(2004)

ANNUAL MONITORING AND COMPLIANCE REPORT
APP NO. P-100388

ARIZONA PUBLIC SERVICE CO.
PALO VERDE NUCLEAR GENERATING STATION

MAY 13, 2005

PV-062

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

Prepared by: Brown and Caldwell
201 East Washington Street, Suite 500
Phoenix, Arizona 85004

Brown and Caldwell Project #: 128186.001

TABLE OF CONTENTS

1. GROUNDWATER MONITORING

A. Summary Tables/Spreadsheets of Analytical Results
B. Trends in Groundwater Chemistry
C. Indicator Parameter Concentration Contour Maps, and All Exceedances Verified During the One-Year Reporting Period
D. Quarterly Shallow Groundwater Maps and Annual Regional Groundwater Equipotential Maps

2. IMPOUNDMENT MONITORING

A. Piezometer and Sump Monitoring Results
B. Summaries of Analytical Results
C. Summary of Maintenance and Repair Activities
D. Summary of the Results of All Liner Leakage
E. Summary Tables of All Basin, Impoundment, and Reservoir Data Which Allows Data to be Readily Compared to Leakage and Discharge Quality Alert Levels and Previous Data

3. SLUDGE MONITORING

A. Sludge Landfill Monitoring Analytical Results
B. Cooling Tower Sludge Analytical Results
C. Summary of Any Exceedances of Permit Limits for Sludge Quality
D. Description of Any Violations of the ARRA Special License for Sludge Radioisotope Limits.

4. COMPLIANCE STATUS

A. Volume of All Non-Storm Water Releases to the Unlined Ditches or Sedimentation Basins
B. Source and Characterization of Releases to Basins
C. Contingency Plan Actions Taken for Releases
D. Violations of This Permit
E. Identification of Alert Levels, AQLs, Aquifer Water Quality Standards, or Discharge Limitations That Have Been Exceeded During the Reporting Period and a Discussion of the Trend in Concentrations Compared to the Previous Reporting Periods and Actions Taken to Correct the Exceeded Levels.

LIST OF FIGURES

FIGURES

1-1 SHALLOW AQUIFER WELLS, SELECTED 2004 BORON CONCENTRATIONS

1-2 SHALLOW AQUIFER WELLS, SELECTED 2004 CHLORIDE CONCENTRATIONS

1-3 SHALLOW AQUIFER WELLS, SELECTED 2004 FLUORIDE CONCENTRATIONS

1-4 SHALLOW AQUIFER WELLS, SELECTED 2004 POTASSIUM CONCENTRATIONS

1-5 QUARTERLY SHALLOW GROUNDWATER CONTOUR MAP, FEBRUARY 2004

1-6 QUARTERLY SHALLOW GROUNDWATER CONTOUR MAP, MAY 2004

1-7 QUARTERLY SHALLOW GROUNDWATER CONTOUR MAP, AUGUST 2004

1-8 QUARTERLY SHALLOW GROUNDWATER CONTOUR MAP, NOVEMBER 2004

1-9 REGIONAL WELLS, 2004 WATER LEVEL MEASUREMENTS

BASE MAP

BASE MAP WITH 2004 AERIAL PHOTOGRAPH

LIST OF APPENDICES

APPENDIX

A ANNUAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM REPORT

B ELECTRONIC DATA

C OTHER REQUIRED INFORMATION

C1 – VERTICAL TREND ANALYSIS

C2 – ANALYTICAL DATA OUTSIDE QA/QC OR PERMIT DETECTION LIMITS

C3 – SUMMARY OF ALL WELL DATA (2004)

C4 – BASE MAPS

1. GROUNDWATER MONITORING

A. SUMMARY TABLES/SPREADSHEETS OF ANALYTICAL RESULTS

TABLE 1A-1. GROUNDWATER LEVELS AT ON-SITE WELLS

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LEVEL	TYPE OF ANALYSIS
10bda	7/26/04	897.71	195	702.71	Discretionary
27cbc	1/6/04	966.02	208.85	757.17	Subsidence Program Measurement
	4/16/04	966.02	203.91	762.11	Subsidence Program Measurement
	7/23/04	966.02	207.68	758.34	Subsidence Program Measurement
	10/13/04	966.02	205.2	760.82	Subsidence Program Measurement
27ddc	9/1/04	954.3	221.49	732.81	GeoTrans Ambient
34abb	9/1/04	962.32	217.9	744.42	GeoTrans Ambient
APP-1	5/25/04	920.64	Dry		Preliminary
	5/28/04	920.64	Dry		Monthly Contingency WL
	7/15/04	920.64	Dry		Monthly Contingency WL
	8/12/04	920.64	Dry		Monthly Contingency WL
	9/9/04	920.64	Dry		Monthly Contingency WL
	10/19/04	920.64	Dry		Monthly Contingency WL
PV-14H	2/18/04	922.01	56.4	865.61	Quarterly
	5/25/04	922.01	56.42	865.59	Quarterly & Monthly Contingency
	7/30/04	922.01	56.31	865.7	Monthly Contingency Water Level
	8/12/04	922.01	56.55	865.46	Monthly Contingency Water Level
	9/14/04	922.01	56.44	865.57	Quarterly & Monthly Contingency
	10/5/04	922.01	56.43	865.58	Monthly Contingency Water Level Make-up Measurement
	10/29/04	922.01	56.85	865.16	Monthly Contingency Water Level
	11/3/04	922.01	56.35	865.66	Monthly Contingency Water Level
	11/4/04	922.01	56.5	865.51	Quarterly WQ
	12/1/04	922.01	56.56	865.45	Monthly Contingency Water Level
PV-173	3/17/04	952.3	Dry		Discretionary
	4/8/04	952.3	Dry		Discretionary
	5/13/04	952.3	29.67	922.63	Discretionary
PV-174	4/16/04	955.75	59.92	895.83	Discretionary
PV-176	3/17/04	955.4	Dry		Discretionary
	4/8/04	955.4	Dry		Discretionary
PV-177	3/17/04	950.3	Dry		Discretionary
	4/8/04	950.3	Dry		Discretionary
PV-183	3/17/04	951.7	56.36	895.34	Discretionary
	4/8/04	951.7	56.2	895.5	Discretionary
	4/16/04	951.7	56.05	895.65	Discretionary
PV-193A	2/13/04	943.71	79.26	864.45	Quarterly WQ
	5/20/04	943.71	79.08	864.63	Quarterly WQ & Monthly Contingency WL
	7/14/04	943.71	79.09	864.62	Monthly Contingency WL
	8/12/04	943.71	79.05	864.66	Monthly Contingency WL
	9/9/04	943.71	79	864.71	Monthly Contingency WL
	10/19/04	943.71	79.1	864.61	Monthly Contingency WL

TABLE 1A-1. GROUNDWATER LEVELS AT ON-SITE WELLS

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LEVEL	TYPE OF ANALYSIS
PV-193A (cont.)	10/21/04	943.71	78.91	864.8	Quarterly WQ
	11/3/04	943.71	79.21	864.5	Monthly Contingency WL
	12/1/04	943.71	79.37	864.34	Monthly Contingency WL
PV-195A	2/18/04	921.71	47.1	874.61	Quarterly
	5/26/04	921.71	47.17	874.54	Quarterly & Monthly Contingency
	7/14/04	921.71	47.32	874.39	Monthly Contingency WL
	8/12/04	921.71	47.29	874.42	Monthly Contingency WL
	9/14/04	921.71	47.15	874.56	Monthly Contingency WL
	10/29/04	921.71	47.6	874.11	Monthly Contingency WL
	11/3/04	921.71	47.29	874.42	Monthly Contingency WL
	11/4/04	921.71	47.43	874.28	Quarterly WQ
	12/1/04	921.71	48.81	872.9	Monthly Contingency WL
	12/7/04	921.71	47.4	874.31	Fluoride Verification Sampling
PV-195B	12/7/04	922.11	47.28	874.83	Fluoride Verification Sampling
PV-198A	2/13/04	930.21	71.5	858.71	Discretionary
	4/13/04	930.21	Dry		GeoTrans Discretionary
PV-198B	4/13/04	930.41	71.3	859.11	GeoTrans Discretionary
PV-201A	5/27/04	942.51	45	897.51	Monthly Contingency WL
	7/14/04	942.51	45.87	896.64	Monthly Contingency WL
	8/12/04	942.51	46.36	896.15	Monthly Contingency WL
	9/16/04	942.51	47.04	895.47	Monthly Contingency WL
	10/19/04	942.51	47.6	894.91	Monthly Contingency WL
	11/3/04	942.51	47.81	894.7	Monthly Contingency WL
	12/1/04	942.51	46.65	895.86	Monthly Contingency WL
PV-201B	5/27/04	942.51	44.97	897.54	Monthly Contingency WL
	7/14/04	942.51	45.86	896.65	Monthly Contingency WL
	8/12/04	942.51	46.36	896.15	Monthly Contingency WL
	9/16/04	942.51	47	895.51	Monthly Contingency WL
	10/19/04	942.51	47.58	894.93	Monthly Contingency WL
	11/3/04	942.51	47.78	894.73	Monthly Contingency WL
	12/1/04	942.51	46.55	895.96	Monthly Contingency WL
PV-202A	5/27/04	941.93	70.04	871.89	Monthly Contingency WL
	7/14/04	941.93	70.03	871.9	Monthly Contingency WL
	8/12/04	941.93	70.05	871.88	Monthly Contingency WL
	9/16/04	941.93	70.17	871.76	Monthly Contingency WL
	10/19/04	941.93	70.18	871.75	Monthly Contingency WL
	11/3/04	941.93	70	871.93	Monthly Contingency WL
	12/1/04	941.93	70.14	871.79	Monthly Contingency WL
PV-204A	5/27/04	943.88	55.38	888.5	Monthly Contingency WL
	7/14/04	943.88	55.53	888.35	Monthly Contingency WL
	8/12/04	943.88	55.56	888.32	Monthly Contingency WL
	9/16/04	943.88	55.64	888.24	Monthly Contingency WL

