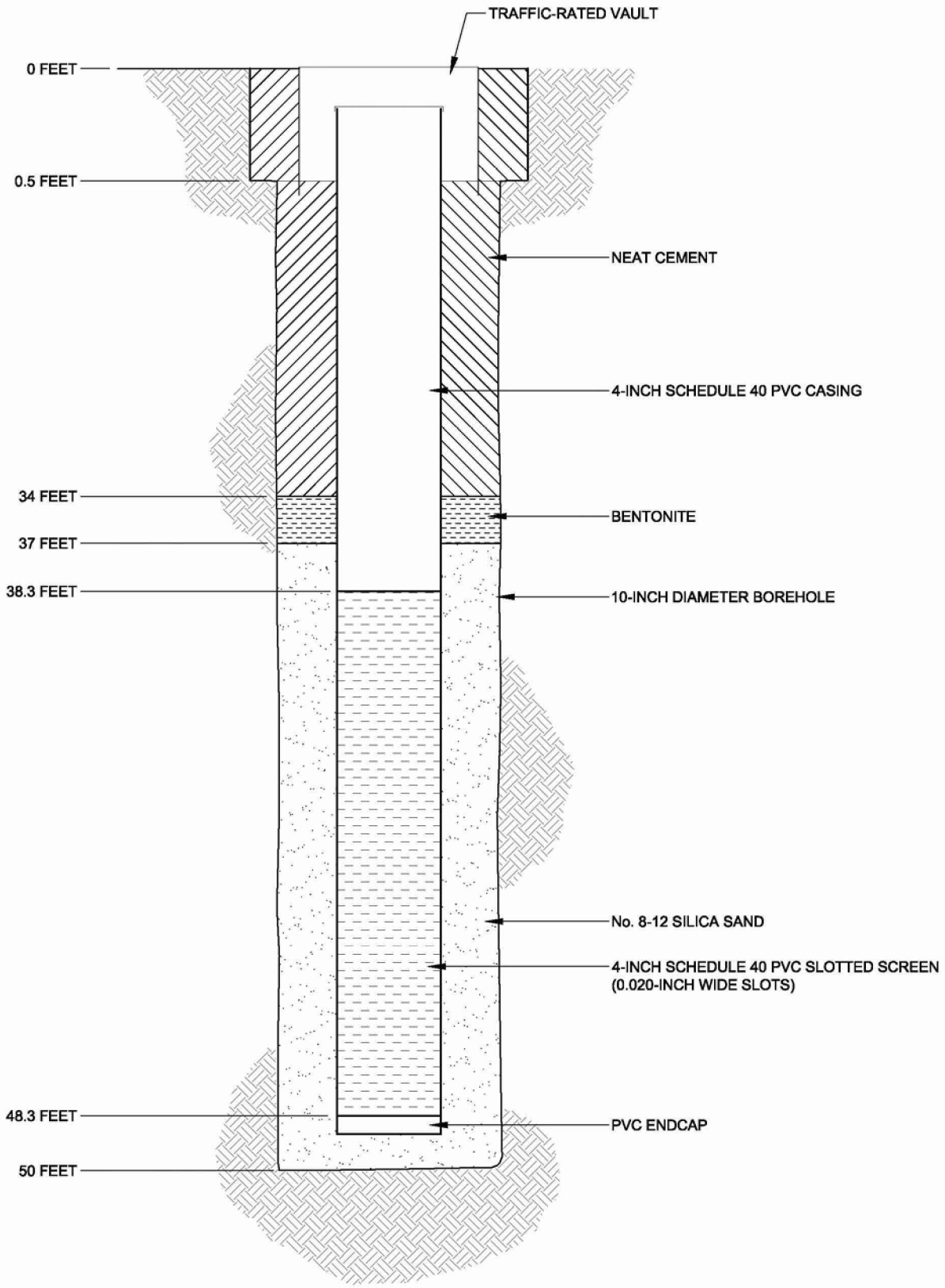

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ADWR REGISTRATION No. 55-905188
CADASTRAL LOCATION B(1-6)34BAC
WELL DRY ON 10/04/2006

BROWN AND CALDWELL

Figure 7

U1-H7 SHALLOW MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

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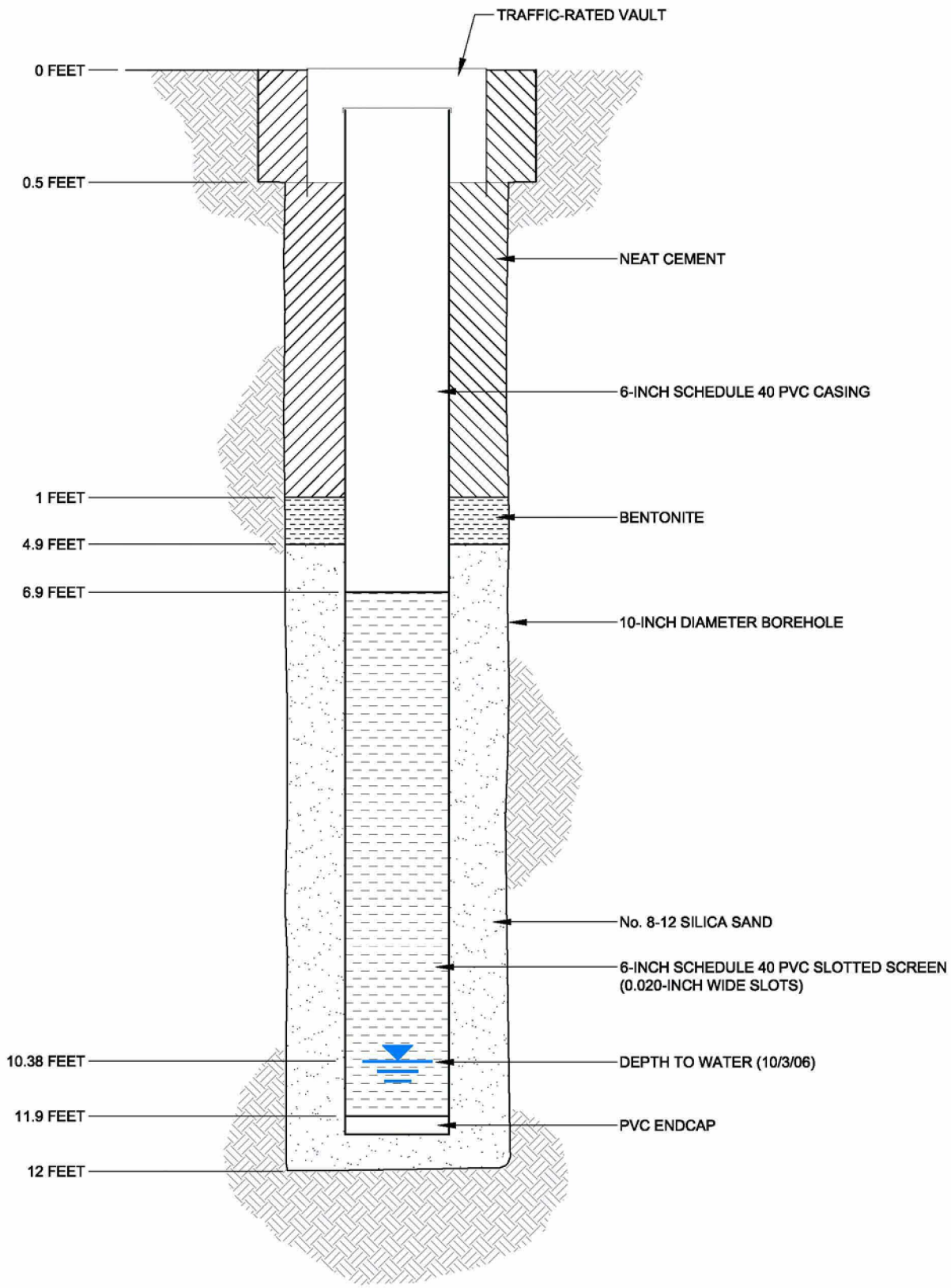

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ADWR REGISTRATION No. 55-905189
CADASTRAL LOCATION B(1-6)34BCA

BROWN AND CALDWELL

Figure 8

U2-H0a AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

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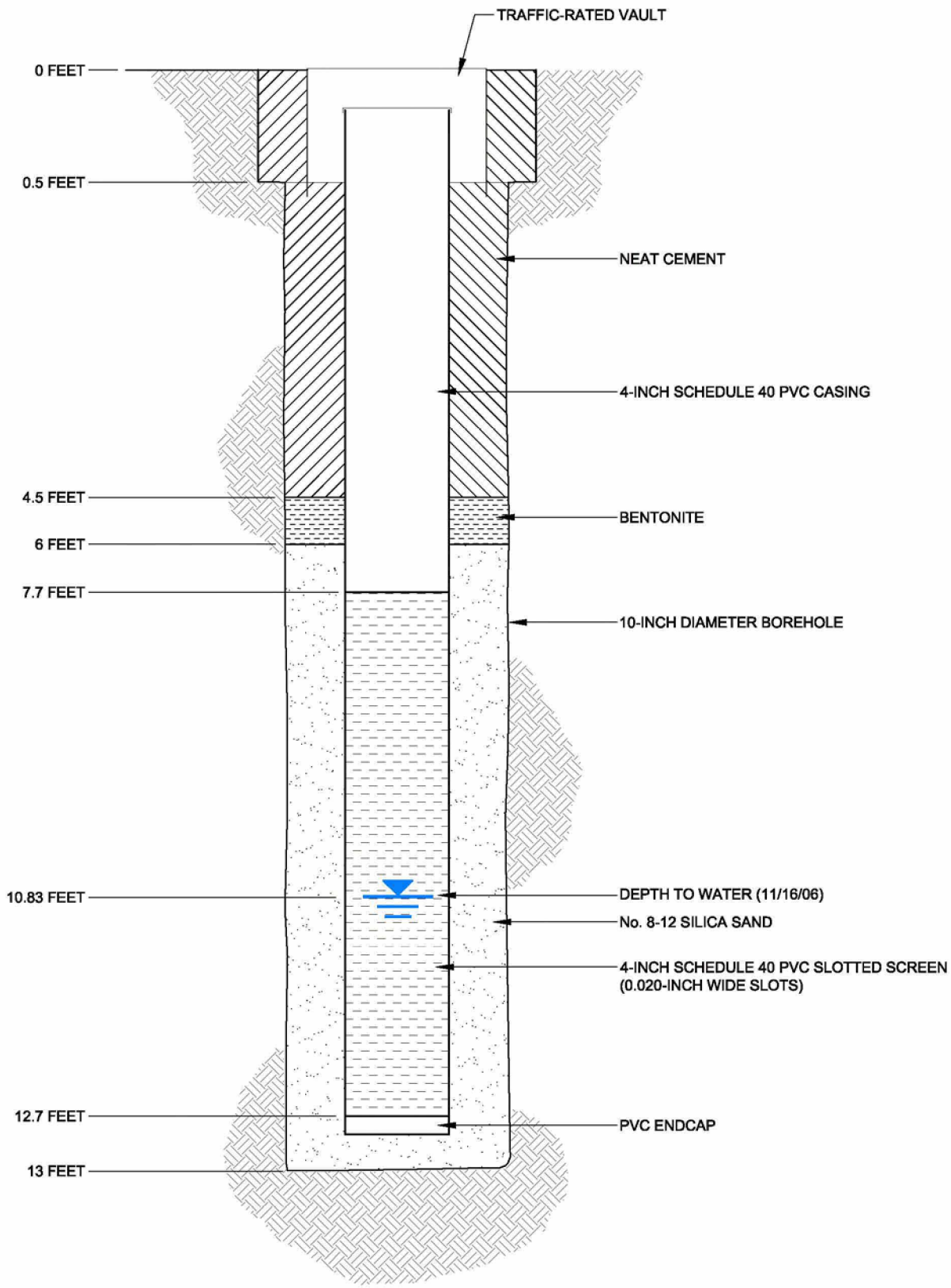

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ADWR REGISTRATION No. 55-905190
CADASTRAL LOCATION B(1-6)34BAC