TABLE 1A-1. GROUNDWATER LEVELS AT ON-SITE WELLS

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LEVEL	TYPE OF ANALYSIS
PV-204A (cont.)	10/19/04	943.88	55.7	888.18	Monthly Contingency WL
	11/3/04	943.88	55.95	887.93	Monthly Contingency WL
	12/1/04	943.88	56.25	887.63	Monthly Contingency WL
PV-204B	5/27/04	943.62	56.47	887.15	Monthly Contingency WL
	7/14/04	943.62	56.52	887.1	Monthly Contingency WL
	8/12/04	943.62	56.2	887.42	Monthly Contingency WL
	9/16/04	943.62	56.63	886.99	Monthly Contingency WL
	10/19/04	943.62	56.7	886.92	Monthly Contingency WL
	11/3/04	943.62	56.85	886.77	Monthly Contingency WL
	12/1/04	943.62	56.58	887.04	Monthly Contingency WL
PV-206A	2/13/04	947.91	75.48	872.43	Quarterly WQ
	3/30/04	947.91	75.83	872.08	Incorrect Verification Sampling
	4/6/04	947.91	75.91	872	Verification WQ
	5/13/04	947.91	76.21	871.7	Discretionary
	5/14/04	947.91	76.18	871.73	Discretionary
	5/19/04	947.91	76.21	871.7	Quarterly & Contingency Monthly WQ & WL
	6/3/04	947.91	76.32	871.59	Monthly Contingency WL
	7/14/04	947.91	76.5	871.41	Monthly Contingency WL
	7/27/04	947.91	79.4	868.51	Quarterly WQ & Contingency Monthly WL
	8/12/04	947.91	76.5	871.41	Monthly Contingency WL
	9/7/04	947.91	78.8	869.11	Pump Stopped Pumping
	9/8/04	947.91	76.54	871.37	Quarterly & 2nd Level Quarterly Contingency
	9/15/04	947.91	76.72	871.19	Fecal Coliform Sample
	10/20/04	947.91	79.05	868.86	Quarterly WQ & Contingency Monthly WL
	11/5/04	947.91	76.92	870.99	Monthly Contingency WL
	11/10/04	947.91	77	870.91	Contingency - Verification of CAL Exceedances
	11/17/04	947.91	77.1	870.81	Quarterly & 2nd Level Quarterly Contingency
	12/1/04	947.91	77.1	870.81	Monthly Contingency WL
	12/3/04	947.91	77.1	870.81	Discretionary WQ
PV-206B	4/6/04	947.68	77.33	870.35	Verification WQ
	5/13/04	947.68	75.85	871.83	Discretionary
	5/14/04	947.68	75.77	871.91	Discretionary
	5/19/04	947.68	75.9	871.78	Contingency Monthly WQ & WL
	6/3/04	947.68	75.98	871.7	Contingency Monthly WQ & WL
	7/27/04	947.68	76.1	871.58	Contingency Monthly WQ & WL
	9/7/04	947.68	76.23	871.45	Contingency Monthly WQ & WL
	10/20/04	947.68	76.5	871.18	Quarterly & 1st Level Contingency
	11/17/04	947.68	76.65	871.03	Discretionary
PV-207A	3/17/04	967.24	Dry	Dry	Discretionary
	4/8/04	967.24	Dry	Dry	Discretionary

TABLE 1A-1. GROUNDWATER LEVELS AT ON-SITE WELLS

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LEVEL	TYPE OF ANALYSIS
PV-216R	1/6/04	891.01	186.7	704.31	Subsidence Program Measurement
	4/16/04	891.01	186.96	704.05	Subsidence Program Measurement
	7/21/04	891.01	189.6	701.41	Subsidence Program Measurement
	9/2/04	891.01	189.47	701.54	GeoTrans Discretionary
	10/13/04	891.01	189.55	701.46	Subsidence Program Measurement
PV-21H	4/16/04	962.1	72.76	889.34	Discretionary
PV-21HB	4/16/04	961.7	72.28	889.42	Discretionary
PV-25HA	3/17/04	942.1	59.21	882.89	Discretionary
	4/8/04	942.1	59.13	882.97	Discretionary
	4/16/04	942.1	59.03	883.07	Discretionary
PV-33H	2/17/04	916.71	42.36	874.35	Quarterly
	5/21/04	916.71	42.33	874.38	Quarterly & Monthly Contingency
	7/14/04	916.71	42.4	874.31	Monthly Contingency WL
	8/3/04	916.71	42.41	874.3	GeoTrans Discretionary
	8/12/04	916.71	42.49	874.22	Monthly Contingency WL
	9/9/04	916.71	42.47	874.24	Monthly Contingency WL
	10/21/04	916.71	42.5	874.21	Quarterly
	11/3/04	916.71	42.53	874.18	Monthly Contingency WL
	12/1/04	916.71	42.61	874.1	Monthly Contingency WL
PV-34H	2/17/04	911.51	42.42	869.09	Quarterly
	5/21/04	911.51	42.6	868.91	Quarterly & Monthly Contingency
	7/14/04	911.51	41.81	869.7	Monthly Contingency WL
	8/3/04	911.51	42.76	868.75	GeoTrans Discretionary
	8/12/04	911.51	42.82	868.69	Monthly Contingency WL
	9/10/04	911.51	42.8	868.71	Monthly Contingency WL
	10/21/04	911.51	42.87	868.64	Quarterly
	11/3/04	911.51	42.76	868.75	Monthly Contingency WL
	12/1/04	911.51	42.77	868.74	Monthly Contingency WL
PV-R2A	2/19/04	956.31	87.89	868.42	Quarterly
	4/13/04	956.31	87.43	868.88	GeoTrans Discretionary
	4/16/04	956.31	87.53	868.78	Discretionary
	4/22/04	956.31	87.4	868.91	Discretionary
	5/27/04	956.31	87.35	868.96	Quarterly & Monthly Contingency
	7/14/04	956.31	87	869.31	Monthly Contingency WL
	7/28/04	956.31	86.87	869.44	Discretionary
	8/6/04	956.31	86.8	869.51	Discretionary
	8/10/04	956.31	86.92	869.39	Discretionary
	8/11/04	956.31	87.25	869.06	Discretionary
	8/12/04	956.31	88.52	867.79	Monthly Contingency WL
	8/13/04	956.31	88.37	867.94	Discretionary
	8/17/04	956.31	87.25	869.06	Discretionary
	8/18/04	956.31	88	868.31	Discretionary
PV-R2A (cont.)	8/19/04	956.31	89.21	867.1	Discretionary