BROWN AND CALDWELL

Figure 9

U2-H0b AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

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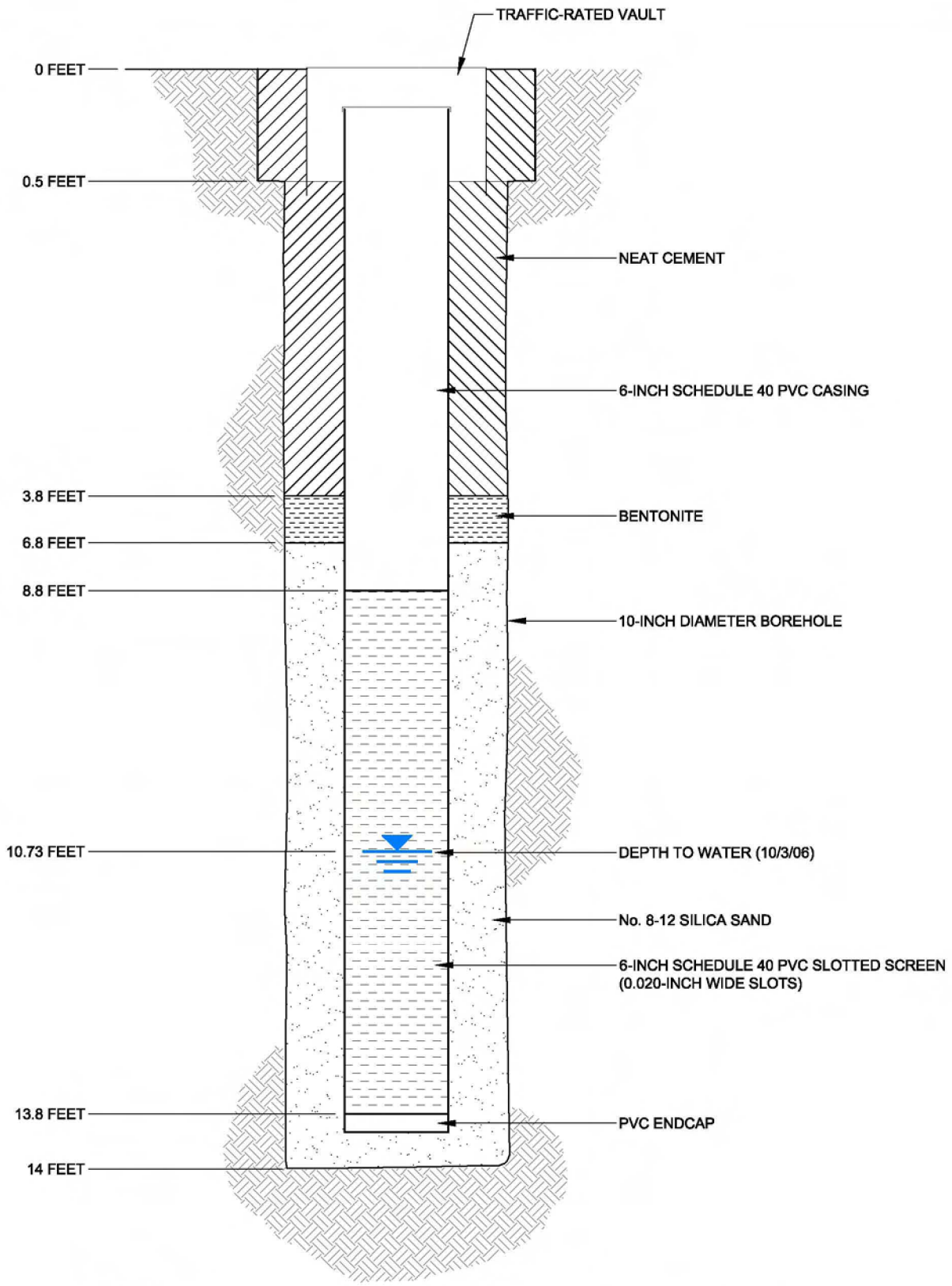

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ADWR REGISTRATION No. 55-905193
CADASTRAL LOCATION B(1-6)34BAC

Figure 10

U2-H10 AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

BROWN AND CALDWELL

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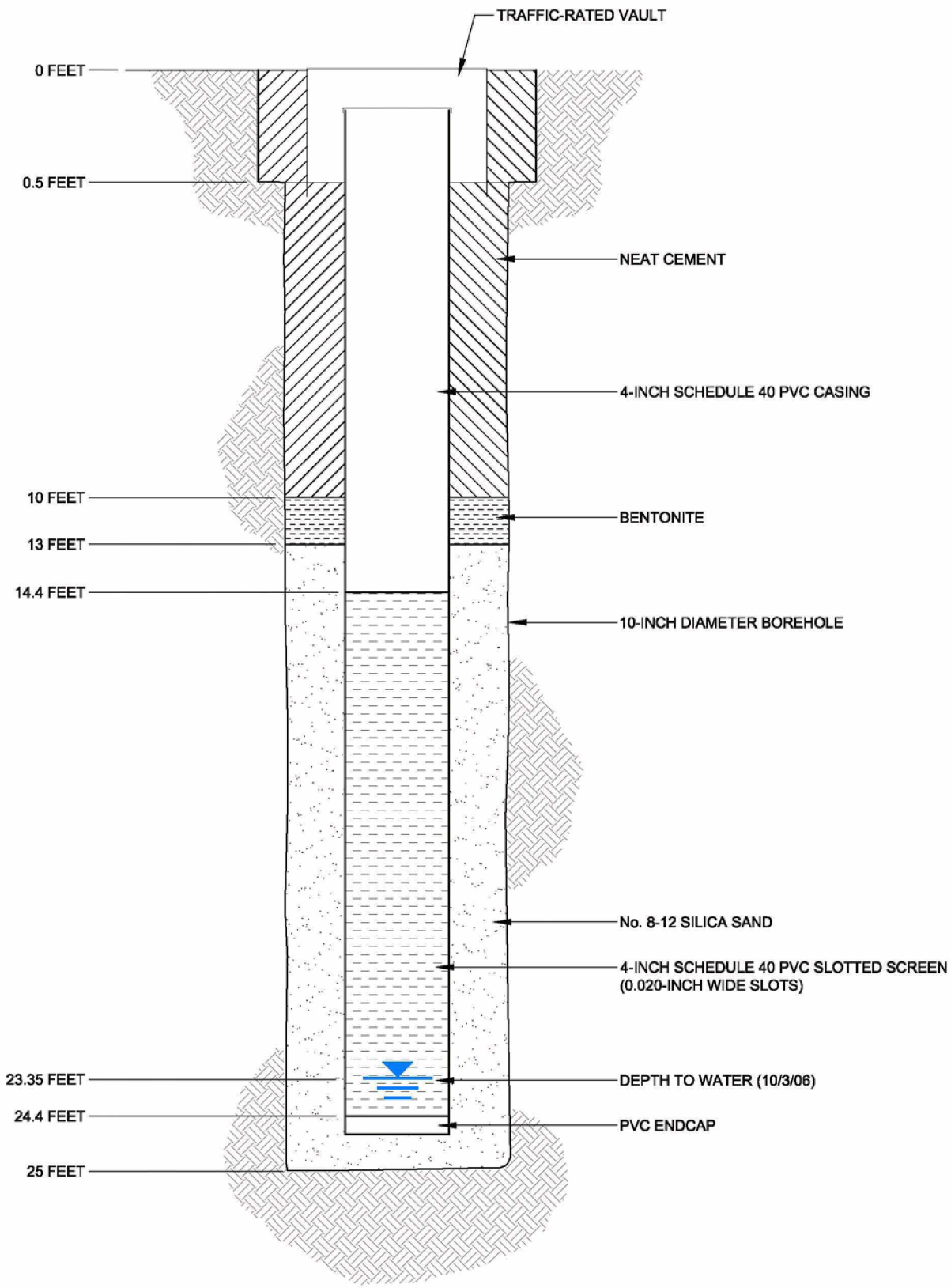

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ADWR REGISTRATION No. 55-905191
CADASTRAL LOCATION B(1-6)34BCA

BROWN AND CALDWELL

Figure 11

U2-H2 SHALLOW MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

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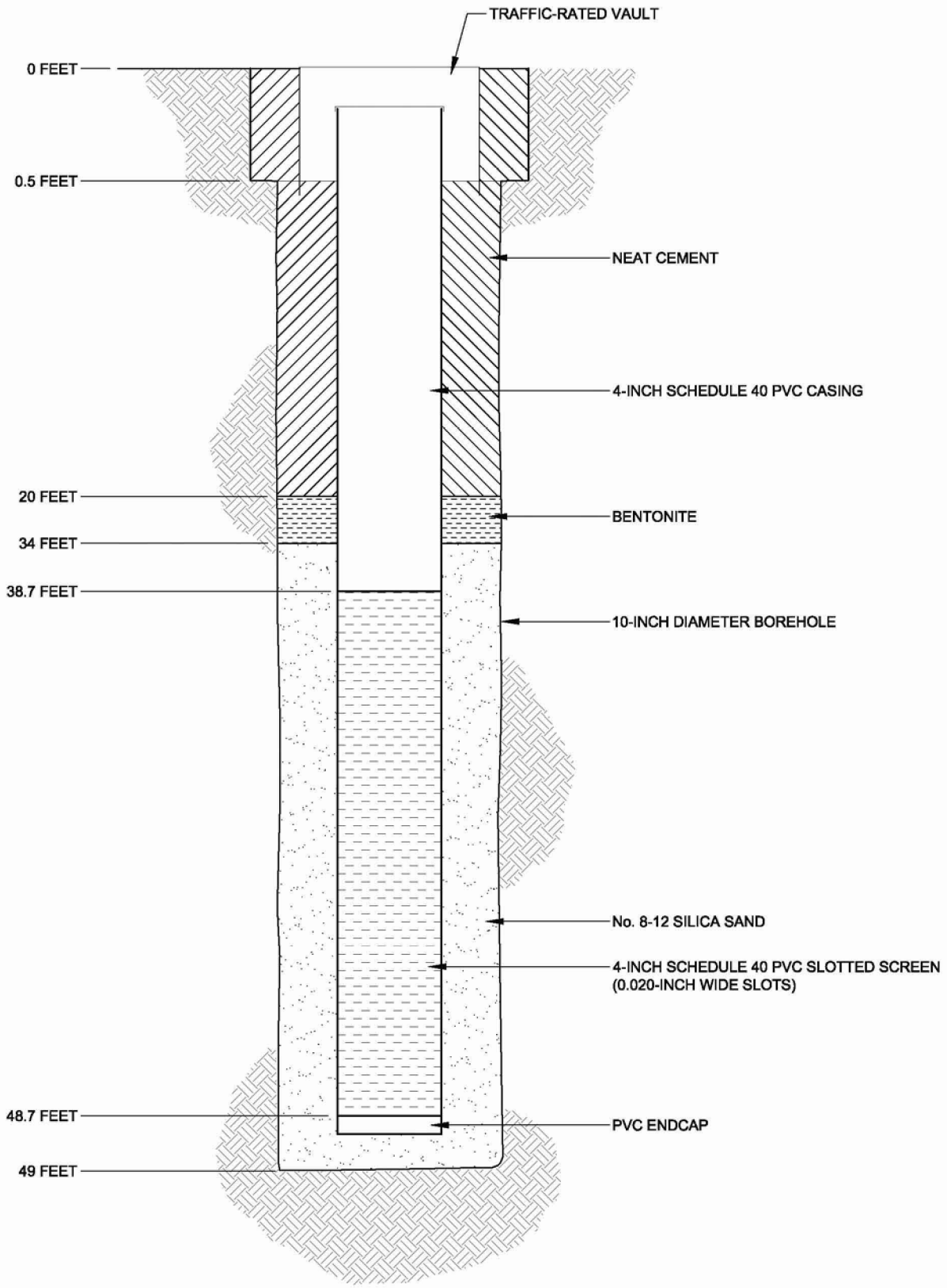