TABLE 1A-1. GROUNDWATER LEVELS AT ON-SITE WELLS

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LEVEL	TYPE OF ANALYSIS
	8/20/04	956.31	88.77	867.54	Discretionary
	8/24/04	956.31	87.25	869.06	Discretionary
	8/25/04	956.31	89.31	867	Discretionary
	8/26/04	956.31	91.38	864.93	Discretionary Water Quality Sample
	9/14/04	956.31	86.7	869.61	Quarterly & Monthly Contingency
	10/20/04	956.31	86.16	870.15	Monthly Contingency WL
	11/4/04	956.31	86.25	870.06	Quarterly & Monthly Contingency
	12/1/04	956.31	86.55	869.76	Monthly Contingency WL
PV-R2B	4/13/04	956.51	87.75	868.76	GeoTrans Discretionary
	4/16/04	956.51	87.9	868.61	Discretionary
	4/22/04	956.51	87.75	868.76	Discretionary
	7/28/04	956.51	87.15	869.36	Discretionary
	8/6/04	956.51	86.98	869.53	Discretionary
	8/10/04	956.51	87.11	869.4	Discretionary
	8/11/04	956.51	91.27	865.24	Discretionary
	8/12/04	956.51	90.43	866.08	Discretionary
	8/13/04	956.51	90.14	866.37	Discretionary
	8/17/04	956.51	87.69	868.82	Discretionary
	8/18/04	956.51	92.49	864.02	Discretionary
	8/19/04	956.51	93.3	863.21	Discretionary
	8/20/04	956.51	92.16	864.35	Discretionary
	8/24/04	956.51	88	868.51	Discretionary
	8/25/04	956.51	93.47	863.04	Discretionary
	8/26/04	956.51	91.85	864.66	Discretionary Water Quality Sample
PV-TR1	4/16/04	962.6	67.14	895.46	Discretionary
U5-PTWA	5/27/04	930.75	40.94	889.81	Monthly Contingency WL
	7/14/04	930.75	41.15	889.6	Monthly Contingency WL
	8/12/04	930.75	41.12	889.63	Monthly Contingency WL
	9/16/04	930.75	41.24	889.51	Monthly Contingency WL
	10/20/04	930.75	41.28	889.47	Monthly Contingency WL
	11/3/04	930.75	41.5	889.25	Monthly Contingency WL
	12/1/04	930.75	41.55	889.2	Monthly Contingency WL
U5-PTWB	5/27/04	930.81	40.76	890.05	Monthly Contingency WL
	7/14/04	930.81	41	889.81	Monthly Contingency WL
	8/12/04	930.81	41	889.81	Monthly Contingency WL
	9/16/04	930.81	41.11	889.7	Monthly Contingency WL
	10/20/04	930.81	41	889.81	Monthly Contingency WL
	11/3/04	930.81	41.05	889.76	Monthly Contingency WL
	12/1/04	930.81	41.2	889.61	Monthly Contingency WL

TABLE 1A-2. 2004 WATER QUALITY DATA FOR WELL PV-14H

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
2/18/2004	Boron	mg/L	6.2	8.1	Quarterly	NE
	Cesium-137	pCi/L	<12.90	50	Quarterly	110
	Chloride	mg/L	2000	2,065	Quarterly	NE
	Cobalt-60	pCi/L	<9.84	100	Quarterly	200
	Field Cond	umhos/cm	10,390	NE	Quarterly	NE
	Field pH	SU	7.92	NE	Quarterly	NE
	Field Temp	°C	24.8	NE	Quarterly	NE
	Fluoride	mg/L	8.1	11.7	Quarterly	4
	Potassium	mg/L	2.1	2.5	Quarterly	NE
	Tritium	pCi/L	<270 (+161)	1,000	Quarterly	20,000
5/25/2004	Boron	mg/L	6.1	8.1	Quarterly	NE
	Cesium-137	pCi/L	<50	50	Quarterly	110
	Chloride	mg/L	2,000	2,065	Quarterly	NE
	Cobalt-60	pCi/L	<100	100	Quarterly	200
	Field Cond	umhos/cm	10,440	NE	Quarterly	NE
	Field pH	SU	7.74	NE	Quarterly	NE
	Field Temp	°C	26.5	NE	Quarterly	NE
	Fluoride	mg/L	7.8	11.7	Quarterly	4
	Potassium	mg/L	1.3	2.5	Quarterly	NE
	Tritium	pCi/L	<1,000	1,000	Quarterly	20,000
9/14/2004	Boron	mg/L	6.7	8.1	Quarterly	NE
	Cesium-137	pCi/L	<50	50	Quarterly	110
	Chloride	mg/L	2,000	2,065	Quarterly	NE
	Cobalt-60	pCi/L	<100	100	Quarterly	200
	Field Cond	umhos/cm	10,110	NE	Quarterly	NE
	Field pH	SU	7.31	NE	Quarterly	NE
	Field Temp	°C	26.2	NE	Quarterly	NE
	Fluoride	mg/L	8.7	11.7	Quarterly	4
	Potassium	mg/L	1.8	2.5	Quarterly	NE
	Tritium	pCi/L	≤ 1,000	1,000	Quarterly	20,000
11/4/2004	Boron	mg/L	6.6	8.1	Quarterly	NE
	Cesium-137	pCi/L	<50	50	Quarterly	110
	Chloride	mg/L	2,000	2,065	Quarterly	NE
	Cobalt-60	pCi/L	<100	100	Quarterly	200
	Field Cond	umhos/cm	10,190	NE	Quarterly	NE
	Field pH	SU	7.54	NE	Quarterly	NE
	Field Temp	°C	24.6	NE	Quarterly	NE
	Fluoride	mg/L	7.7	11.7	Quarterly	4
	Potassium	mg/L	1.8	2.5	Quarterly	NE
	Tritium	pCi/L	≤ 1,000	1,000	Quarterly	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-3. 2004 WATER QUALITY DATA FOR WELL PV-193A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
2/13/2004	Boron	mg/L	5.8	6.8	Quarterly	NE
	Cesium-137	pCi/L	≤12.41	50	Quarterly	110
	Chloride	mg/L	5,800	6,720	Quarterly	NE
	Cobalt-60	pCi/L	≤12.08	100	Quarterly	200
	Field Cond	umhos/cm	20,970	NE	Quarterly	NE
	Field pH	SU	7.41	NE	Quarterly	NE
	Field Temp	°C	26.7	NE	Quarterly	NE
	Fluoride	mg/L	2.7	3.6	Quarterly	4
	Potassium	mg/L	6.3	6.6	Quarterly	NE
	Tritium	pCi/L	≤266 (+159)	1,000	Quarterly	20,000
5/20/2004	Boron	mg/L	5.8	6.8	Quarterly	NE
	Cesium-137	pCi/L	≤13.48	50	Quarterly	110
	Chloride	mg/L	5,800	6,720	Quarterly	NE
	Cobalt-60	pCi/L	≤13.88	100	Quarterly	200
	Field Cond	umhos/cm	20,820	NE	Quarterly	NE
	Field pH	SU	7.48	NE	Quarterly	NE
	Field Temp	°C	28.1	NE	Quarterly	NE
	Fluoride	mg/L	2.5	3.6	Quarterly	4
	Potassium	mg/L	4.1	6.6	Quarterly	NE
	Tritium	pCi/L	≤269 (+159)	1,000	Quarterly	20,000
9/9/2004	Boron	mg/L	6.6	6.8	Quarterly	NE
	Cesium-137	pCi/L	≤ 50	50	Quarterly	110
	Chloride	mg/L	5,400	6,720	Quarterly	NE
	Cobalt-60	pCi/L	≤ 100	100	Quarterly	200
	Field Cond	umhos/cm	16,180	NE	Quarterly	NE
	Field pH	SU	7.33	NE	Quarterly	NE
	Field Temp	°C	33.2	NE	Quarterly	NE
	Fluoride	mg/L	2.6	3.6	Quarterly	4
	Potassium	mg/L	3.2	6.6	Quarterly	NE
	Tritium	pCi/L	≤ 1,000	1,000	Quarterly	20,000
10/21/2004	Boron	mg/L	5.9	6.8	Quarterly	NE
	Cesium-137	pCi/L	≤ 50	50	Quarterly	110
	Chloride	mg/L	5,800	6,720	Quarterly	NE
	Cobalt-60	pCi/L	≤ 100	100	Quarterly	200
	Field Cond	umhos/cm	20,810	NE	Quarterly	NE
	Field pH	SU	6.85	NE	Quarterly	NE
	Field Temp	°C	22.6	NE	Quarterly	NE
	Fluoride	mg/L	2.5	3.6	Quarterly	4
	Potassium	mg/L	5.1	6.6	Quarterly	NE
	Tritium	pCi/L	≤ 1,000	1,000	Quarterly	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-4. 2004 WATER QUALITY DATA FOR WELL PV-195A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
2/18/2004	Boron	mg/L	23	25.5	Quarterly	NE
	Cesium-137	pCi/L	≤12.02	50	Quarterly	110
	Chloride	mg/L	8,600	11,559	Quarterly	NE
	Cobalt-60	pCi/L	≤11.47	100	Quarterly	200
	Field Cond	umhos/cm	36,040	NE	Quarterly	NE
	Field pH	SU	7.29	NE	Quarterly	NE
	Field Temp	°C	26.1	NE	Quarterly	NE
	Fluoride	mg/L	4.1	4.8	Quarterly	4
	Potassium	mg/L	7	13.8	Quarterly	NE
	Tritium	pCi/L	≤270 (+159)	1,000	Quarterly	20,000
5/26/2004	Boron	mg/L	23	25.5	Quarterly	NE
	Cesium-137	pCi/L	≤50	50	Quarterly	110
	Chloride	mg/L	8,300	11,559	Quarterly	NE
	Cobalt-60	pCi/L	≤100	100	Quarterly	200
	Field Cond	umhos/cm	35,950	NE	Quarterly	NE
	Field pH	SU	7.05	NE	Quarterly	NE
	Field Temp	°C	26.7	NE	Quarterly	NE
	Fluoride	mg/L	3.9	4.8	Quarterly	4
	Potassium	mg/L	4.1	13.8	Quarterly	NE
	Tritium	pCi/L	≤1,000	1,000	Quarterly	20,000
9/14/2004	Boron	mg/L	24	25.5	Quarterly	NE
	Cesium-137	pCi/L	≤50	50	Quarterly	110
	Chloride	mg/L	8,200	11,559	Quarterly	NE
	Cobalt-60	pCi/L	≤100	100	Quarterly	200
	Field Cond	umhos/cm	34,200	NE	Quarterly	NE
	Field pH	SU	6.62	NE	Quarterly	NE
	Field Temp	°C	27.2	NE	Quarterly	NE
	Fluoride	mg/L	4.8	4.8	Quarterly	4
	Potassium	mg/L	4	13.8	Quarterly	NE
	Tritium	pCi/L	≤1,000	1,000	Quarterly	20,000
11/4/2004	Boron	mg/L	23	25.5	Quarterly	NE
	Cesium-137	pCi/L	≤50	50	Quarterly	110
	Chloride	mg/L	9,200	11,559	Quarterly	NE
	Cobalt-60	pCi/L	≤100	100	Quarterly	200
	Field Cond	umhos/cm	34,500	NE	Quarterly	NE
	Field pH	SU	6.86	NE	Quarterly	NE
	Field Temp	°C	25.8	NE	Quarterly	NE
	Fluoride	mg/L	8.9	4.8	Quarterly	4
	Potassium	mg/L	4.5	13.8	Quarterly	NE
	Tritium	pCi/L	≤1,000	1,000	Quarterly	20,000
12/7/2004	Boron	mg/L	24	25.5	Fluoride Verification	NE
	Cesium-137	pCi/L	≤50	50	Fluoride Verification	110
	Chloride	mg/L	9,400	11,559	Fluoride Verification	NE
	Cobalt-60	pCi/L	≤100	100	Fluoride Verification	200
	Field Cond	umhos/cm	34,850	NE	Fluoride Verification	NE
	Field pH	SU	6.87	NE	Fluoride Verification	NE