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ADWR REGISTRATION No. 55-905192
CADASTRAL LOCATION B(1-6)34BCA
WELL DRY ON 10/3/06

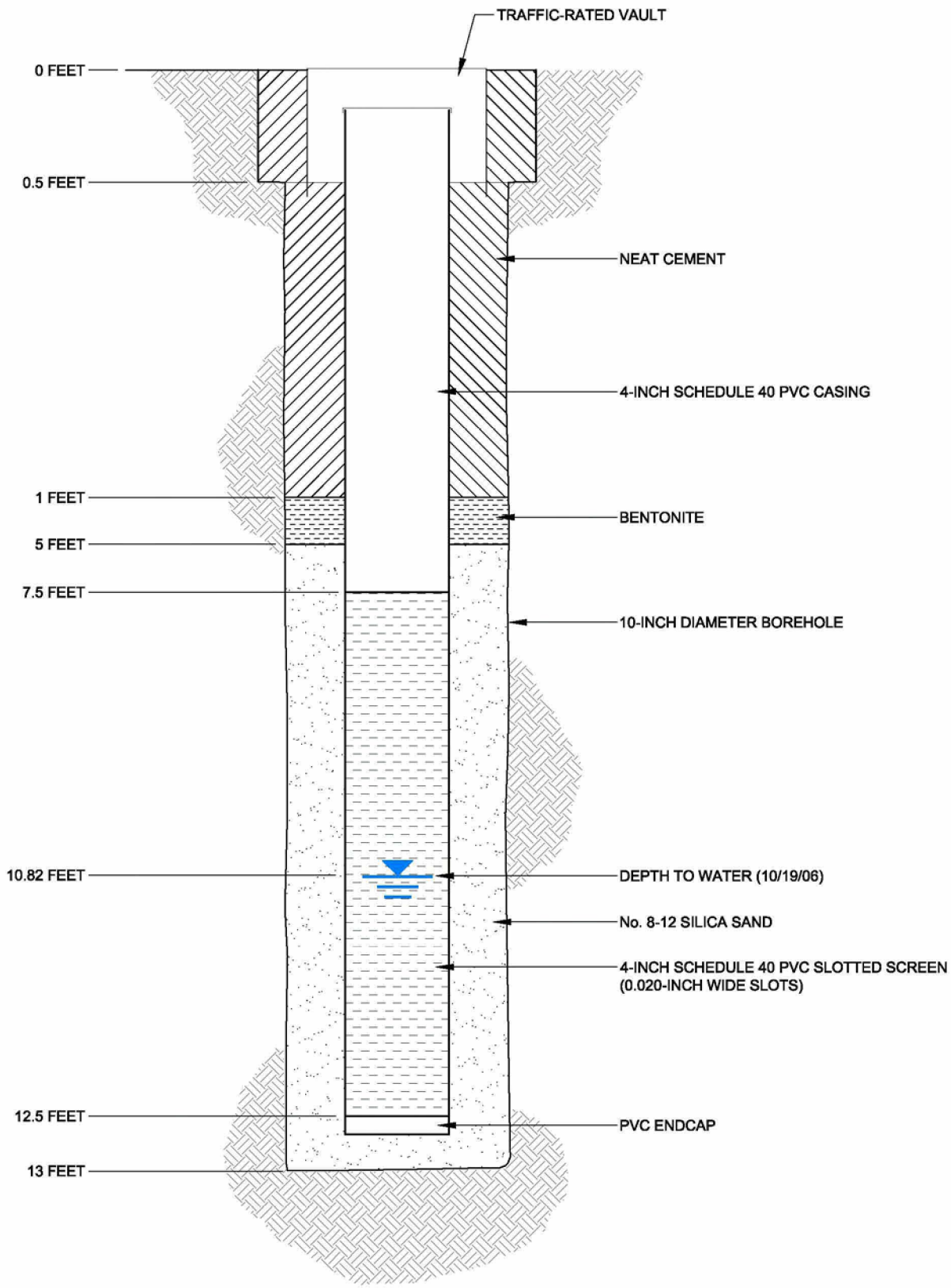
BROWN AND CALDWELL

Figure 12

U2-H7 SHALLOW MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□12-U2-H7.dwg Dec 12, 2007 - 12:37pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905194
CADASTRAL LOCATION B(1-6)34CBB

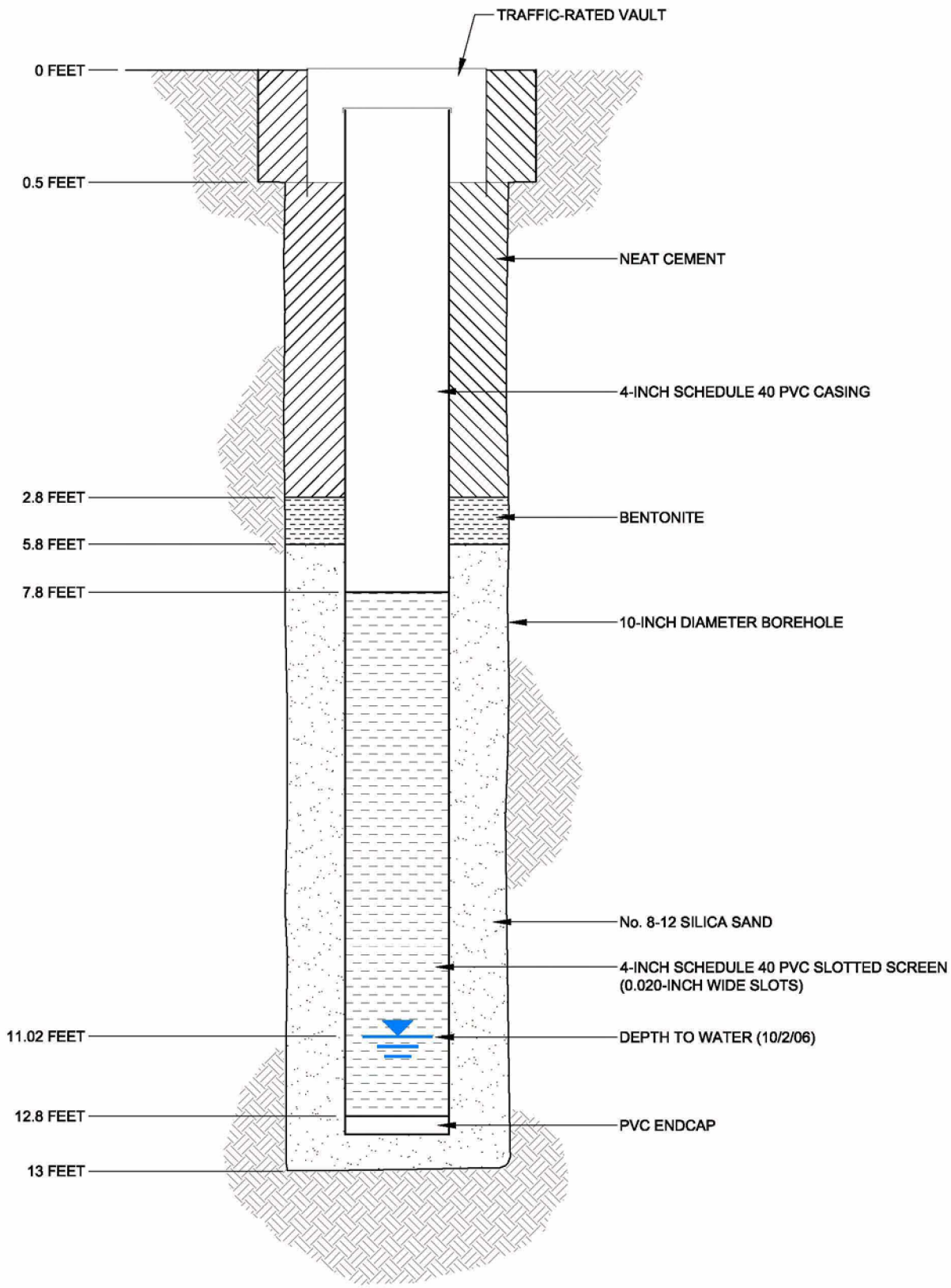
BROWN AND CALDWELL

Figure 13

U3-H0a AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□13-U3-H0a.dwg Dec 12, 2007 - 12:38pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905195
CADASTRAL LOCATION B(1-6)34CBB

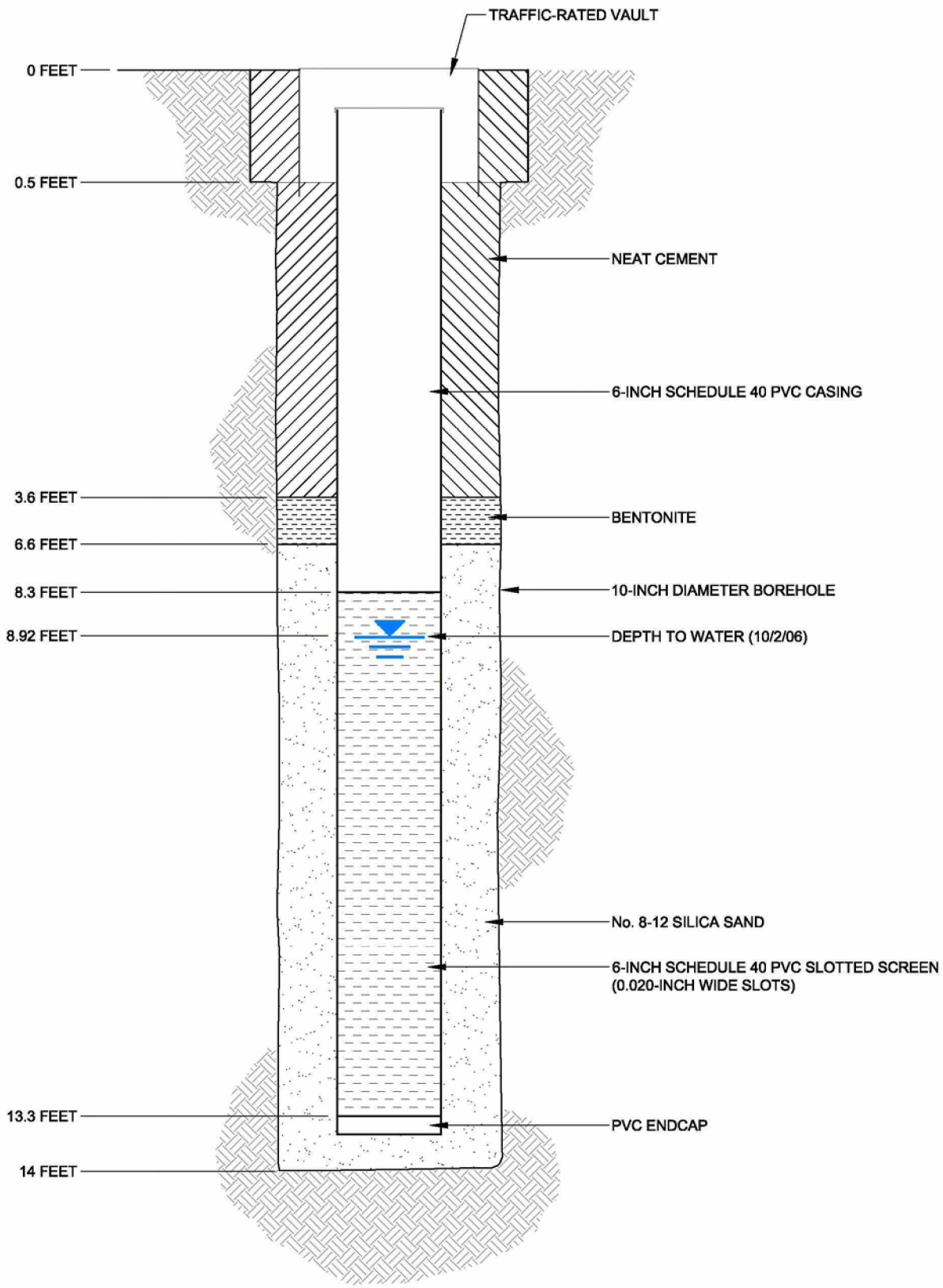
BROWN AND CALDWELL

Figure 14

U3-H0b AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□14-U3-H0b.dwg Dec 12, 2007 - 12:40pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905470
CADASTRAL LOCATION B(1-6)34CBB

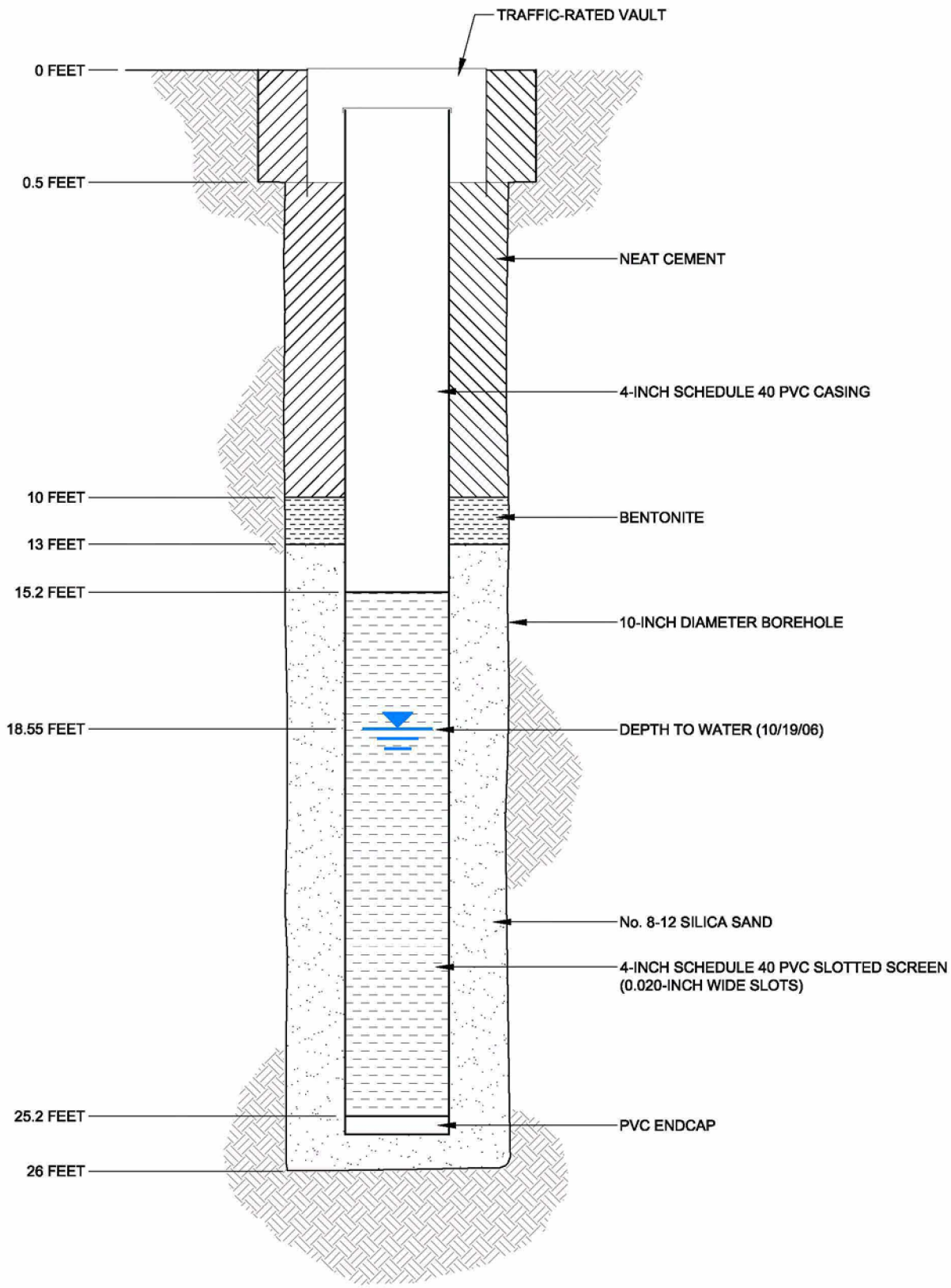
BROWN AND CALDWELL

Figure 15

U3-H1b SHALLOW MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:\APS-PVNGS\134071 - PA Wells Rpts\CAD\134071-002\15-U3-H1b.dwg Dec 12, 2007 - 12:58pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905466
CADASTRAL LOCATION B(1-6)34CBB

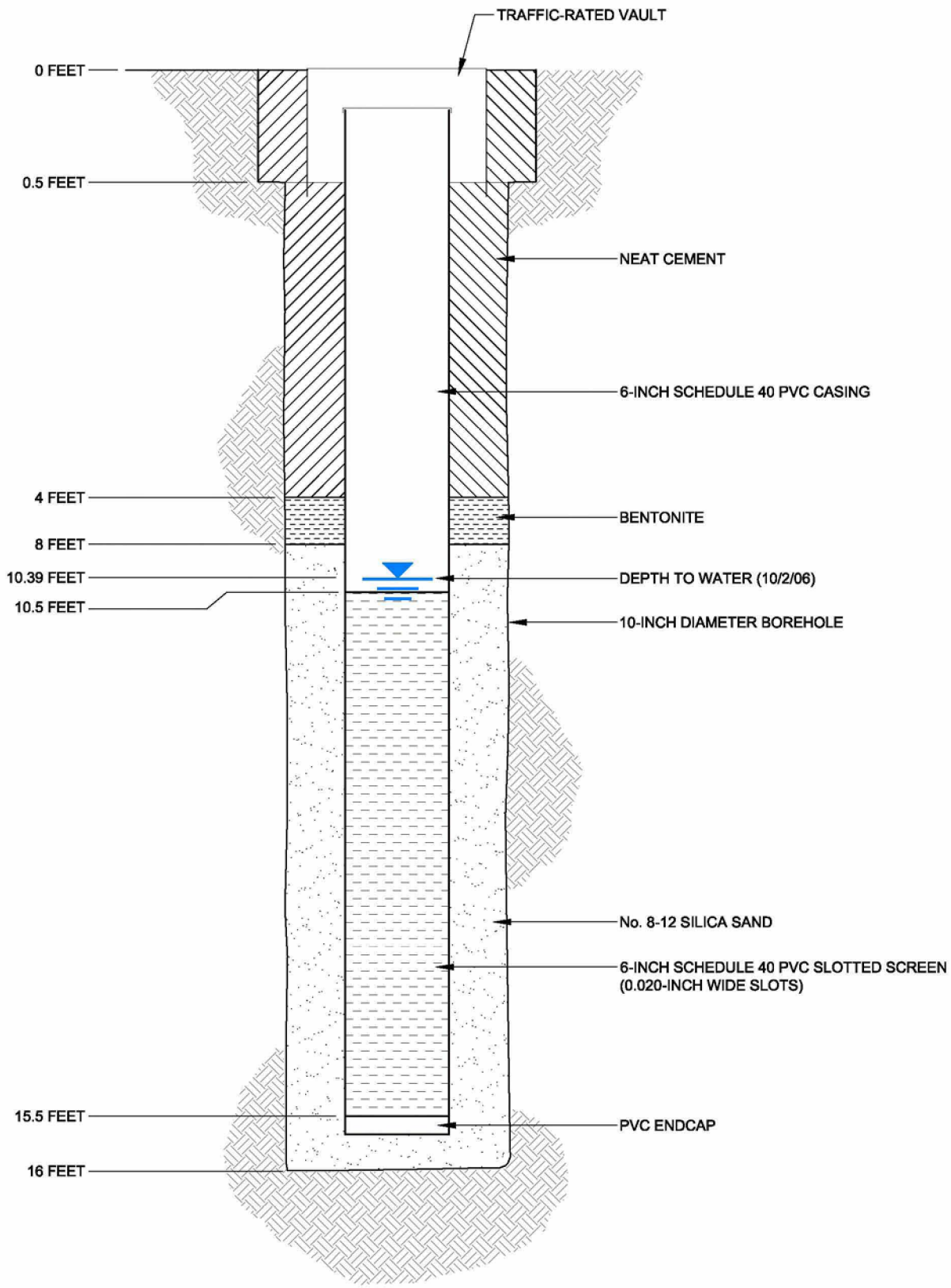
BROWN AND CALDWELL

Figure 16

U3-H2 AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□16-U3-H2.dwg Dec 12, 2007 - 12:43pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905467
CADASTRAL LOCATION B(1-6)34CBB

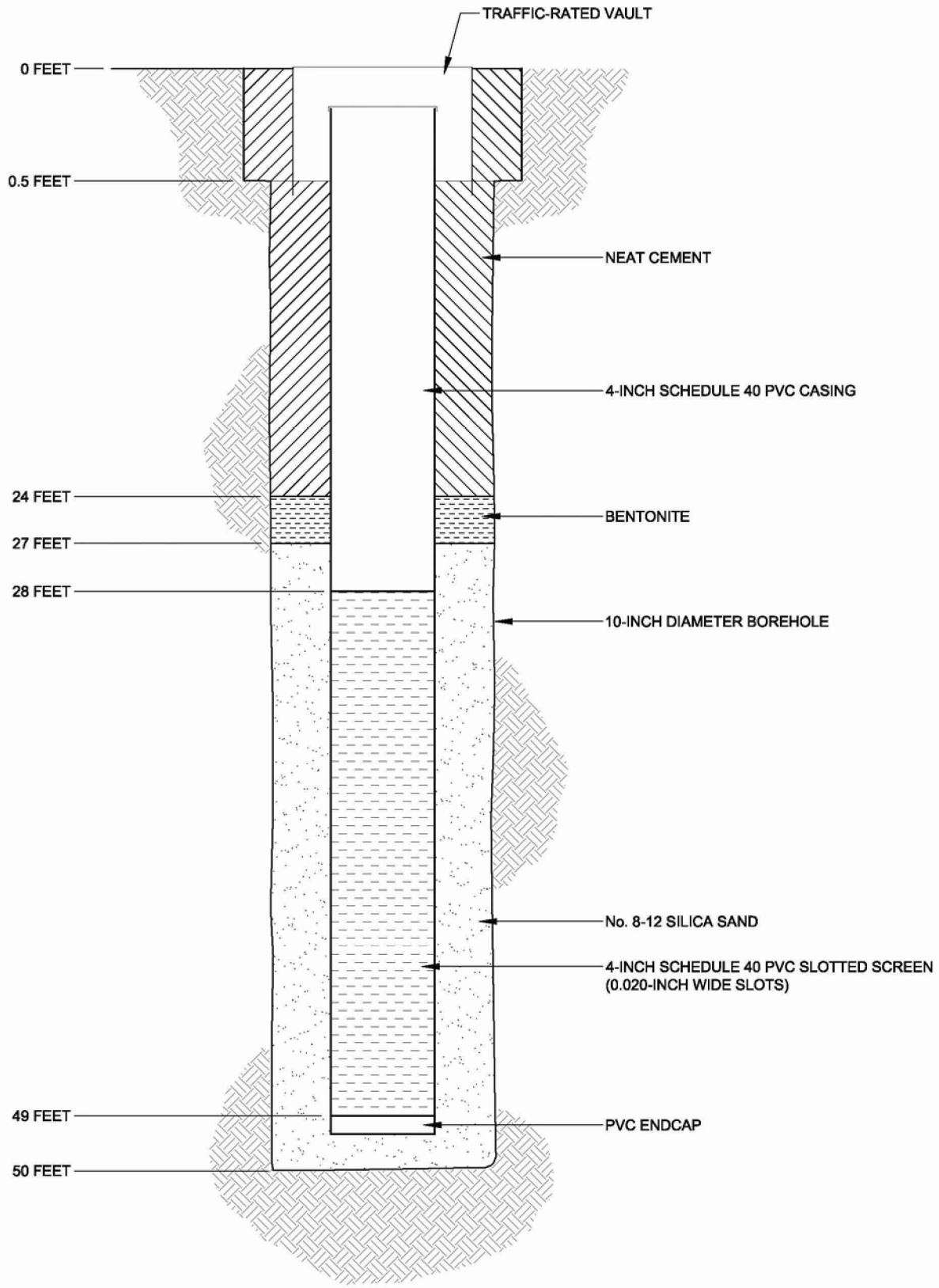
BROWN AND CALDWELL

Figure 17

U3-H5b AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□17-U3-H5b.dwg Dec 12, 2007 - 12:44pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905471
CADASTRAL LOCATION B(1-6)34CBB
WELL DRY ON 10/4/2006