TABLE 1A-4. 2004 WATER QUALITY DATA FOR WELL PV-195A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
12/7/2004 (cont.)	Field Temp	°C	24.7	NE	Fluoride Verification	NE
	Fluoride	mg/L	3.9	4.8	Fluoride Verification	4
	Potassium	mg/L	3.9	13.8	Fluoride Verification	NE
	Tritium	pCi/L	≤1,000	1,000	Fluoride Verification	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-5. 2004 WATER QUALITY DATA FOR WELL PV-195B

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
12/7/2004	Boron	mg/L	15	Resd	Fluoride Verification	NE
	Cesium-137	pCi/L	≤50	50	Fluoride Verification	110
	Chloride	mg/L	15,000	Resd	Fluoride Verification	NE
	Cobalt-60	pCi/L	≤100	100	Fluoride Verification	200
	Field Cond	umhos/cm	42,420	NE	Fluoride Verification	NE
	Field pH	SU	6.69	NE	Fluoride Verification	NE
	Field Temp	°C	18.4	NE	Fluoride Verification	NE
	Fluoride	mg/L	2	Resd	Fluoride Verification	4
	Iodine-131	pCi/L	≤100	100	Fluoride Verification	100
	Potassium	mg/L	12	Resd	Fluoride Verification	NE
	Tritium	pCi/L	≤3,000	3000	Fluoride Verification	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
Resd = Reserved
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-6. 2004 WATER QUALITY DATA FOR WELL PV-206A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	CAL	SAMPLE TYPE	AWQS
2/13/2004	Boron (dissolved)	mg/L	17	27.5		Quarterly	NE
	Cesium-137	pCi/L	≤13.28	50		Quarterly	110
	Chloride	mg/L	6300	6500		Quarterly	NE
	Cobalt-60	pCi/L	≤14.70	100		Quarterly	200
	Field Conductivity	umhos/cm	23050	NE		Quarterly	NE
	Field pH	SU	7.34	NE		Quarterly	NE
	Field Temp	°C	26	NE		Quarterly	NE
	Fluoride	mg/L	5.4	10.4		Quarterly	4
	Potassium (dissolved)	mg/L	14	9.7		Quarterly	NE
	Potassium (dissolved)	mg/L	10	9.7		Re-Analysis	NE
	Tritium	pCi/L	≤268 (+160)	1000		Quarterly	20,000
4/6/2004	Boron (dissolved)	mg/L	10	27.5		Verification	NE
	Cesium-137	pCi/L	≤11.20	50		Verification	110
	Chloride	mg/L	6100	6500		Verification	NE
	Cobalt-60	pCi/L	≤11.45	100		Verification	200
	Field Conductivity	umhos/cm	22340	NE		Verification	NE
	Field pH	SU	7.45	NE		Verification	NE
	Field Temp	°C	28.1	NE		Verification	NE
	Fluoride	mg/L	5.6	10.4		Verification	4
	Potassium (dissolved)	mg/L	19	9.7		Verification	NE
	Tritium	pCi/L	≤270 (±161)	1000		Verification	20,000
5/19/2004	Arsenic(dissolved)	mg/L	<0.0040		0.05	Quarterly & Contingency	0.05
	Barium (dissolved)	mg/L	0.023		2	Quarterly & Contingency	2
	Boron (dissolved)	mg/L	17	27.5	28	Quarterly & Contingency	NE
	Cadmium (dissolved)	mg/L	<0.0030		0.039	Quarterly & Contingency	0.005
	Calcium (dissolved)	mg/L	550		NE	Quarterly & Contingency	NE
	Cation Anion Balance		2		NE	Quarterly & Contingency	NE
	Cesium-137	pCi/L	≤8.63	50	110	Quarterly & Contingency	110
	Chloride	mg/L	6100	6500	7006	Quarterly & Contingency	NE
	Chromium (dissolved)	mg/L	0.012		0.1	Quarterly & Contingency	0.1
	Cobalt-60	pCi/L	≤8.81	100	200	Quarterly & Contingency	200
	Field Conductivity	umhos/cm	23340		NE	Quarterly & Contingency	NE
	Field pH	SU	7.17		NE	Quarterly & Contingency	NE
	Field Temp	°C	28.7		NE	Quarterly & Contingency	NE
	Fluoride	mg/L	4.4	10.4	12	Quarterly & Contingency	4
	Lead (dissolved)	mg/L	<0.0060		0.05	Quarterly & Contingency	0.05
	Magnesium (dissolved)	mg/L	240		NE	Quarterly & Contingency	NE
	Mercury (dissolved)	mg/L	<0.0002		0.002	Quarterly & Contingency	0.002
	Nitrate/Nitrite (as N)	mg/L	22		30	Quarterly & Contingency	10
	pH	SU	7.8		<6>9	Quarterly & Contingency	NE
	Potassium (dissolved)	mg/L	20	9.7	13	Quarterly & Contingency	NE
	Selenium (dissolved)	mg/L	0.024		0.05	Quarterly & Contingency	0.05
	Sodium (dissolved)	mg/L	5600		NE	Quarterly & Contingency	NE
	Specific Conduct.	umhos/cm	26000		NE	Quarterly & Contingency	NE
	Sulfate	mg/L	4800		6800	Quarterly & Contingency	NE
	TDS	mg/L	18000		21000	Quarterly & Contingency	NE
	Total Alkalinity(as CaCO3)	mg/L	320		NE	Quarterly & Contingency	NE
	Tritium	pCi/L	≤266 (±158)	1000	3000	Quarterly & Contingency	20,000
6/3/2004	Arsenic(dissolved)	mg/L	0.013		0.05	Monthly Contingency	0.05
	Barium (dissolved)	mg/L	0.024		2	Monthly Contingency	2
	Boron (dissolved)	mg/L	15		28	Monthly Contingency	NE
	Cadmium (dissolved)	mg/L	<0.0030		0.039	Monthly Contingency	0.005
	Calcium (dissolved)	mg/L	600		NE	Monthly Contingency	NE
	Cation Anion Balance		7.07		NE	Monthly Contingency	NE
	Cesium-137	pCi/L	≤50		110	Monthly Contingency	110
	Chloride	mg/L	5700		7006	Monthly Contingency	NE
	Chromium (dissolved)	mg/L	0.014		0.1	Monthly Contingency	0.1
	Cobalt-60	pCi/L	≤100		200	Monthly Contingency	200
	Field Conductivity	umhos/cm	23250			Monthly Contingency	NE
	Field pH	SU	7.21			Monthly Contingency	NE