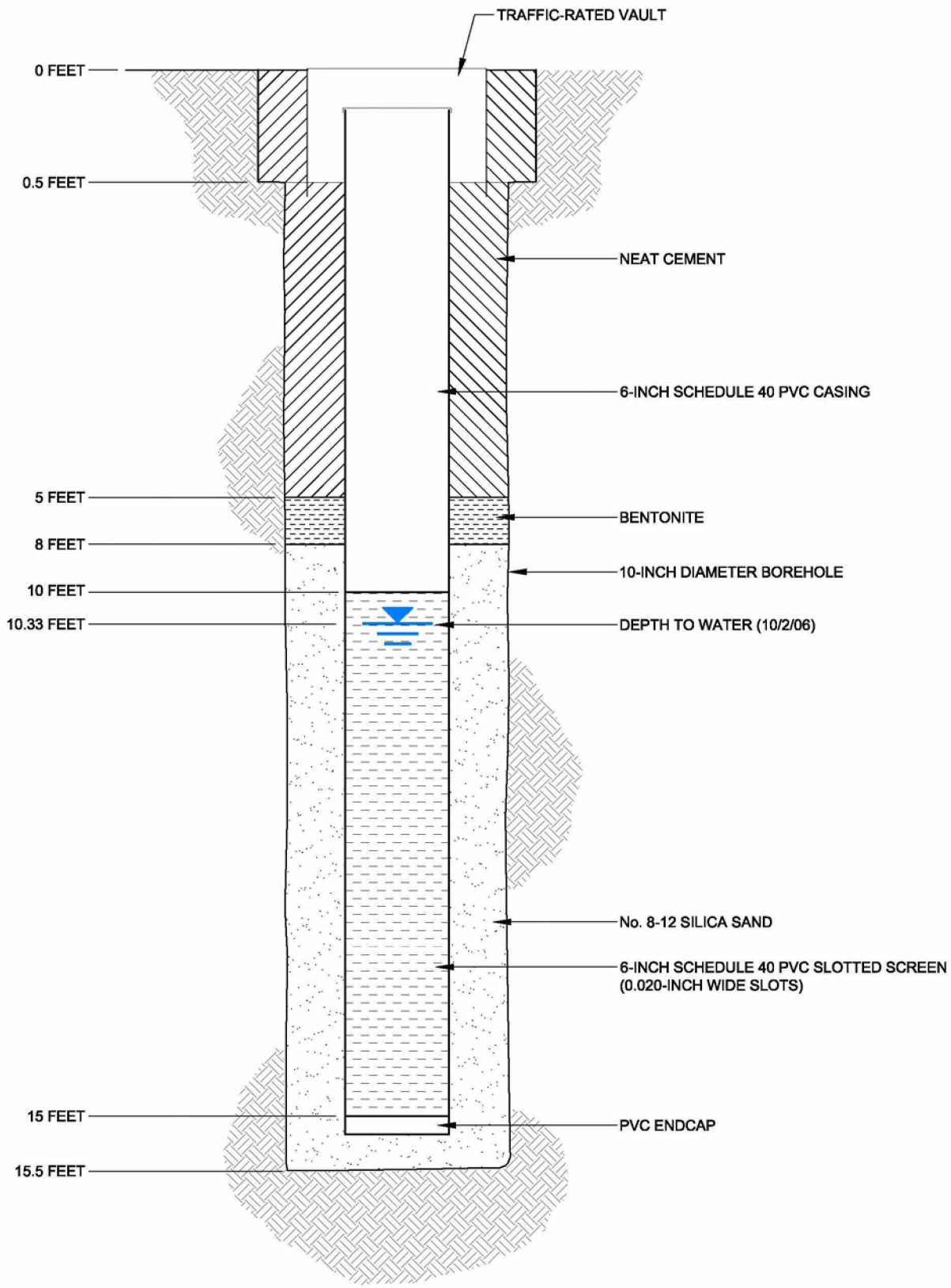
BROWN AND CALDWELL

Figure 18

U3-H7 SHALLOW MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:\APS-PVNGS\134071 - PA Wells Rpts\CAD\134071-002\18-U3-H7.dwg Dec 12, 2007 - 12:59pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905468
CADASTRAL LOCATION B(1-6)34CBB

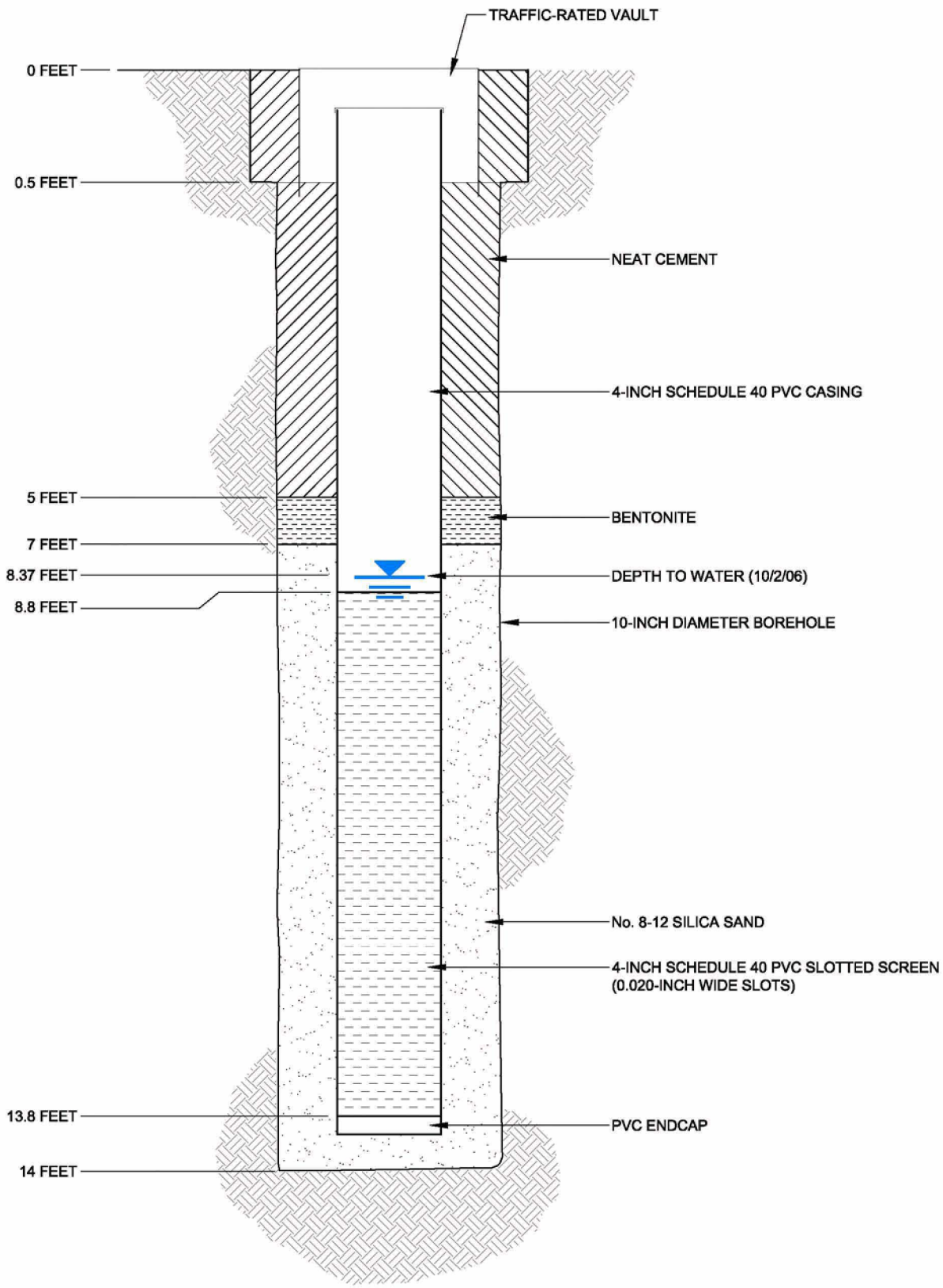
BROWN AND CALDWELL

Figure 19

U3-H11 AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□19-U3-H11.dwg Dec 12, 2007 - 12:47pm jtuscher



NOT TO SCALE

ADWR REGISTRATION No. 55-905469
CADASTRAL LOCATION B(1-6)34CBB

BROWN AND CALDWELL

Figure 20

U3-H12 AIR-KNIFE MONITOR WELL DESIGN

PALO VERDE NUCLEAR GENERATING STATION
WINTERSBURG, ARIZONA

T:□APS-PVNGS□133071_PA_Well_Install□CAD□134071-002□20-U3-H12.dwg Dec 12, 2007 - 12:47pm jtuscher

Table 1. Summary of Well Information

UNIT 1

	U1-H0a	U1-H0b	U1-H7
ADWR Registration No.	55-905185	55-905186	55-905188
Cadastral Location	B(1-6) 34BAC	B(1-6) 34BAC	B(1-6) 34BAC
Screened Interval	8.2 - 13.2	8.1 – 13.1	38.3 – 48.3
Silica Sand	5.5 - 13.5	5.5 – 13.5	37 – 50
Bentonite	3 - 5.5	2.5 – 5.5	34 – 37
Grout	0.5 - 3	0.5 – 2.5	0.5 – 34
Well Materials	6" SCH 40 PVC	6" SCH 40 PVC	4" SCH 40 PVC

Note: all depths in feet below ground surface

UNIT 2

	U2-H0a	U2-H0b	U2-H2	U2-H7	U2-H10
ADWR Registration No.	55-905189	55-905190	55-905191	55-905192	55-905193
Cadastral Location	B(1-6) 34BCA	B(1-6) 34BCA	B(1-6) 34BCA	B(1-6) 34BCA	B(1-6) 34BCA
Screened Interval	6.9 – 11.9	7.7 – 12.7	14.4 – 24.4	38.7 – 48.7	8.8 – 13.8
Silica Sand	4.9 – 12	6 - 13	13 – 25	34 - 49	6.8 – 14
Bentonite	1 – 4.9	4.5 – 6	10 – 13	20 – 34	3.8 – 6.8
Grout	0.5 - 1	0.5 – 4.5	0.5 – 10	0.5 – 20	0.5 – 3.8
Well Materials	6" SCH 40 PVC	4" SCH 40 PVC	4" SCH 40 PVC	4" SCH 40 PVC	6" SCH 40 PVC

Note: all depths in feet below ground surface

UNIT 3

	U3-H0a	U3-H0b	U3-H1b	U3-H2	U3-H5b	U3-H7	U3-H11	U3-H12
ADWR Registration No.	55-905194	55-905195	55-905470	55-905466	55-905467	55-905471	55-905468	55-905469
Cadastral Location	B(1-6) 34CBB	B(1-6) 34CBB	B(1-6) 34CBB	B(1-6) 34CBB	B(1-6) 34CBB	B(1-6) 34CBB	B(1-6) 34CBB	B(1-6) 34CBB
Screened Interval	7.5 – 12.5	7.8 – 12.8	8.3 – 13.3	15.2 – 25.2	10.5 – 15.5	28 - 48	10 – 15	8.8 - 13.8
Silica Sand	5 – 13	5.8 – 13	6.6 - 14	13 – 26	8 – 16	27 – 50	8 – 15.5	7 - 14
Bentonite	1 – 5	2.8 – 5.8	3.6 – 6.6	10 – 13	4 – 8	24 – 27	5 – 8	5 – 7
Grout	0.5 - 1	0.5 – 2.8	0.5 – 3.6	0.5 - 10	0.5 - 4	0.5 - 24	0.5 – 5	0.5 - 5
Well Materials	4" SCH 40 PVC	4" SCH 40 PVC	6" SCH 40 PVC	4" SCH 40 PVC	6" SCH 40 PVC	4" SCH 40 PVC	6" SCH 40 PVC	4" SCH 40 PVC