TABLE 1A-6. 2004 WATER QUALITY DATA FOR WELL PV-206A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	CAL	SAMPLE TYPE	AWQS
6/3/2004 (cont.)	Field Temp	°C	29.6		NE	Monthly Contingency	NE
	Fluoride	mg/L	5.2		12	Monthly Contingency	4
	Lead (dissolved)	mg/L	<0.010		0.05	Monthly Contingency	0.05
	Magnesium (dissolved)	mg/L	260		NE	Monthly Contingency	NE
	Mercury (dissolved)	mg/L	<0.0002		0.002	Monthly Contingency	0.002
	Nitrate/Nitrite (as N)	mg/L	19		30	Monthly Contingency	10
	pH	SU	7.5		<6>9	Monthly Contingency	NE
	Potassium (dissolved)	mg/L	17		13	Monthly Contingency	NE
	Selenium (dissolved)	mg/L	0.028		0.05	Monthly Contingency	0.05
	Sodium (dissolved)	mg/L	6000		NE	Monthly Contingency	NE
	Specific Conductivity	umhos/cm	24000		NE	Monthly Contingency	NE
	Sulfate	mg/L	4900		6800	Monthly Contingency	NE
	TDS	mg/L	18000		21000	Monthly Contingency	NE
	Total Alkalinity(as CaCO3)	mg/L	350		NE	Monthly Contingency	NE
	Tritium	pCi/L	≤1000		3000	Monthly Contingency	20000
7/27/2004	Boron (dissolved)	mg/L	14	27.5	28	Quarterly & Contingency	NE
	Cesium-137	pCi/L	≤50	50	75	Quarterly & Contingency	110
	Chloride	mg/L	6700	6500	7006	Quarterly & Contingency	NE
	Cobalt-60	pCi/L	≤100	100	200	Quarterly & Contingency	200
	Field Conductivity	umhos/cm	25400	NE	NE	Quarterly & Contingency	NE
	Field pH	SU	7.01	NE	<6, >9	Quarterly & Contingency	NE
	Field Temp	°C	30.2	NE	NE	Quarterly & Contingency	NE
	Fluoride	mg/L	4.3	10.4	12	Quarterly & Contingency	4
	Potassium (dissolved)	mg/L	8.3	9.7	13	Quarterly & Contingency	NE
	Tritium	pCi/L	≤1000	1000	3000	Quarterly & Contingency	20,000
9/7/2004	Cesium-134	pCi/L	≤75		75	Qtr WQ & Contingency	75
	Cesium-137	pCi/L	≤110	50	110	Qtr WQ & Contingency	110
	Cobalt-60	pCi/L	≤ 200	100	200	Qtr WQ & Contingency	200
	Iodine-131	pCi/L	≤100		100	Qtr WQ & Contingency	100
	Tritium	pCi/L	≤1000	1000	3000	Qtr WQ & Contingency	20000
9/8/2004	1,1 Dichloroethylene	mg/L	<0.005		0.007	Qtr WQ & Contingency	0.007
	1,1,1 Trichloroethane	mg/L	<0.002		0.2	Qtr WQ & Contingency	0.2
	1,1,2 Trichloroethane	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	1,2 Dichloroethane	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	1,2 Dichloropropane	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	1,2,4-Trichlorobenzene	mg/L	<0.01		0.07	Qtr WQ & Contingency	0.07
	2,3,7,8-TCDD (Dioxin)	pg/L	<1.0E-11		3.00E-08	Qtr WQ & Contingency	0.00000003
	Antimony (dissolved)	mg/L	<0.050		0.006	Qtr WQ & Contingency	0.006
	Arsenic (dissolved)	mg/L	<0.050		0.05	Qtr WQ & Contingency	0.05
	Barium (dissolved)	mg/L	0.031		2	Qtr WQ & Contingency	2
	Benzene	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	Benzo (a) pyrene	mg/L	<0.01		0.0002	Qtr WQ & Contingency	0.0002
	Beryllium (dissolved)	mg/L	<0.0040		0.004	Qtr WQ & Contingency	0.004
	Boron (dissolved)	mg/L	19	27.5	28	Qtr WQ & Contingency	NE
	Cadmium (dissolved)	mg/L	<0.0050		0.039	Qtr WQ & Contingency	0.005
	Calcium (dissolved)	mg/L	650		NE	Qtr WQ & Contingency	NE
	Carbon tetrachloride	mg/L	<0.0025		0.005	Qtr WQ & Contingency	0.005
	Chloride	mg/L	7000	6500	7006	Qtr WQ & Contingency	NE
	Chromium (dissolved)	mg/L	0.02		0.1	Qtr WQ & Contingency	0.1
	cis-1,2-Dichloroethylene	mg/L	<0.0005		0.07	Qtr WQ & Contingency	0.07
	Di (2-ethylhexyl) adipate	mg/L	0.0006		0.4	Qtr WQ & Contingency	0.4
	Di (2-ethylhexyl) phthalate	mg/L	<0.01		0.006	Qtr WQ & Contingency	0.006
	Dichloromethane	mg/L	<0.005		0.005	Qtr WQ & Contingency	0.005
	Ethylbenzene	mg/L	<0.002		0.7	Qtr WQ & Contingency	0.7
	Field Conductivity	umhos/cm	23560		NE	Qtr WQ & Contingency	NE
	Field pH	SU	6.97		<6, >9	Qtr WQ & Contingency	NE
	Field Temp	°C	32.7		NE	Qtr WQ & Contingency	NE
	Fluoride	mg/L	4.8	10.4	12	Qtr WQ & Contingency	4
	Hexachlorobenzene	mg/L	<0.01		0.001	Qtr WQ & Contingency	0.001
	Hexachlorocyclopentadiene	mg/L	<0.01		0.05	Qtr WQ & Contingency	0.05
	Lead (dissolved)	mg/L	<0.0020		0.05	Qtr WQ & Contingency	0.05
	Magnesium (dissolved)	mg/L	270			Qtr WQ & Contingency	NE

TABLE 1A-6. 2004 WATER QUALITY DATA FOR WELL PV-206A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	CAL	SAMPLE TYPE	AWQS
9/8/2004 (cont.)	Mercury (dissolved)	mg/L	<0.00020		0.002	Qtr WQ & Contingency	0.002
	Monochlorobenzene	mg/L	<0.002		0.1	Qtr WQ & Contingency	0.1
	Nickel (dissolved)	mg/L	0.1		0.1	Qtr WQ & Contingency	0.1
	Nitrate/Nitrite (as N)	mg/L	21		30	Qtr WQ & Contingency	10
	o-Dichlorobenzene	mg/L	<0.002		0.6	Qtr WQ & Contingency	0.6
	para-Dichlorobenzene	mg/L	<0.002		0.075	Qtr WQ & Contingency	0.075
	Pentachlorophenol	mg/L	<0.01		0.001	Qtr WQ & Contingency	0.001
	pH	SU	7.34		<6>9	Qtr WQ & Contingency	NE
	Potassium (dissolved)	mg/L	16	9.7	13	Qtr WQ & Contingency	NE
	Selenium (dissolved)	mg/L	0.056		0.05	Qtr WQ & Contingency	0.05
	Sodium (dissolved)	mg/L	6000			Qtr WQ & Contingency	NE
	Specific Conductance	umhos/cm	25000			Qtr WQ & Contingency	NE
	Styrene	mg/L	<0.0005		0.1	Qtr WQ & Contingency	0.1
	Sulfate	mg/L	4600		6800	Qtr WQ & Contingency	NE
	TDS	mg/L	18000		21000	Qtr WQ & Contingency	NE
	Tetrachloroethylene	mg/L	<0.0028		0.005	Qtr WQ & Contingency	0.005
	Thallium (dissolved)	mg/L	<0.0020		0.002	Qtr WQ & Contingency	0.002
	Toluene	mg/L	<0.002		1	Qtr WQ & Contingency	1
	Total Alkalinity (as CaCO3)	mg/L	260			Qtr WQ & Contingency	NE
	Total Petroleum Hydrocarbons	mg/L	<1			Qtr WQ & Contingency	NE
	trans-1,2-Dichloroethylene	mg/L	<0.002		0.1	Qtr WQ & Contingency	0.1
	Trichloroethylene	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	Trihalomethanes (Total)	mg/L	<0.008		0.1	Qtr WQ & Contingency	0.1
	Vinyl Chloride	mg/L	<0.002		0.002	Qtr WQ & Contingency	0.002
	Xylenes (Total)	mg/L	<0.01		10	Qtr WQ & Contingency	10
9/15/2004	Coliform	Present	1			Fecal Coliform Sample	
	E. coli	Present	0		Presence	Fecal Coliform Sample	
	Field Conductivity	umhos/cm	24790	NE		Fecal Coliform Sample	NE
	Field pH	SU	6.68	NE		Fecal Coliform Sample	NE
	Field Temp	°C	28	NE		Fecal Coliform Sample	NE
10/20/2004	Boron (dissolved)	mg/L	13	27.5		Qtr WQ & Monthly WL	NE
	Cesium-137	pCi/L	≤50	50		Qtr WQ & Monthly WL	110
	Chloride	mg/L	6800	6500		Qtr WQ & Monthly WL	NE
	Cobalt-60	pCi/L	≤100	100		Qtr WQ & Monthly WL	200
	Field Conductivity	umhos/cm	26800	NE		Qtr WQ & Monthly WL	NE
	Field pH	SU	6.64	NE		Qtr WQ & Monthly WL	NE
	Field Temp	°C	27.9	NE		Qtr WQ & Monthly WL	NE
	Fluoride	mg/L	4.2	10.4		Qtr WQ & Monthly WL	4
	Potassium (dissolved)	mg/L	15	9.7		Qtr WQ & Monthly WL	NE
	Tritium	pCi/L	≤1000	1000		Qtr WQ & Monthly WL	20,000
11/10/2004	Field Conductivity	umhos/cm	25,620	NE	NE	Verification	NE
	Field pH	SU	6.89	NE	NE	Verification	NE
	Field Temp	°C	30.4	NE	NE	Verification	NE
	Potassium (dissolved)	mg/L	11	9.7	13	Verification	NE
	Selenium (dissolved)	mg/L	0.054	NE	0.05	Verification	0.05
11/17/2004	1,1 Dichloroethylene	mg/L	0.005		0.007	Qtr WQ & Contingency	0.007
	1,1,1 Trichloroethane	mg/L	0.002		0.2	Qtr WQ & Contingency	0.2
	1,1,2 Trichloroethane	mg/L	0.002		0.005	Qtr WQ & Contingency	0.005
	1,2 Dichloroethane	mg/L	0.002		0.005	Qtr WQ & Contingency	0.005
	1,2 Dichloropropane	mg/L	0.002		0.005	Qtr WQ & Contingency	0.005
	1,2,4-Trichlorobenzene	mg/L	0.01		0.07	Qtr WQ & Contingency	0.07
	2,3,7,8-TCDD (Dioxin)	pg/L	5.0E-09		3.00E-08	Qtr WQ & Contingency	3.00E-08
	Alkalinity as CaCO3	mg/L	190		NE	Qtr WQ & Contingency	NE
	Antimony (dissolved)	mg/L	<0.050		0.006	Qtr WQ & Contingency	0.006
	Arsenic (dissolved)	mg/L	<0.050		0.05	Qtr WQ & Contingency	0.05
	Barium (dissolved)	mg/L	0.030		2	Qtr WQ & Contingency	2
	Benzene	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	Benzo (a) pyrene	mg/L	<0.02		0.0002	Qtr WQ & Contingency	0.0002
	Beryllium (dissolved)	mg/L	<0.0040		0.004	Qtr WQ & Contingency	0.004
	Boron (dissolved)	mg/L	12	27.5	28	Qtr WQ & Contingency	NE
	Bromodichloromethane	mg/L	<0.002		NE	Qtr WQ & Contingency	NE
	Bromoform	mg/L	<0.005			Qtr WQ & Contingency	NE

TABLE 1A-6. 2004 WATER QUALITY DATA FOR WELL PV-206A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	CAL	SAMPLE TYPE	AWQS
11/17/2004 (cont.)	Cadmium (dissolved)	mg/L	<0.0050		0.039	Qtr WQ & Contingency	0.005
	Calcium (dissolved)	mg/L	760		NE	Qtr WQ & Contingency	NE
	Carbon tetrachloride	mg/L	<0.0025		0.005	Qtr WQ & Contingency	0.005
	Cesium-134	pCi/L	≤75		75	Qtr WQ & Contingency	75
	Cesium-137	pCi/L	≤110	50	110	Qtr WQ & Contingency	110
	Chloride	mg/L	7400	6500	7006	Qtr WQ & Contingency	NE
	Chromium	mg/L	0.013		0.1	Qtr WQ & Contingency	0.1
	cis-1,2-Dichloroethylene	mg/L	<0.0005		0.07	Qtr WQ & Contingency	0.07
	Cobalt-60	pCi/L	≤200	100	200	Qtr WQ & Contingency	200
	Coliform	present	0		presence	Qtr WQ & Contingency	presence
	Di (2-ethylhexyl) adipate	mg/L	<0.0006		0.4	Qtr WQ & Contingency	0.4
	Di (2-ethylhexyl) phthalate	mg/L	<0.05		0.006	Qtr WQ & Contingency	0.006
	Dibromochloromethane	mg/L	<0.002			Qtr WQ & Contingency	NE
	Dichloromethane	mg/L	<0.005		0.005	Qtr WQ & Contingency	0.005
	E. coli	present	0		presence	Qtr WQ & Contingency	presence
	Ethylbenzene	mg/L	<0.002		0.7	Qtr WQ & Contingency	0.7
	Field Conductivity	umhos/cm	24090		ME	Qtr WQ & Contingency	NE
	Field pH	SU	6.93		<6, >9	Qtr WQ & Contingency	NE
	Field Temp	°C	26		NE	Qtr WQ & Contingency	NE
	Fluoride	mg/L	4.1	10.4	12	Qtr WQ & Contingency	4
	Hexachlorobenzene	mg/L	<0.01		0.001	Qtr WQ & Contingency	0.001
	Hexachlorocyclopentadiene	mg/L	<0.04		0.05	Qtr WQ & Contingency	0.05
	Iodine-131	pCi/L	≤100		100	Qtr WQ & Contingency	100
	Lead (dissolved)	mg/L	<0.0020		0.05	Qtr WQ & Contingency	0.05
	Magnesium (dissolved)	mg/L	540		NE	Qtr WQ & Contingency	NE
	Mercury (dissolved)	mg/L	<0.00020		0.002	Qtr WQ & Contingency	0.002
	Monochlorobenzene	mg/L	<0.002		0.1	Qtr WQ & Contingency	0.1
	Nickel (dissolved)	mg/L	0.054		0.1	Qtr WQ & Contingency	0.1
	Nitrate/Nitrite (as N)	mg/L	22		30	Qtr WQ & Contingency	10
	o-Dichlorobenzene	mg/L	<0.002		0.6	Qtr WQ & Contingency	0.6
	para-Dichlorobenzene	mg/L	<0.002		0.075	Qtr WQ & Contingency	0.075
	Pentachlorophenol	mg/L	<0.01		0.001	Qtr WQ & Contingency	0.001
	pH	SU	7.26		<6, >9	Qtr WQ & Contingency	NE
	Potassium (dissolved)	mg/L	18	9.7	13	Qtr WQ & Contingency	NE
	Selenium (dissolved)	mg/L	0.060		0.05	Qtr WQ & Contingency	0.05
	Sodium	mg/L	5200		NE	Qtr WQ & Contingency	NE
	Specific Conductivity	umhos/cm	23000		NE	Qtr WQ & Contingency	NE
	Styrene	mg/L	<0.0005		0.1	Qtr WQ & Contingency	0.1
	Sulfate	mg/L	3700		6800	Qtr WQ & Contingency	NE
	TDS	mg/L	17000		21,000	Qtr WQ & Contingency	NE
	Tetrachloroethylene	mg/L	<0.0022		0.005	Qtr WQ & Contingency	0.005
	Thallium (dissolved)	mg/L	<0.0020		0.002	Qtr WQ & Contingency	0.002
	Toluene	mg/L	<0.002		1	Qtr WQ & Contingency	1
	Total Petroleum Hydrocarbons	mg/L	<1.0		NE	Qtr WQ & Contingency	NE
	trans-1,2-Dichloroethylene	mg/L	<0.002		0.1	Qtr WQ & Contingency	0.1
	Trichloroethylene	mg/L	<0.002		0.005	Qtr WQ & Contingency	0.005
	Trihalomethanes (Total)	mg/L	<0.008		0.1	Qtr WQ & Contingency	0.1
11/17/2004 (cont.)	Tritium	pCi/L	≤3000	1000	3000	Qtr WQ & Contingency	20,000
	Vinyl Chloride	mg/L	<0.002		0.002	Qtr WQ & Contingency	0.002
	Xylenes (Total)	mg/L	<0.01		10	Qtr WQ & Contingency	10
12/3/2004	Boron (dissolved)	mg/L	12	NE	NE	Discretionary	NE
	Boron (dissolved)	mg/L	19	NE	NE	Discretionary	NE
	Chloride	mg/L	7500	NE	NE	Discretionary	NE
	Chloride	mg/L	7200	NE	NE	Discretionary	NE
	Field Conductivity	umhos/cm	27070	NE	NE	Discretionary	NE
	Field Conductivity	umhos/cm	26270	NE	NE	Discretionary	NE
	Field pH	SU	7	NE	NE	Discretionary	NE
	Field pH	SU	7.02	NE	NE	Discretionary	NE
	Field Temp	°C	27.04	NE	NE	Discretionary	NE
	Field Temp	°C	26.9	NE	NE	Discretionary	NE
	Fluoride	mg/L	5	NE	NE	Discretionary	4
	Fluoride	mg/L	3.8	NE	NE	Discretionary	4