Note: all depths in feet below ground surface

Table 2. Summary of Transducer Depths

Well	Date	DTW (feet bmp)	Water Above Probe	Probe Depth (feet bmp)	Top of Well Casing Elevation (Elevation of PVC Cap) (feet amsl)	Feet Above Top of Well Casing	Measuring Point	Measuring Point Elevation (feet amsl)	Probe Elevation (feet amsl)
U1-H0a	11/16/2006	12.95	0.46	13.41	956.43	0	Top of casing	956.43	943.02
U1-H0b	11/16/2006	12.61	0.86	13.47	956.24	0	Top of casing	956.24	942.77
U1-H7	11/16/2006	Dry	0	~49.04	956.22	0	Top of riser	956.22	Dry
U2-H0a	11/16/2006	10.81	1.48	12.29	953.48	0	Top of casing	953.48	941.19
U2-H0b	11/16/2006	10.83	2.12	12.95	953.26	0.29	Top of riser	953.55	940.6
U2-H2	11/16/2006	22.17	2.52	24.69	953.01	0.25	Top of riser	953.26	928.57
U2-H7	11/16/2006	Dry	0	~49.02	953.11	0.21	Top of riser	953.32	Dry
U2-H10	11/16/2006	12.69	1.05	13.74	953.35	0.4	Top of riser	953.75	940.01
U3-H0a	11/16/2006	11.33	1.16	12.49	950.47	0	Top of casing	950.47	937.98
U3-H0b	11/16/2006	11.49	1.19	12.68	950.56	0	Top of casing	950.56	937.88
U3-H1b	11/16/2006	9.33	2.17	11.5	951.19	0	Top of casing	951.19	939.69
U3-H2	11/16/2006	17.94	4.93	22.87	950.47	0	Top of casing	950.47	927.6
U3-H5b	11/16/2006	11.47	4.16	15.63	950.22	0.42	Top of riser	950.64	935.01
U3-H7	11/16/2006	Dry	0	~49.11	950.34	0	Top of casing	950.34	Dry
U3-H11	11/16/2006	15.03	3.25	18.28	954.26	0.46	Top of riser	954.72	936.44
U3-H12	11/16/2006	11.41	4.28	15.69	953.45	0.19	Top of riser	953.64	937.95

Notes:
bmp = below measuring point
amsl = above mean sea level

Table 3. Summary of Geotechnical Results

Location	Depth (feet)	Percent Gravel	Percent Sand	Percent Silt and Clay	Moisture Content (percent)	Hydraulic Conductivity (cm/sec)
U1-H7	5	13.1	65.1	21.8	11	6.50E-05
U1-H7	10	5.7	84.5	9.8	4	5.20E-04
U1-H7	15	5.2	71.1	23.7	13	2.10E-06
U1-H7	30	3.4	78	18.6	11	2.10E-07
U1-H7	35	6.5	61.7	31.8	16	3.90E-05
U1-H7	40	7.4	70.5	22.1	11	1.30E-05
U1-H7	45	4.9	69.3	25.8	11	8.00E-05
U1-H7	50	13.8	60.9	25.3	5	7.80E-05
U2-H2	5	12	70.9	17.1	9	3.60E-06
U2-H2	10	26.1	57.4	16.5	9	2.90E-08
U2-H2	15	2.1	82.7	15.2	13	7.00E-05
U2-H2	20	13.1	67.2	19.7	12	1.50E-04
U2-H2	25	39.2	46.7	14.1	10	1.30E-07
U2-H7	5	6.8	77.7	15.5	8	3.40E-08
U2-H7	10	9.2	63.9	26.9	11	5.40E-05
U2-H7	15	17	61.8	21.2	12	2.40E-08
U2-H7	20	28.6	60	11.4	9	1.60E-05
U2-H7	30	3	64	33	11	2.70E-07
U2-H7	40	13.3	61.7	25	12	2.30E-05
U2-H7	45	0.9	65.4	33.7	11	6.00E-07
U2-H7	50	3.2	13.1	83.7	16	2.10E-07
U3-H1b	5	6.2	85.1	8.7	6	1.10E-03
U3-H1b	10	5	83.9	11.1	7	1.90E-03
U3-H1b	13	33.6	51.7	14.7	12	2.00E-06
U3-H7	5	11.7	62.9	25.4	11	5.80E-05
U3-H7	10	12	62	26	10	1.50E-05
U3-H7	15	18.2	57	24.8	19	3.60E-08
U3-H7	20	13.5	60.2	26.3	13	5.70E-08
U3-H7	25	13.7	61.2	25.1	15	3.60E-08
U3-H7	35	12.7	57.5	29.8	11	8.70E-07
U3-H7	40	4.6	59.8	35.6	11	1.90E-04
U3-H7	45	13.1	54	32.9	11	7.40E-05

Notes:
cm/sec - centimeters per second

Table 4a. Summary of Soil Sample Results for Unit 1

Analyte	Units	U1-H7-5	U1-H7-10	U1-H7-15	U1-H7-20	U1-H7-25	U1-H7-30	U1-H7-35	U1-H7-40	U1-H7-45	U1-H7-50
		9/22/06	9/22/06	9/29/06	9/29/06	9/29/06	9/29/06	9/29/06	9/29/06	9/29/06	9/29/06
Arsenic	mg/Kg	5.4	<5.0	9.6	5.9	5.8	5.4	<5.0	<5.0	<5.0	<5.0
Barium	mg/Kg	150	55	140	71	76	72	110	200	180	96
Boron	mg/Kg	12	<5.0	10	11	7.7	9.1	8.3	7.2	8	8.6
Cadmium	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	mg/Kg	23	5.6	35	28	37	33	36	33	34	30
Lead	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	mg/Kg	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
Potassium	mg/Kg	1,500	970	1,800	1,200	940	940	930	770	840	1,200
Selenium	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc	mg/Kg	17	16	20	21	23	18	19	18	21	23
VOCs	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Note:

Volatile organic compounds (VOCs) were not detected above the practical quantitation limit in following samples: U1-H0a-15 and U1-H0b-15

mg/Kg = milligrams per kilogram

ND = Non Detect

Table 4b. Summary of Soil Sample Results for Unit 2

Analyte	Units	U2-H2-5 9/22/06	U2-H2-10 9/22/06	U2-H2-15 9/22/06	U2-H2-20 9/26/06	U2-H2-25 9/26/06
Arsenic	mg/Kg	<5.0	5.8	5.2	5.5	<5.0
Barium	mg/Kg	160	63	78	290	200
Boron	mg/Kg	5.6	8.8	7.2	5.2	7.3
Cadmium	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	mg/Kg	25	39	37	30	25
Lead	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	mg/Kg	<0.083	<0.083	<0.083	<0.083	<0.083
Potassium	mg/Kg	830	880	800	760	1500
Selenium	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc	mg/Kg	20	21	18	25	14
VOCs	mg/Kg	ND	ND	ND	ND	ND

Analyte	Units	U2-H7-5 9/22/06	U2-H7-10 9/22/06	U2-H7-15 9/27/06	U2-H7-20 9/27/06	U2-H7-25 9/27/06	U2-H7-30 9/27/06	U2-H7-35 9/27/06	U2-H7-40 9/27/06	U2-H7-45 9/27/06	U2-H7-50 9/27/06
Arsenic	mg/Kg	<5.0	<5.0	5.4	<5.0	<5.0	5.3	8.5	6	7.2	**14**
Barium	mg/Kg	70	200	140	140	200	71	90	89	49	110
Boron	mg/Kg	<5.0	8.2	11	5.8	8	8.7	16	14	14	14
Cadmium	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	mg/Kg	7	26	27	19	24	30	28	31	34	25
Lead	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	mg/Kg	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
Potassium	mg/Kg	1,400	1,000	1,400	1,100	1,400	1,200	1,800	1,200	1,100	2,900
Selenium	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc	mg/Kg	23	21	19	36	40	19	22	25	18	37
VOCs	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	Chloroform detected	ND

Note:
Volatile organic compounds (VOCs) were not detected above the practical quantitation limit in following samples: U2-H0a-12, U2-H0b-15, U2-H10-14
mg/Kg - milligrams per kilogram

Table 4c. Summary of Soil Sample Results for Unit 3

Analyte	Units	U3-H7-5 9/21/06	U3-H7-10 9/21/06	U3-H7-15 9/18/06	U3-H7-20 9/18/06	U3-H7-25 9/18/06	U3-H7-30 9/18/06	U3-H7-35 9/18/06	U3-H7-40 9/18/06	U3-H7-45 9/18/06
Arsenic	mg/Kg	<5.0	7	<5.0	<5.0	<5.0	<5.0	<5.0	5.3	5.9
Barium	mg/Kg	130	170	210	160	240	170	180	180	120
Boron	mg/Kg	9.7	12	10	7.6	9.3	8.5	12	12	12
Cadmium	mg/Kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	mg/Kg	18	23	31	16	32	13	19	24	30
Lead	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury	mg/Kg	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
Potassium	mg/Kg	1,200	1,800	1,300	1,200	1,400	2,000	1,700	1,600	1,700
Selenium	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	mg/Kg	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc	mg/Kg	22	20	30	16	29	18	51	47	26
VOCs	mg/Kg	ND	ND	ND	ND	ND	ND	ND	ND	ND

Analyte	Units	U3-H1B-5 9/21/06	U3-H1B-10 9/21/06	U3-H1B-13 9/21/06
Arsenic	mg/Kg	<20	<20	<20
Barium	mg/Kg	64.4	63.7	265
Boron	mg/Kg	<5	<5	18
Cadmium	mg/Kg	<2	<2	<2
Chromium	mg/Kg	10	11	66
Lead	mg/Kg	<20	<20	<20
Mercury	mg/Kg	<0.2	<0.2	<0.2
Potassium	mg/Kg	1,100	1,200	2,180
Selenium	mg/Kg	<20	<20	<20
Silver	mg/Kg	<3	<3	<3
Zinc	mg/Kg	22	21	40
VOCs	mg/Kg	ND	ND	ND

Note:

VOCs were not detected above the practical quantitation limit in following samples:
U3-H0a-17 and U3-H0b-15

mg/Kg = milligrams per kilogram

Table 5. Summary of Water Quality Results

WELL ID		U2-H0a	U2-H0b	U2-H0b-Dup	U3-H0a	U3-H0b	U3-H11	U3-H1b	U3-H5b	
SAMPLE DATE		12/20/06	12/20/06	12/20/06	12/13/06	12/13/06	12/13/06	12/13/06	12/13/06	
DEPTH TO WATER	ft bmp	11.12	11.14	11.14	11.60	1/11/00	1/15/00	1/9/00	1/11/00	
ANALYTE	UNIT									AWQS
Summary of Inorganic Analytical Results										
Antimony	ug/L	<2	<2	<2	<2		<2	<2	<2	6
Arsenic	ug/L	**17**	**38**	**22**	**20**		**23**	**21**	**39**	10
Barium	ug/L	76	870	410	230		120	230	69	2,000
Beryllium	ug/L	<5	<5	<5	<5		<5	<5	<5	4
Bicarbonate, as CaCO3	mg/L	190	110	110	92	<5	130	190	140	NE
Boron	ug/L	2,300	300	280	1,200		2,300	1,700	2,500	NE
Cadmium	ug/L	<5	<5	<5	<5		<5	<5	<5	5
Calcium	ug/L	14,000	200,000	100,000	48,000		21,000	55,000	35,000	NE
Carbonate, as CaCO3	mg/L	140	3	4.6	68	960	84	<5	56	NE
Chloride	mg/L	71	58	59	28	120	33	64	45	NE
Chromium	ug/L	40	**160**	77	37		36	48	29	100
Fluoride	mg/L	**8.4**	0.64	0.65	3.6	**11**	**4.4**	3.6	**5.2**	4
Hydroxide, as CaCO3	mg/L	<5	<5	<5	<5	470	<5	<5	<5	NE
Ion Balance Difference	%	3.8	56	34	22		13	14	22	NE
Lead	ug/L	7.4	**75**	34	16		12	14	<1	50
Magnesium	ug/L	4,000	65,000	34,000	11,000		7,700	14,000	6,800	NE
Mercury	ug/L	<0.2	<0.2	<0.2	<0.2		<0.2	<0.2	<0.2	2
Nickel	ug/L	<40	**120**	53	<40		<40	<40	<40	100
Nitrate-Nitrite	mg/L	6.8	2.7	2.8	4.1	4.6	4.4	**14**	9.7	10
Potassium	ug/L	5,600	18,000	10,000	7,300		8,000	9,900	5,500	NE
Selenium	ug/L	11	<5	<5	<5		<5	6.4	8.6	50
Sodium	ug/L	300,000	64,000	63,000	110,000		160,000	180,000	280,000	NE
Sulfate	mg/L	200	56	57	50	350	63	120	170	NE
Thallium	ug/L	<1	<1	<1	<1		<1	<1	<1	2
Total Alkalinity	mg/L	330	120	120	160	1,400	210	190	190	NE
Total Anions	meq/L	13	5.2	5.3	5.3		6.8	9	9.4	NE
Total Cations	meq/L	14	19	11	8.3		8.8	12	15	NE