TABLE 1A-6. 2004 WATER QUALITY DATA FOR WELL PV-206A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	CAL	SAMPLE TYPE	AWQS
12/3/2004 (cont.)	Potassium (dissolved)	mg/L	7.8	NE	NE	Discretionary	NE
	Potassium (dissolved)	mg/L	8.6	NE	NE	Discretionary	NE

AL = Alert Level
AWQS = Aquifer water quality standard
CAL = Contingency Alert Level
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-7. 2004 WATER QUALITY DATA FOR WELL PV-206B

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
4/6/2004	Boron (dissolved)	mg/L	2.9	Resd	Potassium Verification	NE
	Cesium-137	pCi/L	≤13.02	50	Potassium Verification	110
	Chloride	mg/L	6200	Resd	Potassium Verification	NE
	Cobalt-60	pCi/L	≤14.28	100	Potassium Verification	200
	Field Cond	umhos/cm	20160	NE	Potassium Verification	NE
	Field pH	SU	7.45	NE	Potassium Verification	NE
	Field Temp	°C	26.9	NE	Potassium Verification	NE
	Fluoride	mg/L	2.9	Resd	Potassium Verification	4
	Iodine-131	pCi/L	≤12.70	100	Potassium Verification	100
	Potassium (dissolved)	mg/L	13	Resd	Potassium Verification	NE
	Tritium	pCi/L	≤269 (±158)	3000	Potassium Verification	20,000
5/19/2004	Alkalinity as CaCO3	mg/L	81	NE	Contingency	NE
	Arsenic (dissolved)	mg/L	<0.0040		Contingency	0.05
	Barium (dissolved)	mg/L	0.052		Contingency	2
	Boron (dissolved)	mg/L	3.2	Resd	Contingency	NE
	Cadmium (dissolved)	mg/L	<0.0030		Contingency	0.005
	Calcium (dissolved)	mg/L	1100	NE	Contingency	NE
	Cation Sum	meq/L	6.1	NE	Contingency	NE
	Cesium-137	pCi/L	≤4.50	50	Contingency	110
	Chloride	mg/L	5900	Resd	Contingency	NE
	Chromium (dissolved)	mg/L	0.010		Contingency	0.1
	Cobalt-60	pCi/L	≤4.08	100	Contingency	200
	Field Cond	umhos/cm	19730	NE	Contingency	NE
	Field pH	SU	7.21	NE	Contingency	NE
	Field Temp	°C	28.7	NE	Contingency	NE
	Fluoride	mg/L	2.2	Resd	Contingency	4
	Iodine-131	pCi/L	≤5.54	100	Contingency	100
	Lead (dissolved)	mg/L	<0.0060		Contingency	0.05
	Magnesium (dissolved	mg/L	310	NE	Contingency	NE
	Mercury (dissolved)	mg/L	<0.0002		Contingency	0.002
	Nitrate/Nitrite (as N)	mg/L	21		Contingency	10
	pH	SU	7.5	NE	Contingency	NE
	Potassium (dissolved)	mg/L	33	Resd	Contingency	NE
	Selenium (dissolved)	mg/L	0.021		Contingency	0.05
	Sodium (dissolved)	mg/L	3400	NE	Contingency	NE
	Spec Cond	umhos/cm	20000	NE	Contingency	NE
	Sulfate	mg/L	1600	NE	Contingency	NE
	TDS	mg/L	14000	NE	Contingency	NE
	Tritium	pCi/L	≤267 (±159)	3000	Contingency	20,000
6/3/2004	Alkalinity as CaCO3	mg/L	87	NE	Contingency	NE
	Arsenic (dissolved)	mg/L	<0.010		Contingency	0.05
	Barium (dissolved)	mg/L	0.051		Contingency	2
	Boron (dissolved)	mg/L	3.4	Resd	Contingency	NE
	Cadmium (dissolved)	mg/L	<0.0030		Contingency	0.005
	Calcium (dissolved)	mg/L	1100	NE	Contingency	NE
	Cesium-137	pCi/L	≤50	50	Contingency	110
	Chloride	mg/L	6600	Resd	Contingency	NE
	Chromium (dissolved)	mg/L	<0.010		Contingency	0.1
	Cobalt-60	pCi/L	≤100	100	Contingency	200
	Field Cond	umhos/cm	18110	NE	Contingency	NE
	Field pH	SU	7.15	NE	Contingency	NE
	Field Temp	°C	29.3	NE	Contingency	NE
	Fluoride	mg/L	2.2	Resd	Contingency	4
	Iodine-131	pCi/L	≤100	100	Contingency	100

TABLE 1A-7. 2004 WATER QUALITY DATA FOR WELL PV-206B

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
6/3/2004 (cont.)	Lead (dissolved)	mg/L	<0.010		Contingency	0.05
	Magnesium (dissolved	mg/L	320	NE	Contingency	NE
	Mercury (dissolved)	mg/L	<0.0002		Contingency	0.002
	Nitrate/Nitrite (as N)	mg/L	20		Contingency	10
	pH	SU	7.3	NE	Contingency	NE
	Potassium (dissolved)	mg/L	24	Resd	Contingency	NE
	Selenium (dissolved)	mg/L	0.020		Contingency	0.05
	Sodium (dissolved)	mg/L	3500	NE	Contingency	NE
	Spec Cond	umhos/cm	20000	NE	Contingency	NE
	Sulfate	mg/L	1500	NE	Contingency	NE
	TDS	mg/L	14000	NE	Contingency	NE
	Tritium	pCi/L	≤3000	3000	Contingency	20,000
7/27/2004	Boron (dissolved)	mg/L	4.4	Resd	Contingency	NE
	Cesium-137	pCi/L	≤50	50	Contingency	110
	Chloride	mg/L	6600	Resd	Contingency	NE
	Cobalt-60	pCi/L	≤100	100	Contingency	200
	Field Cond	umhos/cm	21200	NE	Contingency	NE
	Field pH	SU	7.05	NE	Contingency	NE
	Field Temp	°C	30.4	NE	Contingency	NE
	Fluoride	mg/L	2.1	Resd	Contingency	4
	Iodine-131	pCi/L	≤ 100	100	Contingency	100
	Potassium (dissolved)	mg/L	13	Resd	Contingency	NE
	Tritium	pCi/L	≤ 3000	3000	Contingency	20,000
9/7/2004	Boron (dissolved)	mg/L	4.8	Resd	Chloride Verification & Contin	NE
	Cesium-137	pCi/L	≤50	50	Chloride Verification & Contin	110
	Chloride	mg/L	7100	Resd	Chloride Verification & Contin	NE
	Cobalt-60	pCi/L	≤100	100	Chloride Verification & Contin	200
	Field Cond	umhos/cm	20860	NE	Chloride Verification & Contin	NE
	Field pH	SU	6.94	NE	Chloride Verification & Contin	NE
	Field Temp	°C	29.1	NE	Chloride Verification & Contin	NE
	Fluoride	mg/L	2.6	Resd	Chloride Verification & Contin	4
	Iodine-131	pCi/L	≤ 100	100	Chloride Verification & Contin	100
	Potassium (dissolved)	mg/L	18	Resd	Chloride Verification & Contin	NE
	Tritium	pCi/L	≤ 3000	3000	Chloride Verification & Contin	20,000
10/20/2004	Boron (dissolved)	mg/L	4.5	Resd	Contingency	NE
	Cesium-137	pCi/L	≤50	50	Contingency	110
	Chloride	mg/L	6400	Resd	Contingency	NE
	Cobalt-60	pCi/L	≤100	100	Contingency	200
	Field Cond	umhos/cm	20370	NE	Contingency	NE
	Field pH	SU	6.67	NE	Contingency	NE
	Field Temp	°C	27.2	NE	Contingency	NE
	Fluoride	mg/L	6.2	Resd	Contingency	4
	Iodine-131	pCi/L	≤ 100	100	Contingency	100
	Potassium (dissolved)	mg/L	16	Resd	Contingency	NE
	Tritium	pCi/L	≤ 3000	3000	Contingency	20,000