Table 5. Summary of Water Quality Results

WELL ID		U2-H0a	U2-H0b	U2-H0b-Dup	U3-H0a	U3-H0b	U3-H11	U3-H1b	U3-H5b	
SAMPLE DATE		12/20/06	12/20/06	12/20/06	12/13/06	12/13/06	12/13/06	12/13/06	12/13/06	
DEPTH TO WATER	ft bmp	11.12	11.14	11.14	11.60	1/11/00	1/15/00	1/9/00	1/11/00	
ANALYTE	UNIT									AWQS
Zinc	ug/L	35	570	240	77		300	88	<20	NE
VOCs		See below	ND	ND	See below	ND	ND	ND	See below	Various
Field pH					9.35		9.43	8.34	9.12	NE
Field Conductivity	uS/cm				553		700	970	1,050	NE
Tritium	uCi/ml	1.87E-06	1.23E-06	NA	2.34E-06	NA	1.19E-05	1.89E-06	2.49E-06	2.00E-05
Summary of Detected VOCs										
1,1,1-Trichloroethane	ug/L	14	<1	<1	1.9	<1	<1	<1	<1	200
1,1-Dichloroethane	ug/L	18	<1	<1	1.8	<1	<1	<1	<1	NE
Chloroform	ug/L	1	<1	<1	<1	<1	<1	<1	4.8	100
Tetrachloroethene	ug/L	1.2	<1	<1	**9.4**	<1	<1	<1	3.5	5
Trihalomethanes (total)	ug/L	1	<1	<1	<1	<1	<1	<1	4.8	100
cis-1,2-Dichloroethene	ug/L	<1	<1	<1	2.8	<1	<1	<1	<1	70
Toluene	ug/L	<1	<1	<1	1.4	<1	<1	<1	<1	1,000

ug/L = micrograms per liter
mg/L = milligrams per liter
< = less than the indicated value
uS/cm = microSiemens per centimeter
uCi/ml = microCuries per milliliter
NE = Not established

Table 6. Water Levels and Well Survey Data

Well	Date	Depth to Water (feet bmp)	Groundwater Elevation (feet amsl)	UTM Coordinates		Top of PVC Cap Elevation (feet amsl)
				Northing (meters)	Easting (meters)	
U1-H0a	10/13/2006	12.95	943.48	870391.13	211343.04	956.43
U1-H0b	10/13/2006	12.56	943.68	870384.89	211351.83	956.24
U1-H7	10/4/2006	Dry	Dry	870372.51	211352.79	956.22
U2-H0a	10/3/2006	10.38	943.1	869461.21	210661.36	953.48
U2-H0b	10/19/2006	13.3	939.96	869454.2	210673.73	953.26
U2-H2	10/19/2006	23.35	929.66	869445.4	210687.45	953.01
U2-H7	10/3/2006	Dry	Dry	869439.29	210677.24	953.11
U2-H10	10/3/2006	10.73	942.62	869488.63	210665.3	953.35
U3-H0a	10/19/2006	10.82	939.65	868351.59	210341.95	950.47
U3-H0b	10/2/2006	11.02	939.54	868348.56	210356.23	950.56
U3-H1b	10/2/2006	8.92	942.27	868389.87	210292.15	951.19
U3-H2	10/19/2006	18.55	931.92	868345.33	210371.58	950.47
U3-H5b	10/2/2006	10.39	939.83	868345.03	210334.8	950.22
U3-H7	10/4/2006	Dry	Dry	868332.88	210371.44	950.34
U3-H11	10/2/2006	10.33	943.93	868369.11	210338.97	954.26
U3-H12	10/2/2006	8.37	945.08	868364.9	210297.31	953.45

Notes:
amsl - above mean sea level
bmp - below measuring point

APPENDIX A

ADWR Notices of Intent and Well Driller Reports (Provided On Disc)

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVEI DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	SW ¼	NW ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
ARIZONA PUBLIC SERVICE

MAILING ADDRESS
5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE
TONOPAH, AZ 85354-7529

CONTACT PERSON NAME AND TITLE
HENRY DAY, ENVIRONMENTAL DEPT. LDR

TELEPHONE NUMBER (623) 393-6567
FAX (623) 393-5442

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
SAME AS WELL OWNER

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER
FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME
YELLOW JACKET DRILLING

DWR LICENSE NUMBER
78

ROC LICENSE CATEGORY
A-04

TELEPHONE NUMBER (602) 453-3252
FAX (602) 453-3258

E-MAIL ADDRESS
PAUL@YJDRILLING.COM

Consultant (if applicable)

CONSULTING FIRM
BROWN AND CALDWELL

CONTACT PERSON NAME
STEVE BROOKS

TELEPHONE NUMBER (520) 624-5744
FAX (520) 791-2738

E-MAIL ADDRESS
SBROOKS@BRWNCALD.COM

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE U3-H7
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE (602) 771-4696
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- ☐ Air Rotary
- ☒ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

DATE CONSTRUCTION TO BEGIN
8/21/06

Method of Well Development

CHECK ONE

- ☐ Airlift
- ☒ Bail
- ☐ Surge Block
- ☒ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- ☐ Gravity
- ☐ Pressure Grout
- ☒ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- ☒ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- ☒ Flush Mount in a vault
- ☐ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole / Casing

Borehole: DEPTH FROM SURFACE FROM (feet)	Borehole: DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)	Casing: DEPTH FROM SURFACE FROM (feet)	Casing: DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	50	10	0	40	6		X			X						
			40	50	6		X							X		

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS	EXPECTED DEPTH TO WATER Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
	[signature]	8-15-06
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER IF APPLICABLE (SEE INSTRUCTIONS)	DATE

43 - 47

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVEI DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	SW ¼	NW ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER
BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
ARIZONA PUBLIC SERVICE

MAILING ADDRESS
5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE
TONOPAH, AZ 85354-7529

CONTACT PERSON NAME AND TITLE
HENRY DAY, ENVIRONMENTAL DEPT. LDR

TELEPHONE NUMBER (623) 393-6567
FAX (623) 393-5442

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
SAME AS WELL OWNER

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER
FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME
YELLOW JACKET DRILLING

DWR LICENSE NUMBER
78

ROC LICENSE CATEGORY
A-04

TELEPHONE NUMBER (602) 453-3252
FAX (602) 453-3258

E-MAIL ADDRESS
PAUL@YJDRILLING.COM

Consultant (if applicable)

CONSULTING FIRM
BROWN AND CALDWELL

CONTACT PERSON NAME
STEVE BROOKS

TELEPHONE NUMBER (520) 624-5744
FAX (520) 791-2738

E-MAIL ADDRESS
SBROOKS@BRWNCALD.COM

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE U3-H1b
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE (602) 771-4696
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- [ ] Air Rotary
- [x] Bored or Augered
- [ ] Cable Tool
- [ ] Dual Rotary
- [ ] Mud Rotary
- [ ] Reverse Circulation
- [ ] Driven
- [ ] Jetted
- [ ] Air Percussion / Odex Tubing
- [ ] Other (*please specify*):

DATE CONSTRUCTION TO BEGIN
8/21/06

Method of Well Development

CHECK ONE

- [ ] Airlift
- [x] Bail
- [ ] Surge Block
- [x] Surge Pump
- [ ] Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- [x] None
- [ ] Welded
- [ ] Swedged
- [ ] Packed
- [ ] Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- [ ] Gravity
- [ ] Pressure Grout
- [x] Tremie
- [ ] Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- [x] Flush Mount in a vault
- [ ] Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	15	10

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	10	4		X			X						
10	15	4		X							X		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE
0	6		X									
6	8							X				
8	15									X		8-12

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS

EXPECTED DEPTH TO WATER
Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
	[signature]	8-15-06
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue Ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVEI DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	SW ¼	NW ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
ARIZONA PUBLIC SERVICE

MAILING ADDRESS
5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE
TONOPAH, AZ 85354-7529

CONTACT PERSON NAME AND TITLE
HENRY DAY, ENVIRONMENTAL DEPT. LDR

TELEPHONE NUMBER (623) 393-6567
FAX (623) 393-5442

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
SAME AS WELL OWNER

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER
FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME
YELLOW JACKET DRILLING

DWR LICENSE NUMBER
78

ROC LICENSE CATEGORY
A-04

TELEPHONE NUMBER (602) 453-3252
FAX (602) 453-3258

E-MAIL ADDRESS
PAUL@YJDRILLING.COM

Consultant (if applicable)

CONSULTING FIRM
BROWN AND CALDWELL

CONTACT PERSON NAME
STEVE BROOKS

TELEPHONE NUMBER (520) 624-5744
FAX (520) 791-2738

E-MAIL ADDRESS
SBROOKS@BRWNCALD.COM

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE U3-H12
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE (602) 771-4696
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- ☐ Air Rotary
- ☒ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

DATE CONSTRUCTION TO BEGIN
8/21/06

Method of Well Development

CHECK ONE

- ☐ Airlift
- ☒ Bail
- ☐ Surge Block
- ☒ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- ☐ Gravity
- ☐ Pressure Grout
- ☒ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- ☒ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- ☒ Flush Mount in a vault
- ☐ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole			Casing													
DEPTH FROM SURFACE			DEPTH FROM SURFACE			MATERIAL TYPE (T)				PERFORATION TYPE (T)						
FROM (feet)	TO (feet)	BOREHOLE DIAMETER (inches)	FROM (feet)	TO (feet)	OUTER DIAMETER (inches)	STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	15	12	0	10	6		X			X						
			10	15	6		X							X		0.020

Annular Material

DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)								FILTER PACK		
						BENTONITE						
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
0	6		X									
6	8							X				
8	15									X		8-12

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS	EXPECTED DEPTH TO WATER 11 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
	Henry P. Ward	8-15-06
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVEI DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	SW ¼	NW ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
ARIZONA PUBLIC SERVICE

MAILING ADDRESS
5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE
TONOPAH, AZ 85354-7529

CONTACT PERSON NAME AND TITLE
HENRY DAY, ENVIRONMENTAL DEPT. LDR

TELEPHONE NUMBER (623) 393-6567
FAX (623) 393-5442

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
SAME AS WELL OWNER

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER
FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME
YELLOW JACKET DRILLING

DWR LICENSE NUMBER
78

ROC LICENSE CATEGORY
A-04

TELEPHONE NUMBER (602) 453-3252
FAX (602) 453-3258

E-MAIL ADDRESS
PAUL@YJDRILLING.COM

Consultant (if applicable)

CONSULTING FIRM
BROWN AND CALDWELL

CONTACT PERSON NAME
STEVE BROOKS

TELEPHONE NUMBER (520) 624-5744
FAX (520) 791-2738

E-MAIL ADDRESS
SBROOKS@BRWNCALD.COM

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE U3-H11
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE (602) 771-4696
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- [ ] Air Rotary
- [x] Bored or Augered
- [ ] Cable Tool
- [ ] Dual Rotary
- [ ] Mud Rotary
- [ ] Reverse Circulation
- [ ] Driven
- [ ] Jetted
- [ ] Air Percussion / Odex Tubing
- [ ] Other (*please specify*):

DATE CONSTRUCTION TO BEGIN
8/21/06

Method of Well Development

CHECK ONE

- [ ] Airlift
- [x] Bail
- [ ] Surge Block
- [x] Surge Pump
- [ ] Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- [x] None
- [ ] Welded
- [ ] Swedged
- [ ] Packed
- [ ] Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- [ ] Gravity
- [ ] Pressure Grout
- [x] Tremie
- [ ] Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- [x] Flush Mount in a vault
- [ ] Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	15	12

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	10	6		X			X						
10	15	6		X							X		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE
0	6		X									
6	8							X				
8	15									X		8-12

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS

EXPECTED DEPTH TO WATER
11.5 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
	Henry P. Kay	8-15-06
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVEI DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	SW ¼	NW ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER
BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
ARIZONA PUBLIC SERVICE

MAILING ADDRESS
5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE
TONOPAH, AZ 85354-7529

CONTACT PERSON NAME AND TITLE
HENRY DAY, ENVIRONMENTAL DEPT. LDR

TELEPHONE NUMBER (623) 393-6567
FAX (623) 393-5442

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
SAME AS WELL OWNER

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER
FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME
YELLOW JACKET DRILLING

DWR LICENSE NUMBER
78

ROC LICENSE CATEGORY
A-04

TELEPHONE NUMBER (602) 453-3252
FAX (602) 453-3258

E-MAIL ADDRESS
PAUL@YJDRILLING.COM

Consultant (if applicable)

CONSULTING FIRM
BROWN AND CALDWELL

CONTACT PERSON NAME
STEVE BROOKS

TELEPHONE NUMBER (520) 624-5744
FAX (520) 791-2738

E-MAIL ADDRESS
SBROOKS@BRWNCALD.COM

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE U3-H5b
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE (602) 771-4696
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- [ ] Air Rotary
- [x] Bored or Augered
- [ ] Cable Tool
- [ ] Dual Rotary
- [ ] Mud Rotary
- [ ] Reverse Circulation
- [ ] Driven
- [ ] Jetted
- [ ] Air Percussion / Odex Tubing
- [ ] Other (*please specify*):

DATE CONSTRUCTION TO BEGIN
8/21/06

Method of Well Development

CHECK ONE

- [ ] Airlift
- [x] Bail
- [ ] Surge Block
- [x] Surge Pump
- [ ] Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- [x] None
- [ ] Welded
- [ ] Swedged
- [ ] Packed
- [ ] Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- [ ] Gravity
- [ ] Pressure Grout
- [x] Tremie
- [ ] Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- [x] Flush Mount in a vault
- [ ] Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	15	12

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	10	6		X			X						
10	15	6		X							X		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE
0	6		X									
6	8							X				
8	15									X		8-12

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS:

EXPECTED DEPTH TO WATER: 12.5 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
	[signature]	8-15-06
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

AMA / INA	B	SB
RECEIVEI DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

** PLEASE PRINT CLEARLY **

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	SW ¼	NW ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
MARICOPA

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
ARIZONA PUBLIC SERVICE

MAILING ADDRESS
5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE
TONOPAH, AZ 85354-7529

CONTACT PERSON NAME AND TITLE
HENRY DAY, ENVIRONMENTAL DEPT. LDR

TELEPHONE NUMBER (623) 393-6567
FAX (623) 393-5442

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
SAME AS WELL OWNER

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER
FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME
YELLOW JACKET DRILLING

DWR LICENSE NUMBER
78

ROC LICENSE CATEGORY
A-04

TELEPHONE NUMBER (602) 453-3252
FAX (602) 453-3258

E-MAIL ADDRESS
PAUL@YJDRILLING.COM

Consultant (if applicable)

CONSULTING FIRM
BROWN AND CALDWELL

CONTACT PERSON NAME
STEVE BROOKS

TELEPHONE NUMBER (520) 624-5744
FAX (520) 791-2738

E-MAIL ADDRESS
SBROOKS@BRWNCALD.COM

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	X		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		X	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		X	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)	X		IF YES, PLEASE STATE U3-H2
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	X		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE (602) 771-4696
6. For monitor wells, is dedicated pump equipment to be installed?		X	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		X	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?	X		IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED?

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- ☐ Air Rotary
- ☒ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

DATE CONSTRUCTION TO BEGIN
8/21/06

Method of Well Development

CHECK ONE

- ☐ Airlift
- ☒ Bail
- ☐ Surge Block
- ☒ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- ☐ Gravity
- ☐ Pressure Grout
- ☒ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- ☒ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- ☒ Flush Mount in a vault
- ☐ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	25	12

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	15	6		X			X						
15	25	6		X							X		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE
0	11		X									
11	13							X				
13	25									X		8-12

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS	EXPECTED DEPTH TO WATER: Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
	Henry P. Kay	8-15-06
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

U3-H2

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER 55- 905185

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	NE ¼	SW ¼

LATITUDE			LONGITUDE		
° Degrees	' Minutes	"N Seconds	° Degrees	' Minutes	"W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE) ☐ *GPS: Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE) ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC.

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
HENRY DAY, ENVIRONMENTAL DEPT. LDR.	Henry Day	8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER
55 - 905186

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	NE ¼	SW ¼

LATITUDE ° Degrees	' Minutes	" N Seconds	LONGITUDE ° Degrees	' Minutes	" W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED:

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
HENRY DAY, ENVIRONMENTAL DEPT. LDR.	Henry P. Day	8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER 55- 905187

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	NE ¼	SW ¼

LATITUDE			LONGITUDE		
° Degrees	' Minutes	"N Seconds	° Degrees	' Minutes	"W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER			COUNTY WHERE WELL IS LOCATED
BOOK	MAP	PARCEL	

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
HENRY DAY, ENVIRONMENTAL DEPT. LDR.	Henry P. Day	5-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER 55- 905; 88

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	NE ¼	SW ¼

LATITUDE ° Degrees	' Minutes	"N Seconds	LONGITUDE ° Degrees	' Minutes	"W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL:

MAILING ADDRESS:

CITY / STATE / ZIP CODE:

CONTACT PERSON NAME AND TITLE:

TELEPHONE NUMBER: FAX:

New Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL:

MAILING ADDRESS:

CITY / STATE / ZIP CODE:

CONTACT PERSON NAME AND TITLE:

TELEPHONE NUMBER: FAX:

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

SIGNATURE OF WELL OWNER: Henry P. Day

DATE: 8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER 55 - 905189

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	SW ¼	SE ¼

LATITUDE ° Degrees	' Minutes	" N Seconds	LONGITUDE ° Degrees	' Minutes	" W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED:

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
HENRY DAY, ENVIRONMENTAL DEPT. LDR.	Henry Day	8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER
55- 905190

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	SW ¼	SE ¼

LATITUDE ° Degrees	' Minutes	" N Seconds	LONGITUDE ° Degrees	' Minutes	" W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER			COUNTY WHERE WELL IS LOCATED
BOOK	MAP	PARCEL	

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor		New Well Drilling Contractor	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
GEOMECHANICS SOUTHWEST, INC		YELLOW JACKET DRILLING	
DWR LICENSE NUMBER		DWR LICENSE NUMBER	ROC LICENSE CATEGORY
498		78	A-04
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX
(602) 252-0559	(602) 252-0721	(602) 453-3252	(602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
HENRY DAY, ENVIRONMENTAL DEPT. LDR.	Henry P. Day	8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER
WELL REGISTRATION NUMBER
55 - 905191

SECTION 1. REGISTRY INFORMATION

Well Owner		Location of Well					
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE		WELL LOCATION ADDRESS (IF ANY)					
MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626		TOWNSHIP (N/S): 1N	RANGE (E/W): 6W	SECTION: 34	160 ACRE: NW ¼	40 ACRE: SW ¼	10 ACRE: SE ¼
CITY / STATE / ZIP CODE: TONOPAH, AZ 85254		LATITUDE: ° Degrees, ' Minutes, "N Seconds			LONGITUDE: ° Degrees, ' Minutes, "W Seconds		
CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.		METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade					
TELEPHONE NUMBER: (623) 393-6567	FAX: (623) 393-5442	*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):					
		COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK	MAP	PARCEL	COUNTY WHERE WELL IS LOCATED		

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)* ☐ Change of Well Ownership *(Fill out Section 3)* ☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor		New Well Drilling Contractor	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC.		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING	
DWR LICENSE NUMBER: 498		DWR LICENSE NUMBER: 78	ROC LICENSE CATEGORY: A-04
TELEPHONE NUMBER: (602) 252-0559	FAX: (602) 252-0721	TELEPHONE NUMBER: (602) 453-3252	FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
HENRY DAY, ENVIRONMENTAL DEPT. LDR.	Henry Day	8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER
55 - 905192

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1N	6W	34	NW ¼	SW ¼	SE ¼

LATITUDE			LONGITUDE		
° Degrees	' Minutes	"N Seconds	° Degrees	' Minutes	"W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ *GPS: Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☐ NAD-83 ☐ Other (*please specify*):

COUNTY ASSESSOR'S PARCEL ID NUMBER: BOOK | MAP | PARCEL

COUNTY WHERE WELL IS LOCATED:

Type of Request (CHECK ONE)

☒ Change of Well Drilling Contractor *(Fill out Section 2)*
☐ Change of Well Ownership *(Fill out Section 3)*
☐ Change of Well Information (location, use, etc.) *(Fill out Section 4)*

SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR ($10 Fee Required) — $10 FEE

- If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.

Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

- If this change pertains to more than one well and the names are the same, only one $10 fee is required.

Previous Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL:

MAILING ADDRESS:

CITY / STATE / ZIP CODE:

CONTACT PERSON NAME AND TITLE:

TELEPHONE NUMBER:

FAX:

New Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL:

MAILING ADDRESS:

CITY / STATE / ZIP CODE:

CONTACT PERSON NAME AND TITLE:

TELEPHONE NUMBER:

FAX:

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

NOTE: Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.

EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

SIGNATURE OF WELL OWNER: Henry P. Day

DATE: 8-2-06

Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

** PLEASE PRINT CLEARLY **

FILE NUMBER

WELL REGISTRATION NUMBER
55 - 905193

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Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: ARIZONA PUBLIC SERVICE

MAILING ADDRESS: 5801 S. WINTERSBURG RD., M.S. 7626

CITY / STATE / ZIP CODE: TONOPAH, AZ 85254

CONTACT PERSON NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

TELEPHONE NUMBER: (623) 393-6567

FAX: (623) 393-5442

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Current Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: GEOMECHANICS SOUTHWEST, INC

DWR LICENSE NUMBER: 498

TELEPHONE NUMBER: (602) 252-0559

FAX: (602) 252-0721

New Well Drilling Contractor

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: YELLOW JACKET DRILLING

DWR LICENSE NUMBER: 78

ROC LICENSE CATEGORY: A-04

TELEPHONE NUMBER: (602) 453-3252

FAX: (602) 453-3258

SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP ($10 Fee Required) — $10 FEE

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Previous Well Owner		New Well Owner	
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL		FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	
MAILING ADDRESS		MAILING ADDRESS	
CITY / STATE / ZIP CODE		CITY / STATE / ZIP CODE	
CONTACT PERSON NAME AND TITLE		CONTACT PERSON NAME AND TITLE	
TELEPHONE NUMBER	FAX	TELEPHONE NUMBER	FAX

SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required) — NO FEE

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EXPLAIN

I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE: HENRY DAY, ENVIRONMENTAL DEPT. LDR.

SIGNATURE OF WELL OWNER: [signature]

DATE: 8-2-06