AL = Alert Level
Resd = Reserved
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-8. 2004 WATER QUALITY DATA FOR WELL PV-33H

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
2/17/2004	Boron	mg/L	5.2	7.5	Quarterly	NE
	Cesium-137	pCi/L	≤9.89	50	Quarterly	110
	Chloride	mg/L	5000	5303	Quarterly	NE
	Cobalt-60	pCi/L	≤10.95	100	Quarterly	200
	Field Cond	umhos/cm	18770	NE	Quarterly	NE
	Field pH	SU	7.43	NE	Quarterly	NE
	Field Temp	°C	25.4	NE	Quarterly	NE
	Fluoride	mg/L	2.8	3.52	Quarterly	4
	Potassium	mg/L	**4.9**	4.74	Quarterly	NE
	Potassium	mg/L	3.7	4.74	Re-Analysis on K on 03/25/04	NE
	Tritium	pCi/L	≤270 (±160)	1000	Quarterly	20,000
5/21/2004	Boron	mg/L	5.3	7.5	Quarterly	NE
	Cesium-137	pCi/L	≤11.94	50	Quarterly	110
	Chloride	mg/L	4700	5303	Quarterly	NE
	Cobalt-60	pCi/L	≤9.73	100	Quarterly	200
	Field Cond	umhos/cm	16080	NE	Quarterly	NE
	Field pH	SU	7.31	NE	Quarterly	NE
	Field Temp	°C	27.2	NE	Quarterly	NE
	Fluoride	mg/L	2.8	3.52	Quarterly	4
	Potassium	mg/L	3.1	4.74	Quarterly	NE
	Tritium	pCi/L	≤267 (±159)	1000	Quarterly	20,000
9/9/2004	Boron	mg/L	6.1	7.5	Quarterly	NE
	Cesium-137	pCi/L	≤ 50	50	Quarterly	110
	Chloride	mg/L	4400	5303	Quarterly	NE
	Cobalt-60	pCi/L	≤ 100	100	Quarterly	200
	Field Cond	umhos/cm	17500	NE	Quarterly	NE
	Field pH	SU	7.1	NE	Quarterly	NE
	Field Temp	°C	27.6	NE	Quarterly	NE
	Fluoride	mg/L	2.9	3.52	Quarterly	4
	Potassium	mg/L	2.9	4.74	Quarterly	NE
	Tritium	pCi/L	≤ 1000	1000	Quarterly	20,000
10/21/2004	Boron	mg/L	5.4	7.5	Quarterly	NE
	Cesium-137	pCi/L	≤ 50	50	Quarterly	110
	Chloride	mg/L	4800	5303	Quarterly	NE
	Cobalt-60	pCi/L	≤ 100	100	Quarterly	200
	Field Cond	umhos/cm	17950	NE	Quarterly	NE
	Field pH	SU	6.9	NE	Quarterly	NE
	Field Temp	°C	23	NE	Quarterly	NE
	Fluoride	mg/L	2.8	3.52	Quarterly	4
	Potassium	mg/L	3.9	4.74	Quarterly	NE
	Tritium	pCi/L	≤ 1000	1000	Quarterly	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-9. 2004 WATER QUALITY DATA FOR WELL PV-34H

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
2/17/2004	Boron	mg/L	5	10.6	Quarterly	NE
	Cesium-137	pCi/L	≤ 13.41	50	Quarterly	110
	Chloride	mg/L	1800	2587	Quarterly	NE
	Cobalt-60	pCi/L	≤ 10.44	100	Quarterly	200
	Field Cond	umhos/cm	9010	NE	Quarterly	NE
	Field pH	SU	7.81	NE	Quarterly	NE
	Field Temp	°C	26.1	NE	Quarterly	NE
	Fluoride	mg/L	15	24.1	Quarterly	4
	Potassium	mg/L	1	1.7	Quarterly	NE
	Tritium	pCi/L	≤ 271 (±160)	1000	Quarterly	20,000
5/21/2004	Boron	mg/L	5.1	10.6	Quarterly	NE
	Cesium-137	pCi/L	≤ 15.35	50	Quarterly	110
	Chloride	mg/L	1900	2587	Quarterly	NE
	Cobalt-60	pCi/L	≤ 13.07	100	Quarterly	200
	Field Cond	umhos/cm	8200	NE	Quarterly	NE
	Field pH	SU	7.72	NE	Quarterly	NE
	Field Temp	°C	28.6	NE	Quarterly	NE
	Fluoride	mg/L	14	24.1	Quarterly	4
	Potassium	mg/L	1	1.7	Quarterly	NE
	Tritium	pCi/L	≤ 268 (±161)	1000	Quarterly	20,000
9/10/2004	Boron	mg/L	5.7	10.6	Quarterly	NE
	Cesium-137	pCi/L	≤ 50	50	Quarterly	110
	Chloride	mg/L	1900	2587	Quarterly	NE
	Cobalt-60	pCi/L	≤ 100	100	Quarterly	200
	Field Cond	umhos/cm	9150	NE	Quarterly	NE
	Field pH	SU	7.44	NE	Quarterly	NE
	Field Temp	°C	27.3	NE	Quarterly	NE
	Fluoride	mg/L	15	24.1	Quarterly	4
	Potassium	mg/L	1	1.7	Quarterly	NE
	Tritium	pCi/L	≤ 1000	1000	Quarterly	20,000
10/21/2004	Boron	mg/L	5.2	10.6	Quarterly	NE
	Cesium-137	pCi/L	≤ 50	50	Quarterly	110
	Chloride	mg/L	1900	2587	Quarterly	NE
	Cobalt-60	pCi/L	≤ 100	100	Quarterly	200
	Field Cond	umhos/cm	9000	NE	Quarterly	NE
	Field pH	SU	7.63	NE	Quarterly	NE
	Field Temp	°C	17.3	NE	Quarterly	NE
	Fluoride	mg/L	17	24.1	Quarterly	4
	Potassium	mg/L	1	1.7	Quarterly	NE
	Tritium	pCi/L	≤ 1000	1000	Quarterly	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-10. 2004 WATER QUALITY DATA FOR WELL PV-R2A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
2/19/2004	Boron (dissolved)	mg/L	3.9	Resd	Quarterly	NE
	Cesium-137	pCi/L	≤12.77	50	Quarterly	110
	Chloride	mg/L	1500	Resd	Quarterly	NE
	Cobalt-60	pCi/L	≤12.30	100	Quarterly	200
	Field Cond	umhos/cm	8550	NE	Quarterly	NE
	Field pH	SU	8.04	NE	Quarterly	NE
	Field Temp	°C	26.1	NE	Quarterly	NE
	Fluoride	mg/L	9.9	Resd	Quarterly	4
	Potassium (dissolved)	mg/L	8.8	Resd	Quarterly	NE
	Tritium	pCi/L	≤269 (±157)	1000	Quarterly	20,000
4/23/2004	Alkalinity as CaCO3	mg/L	79	NE	Discretionary	NE
	Arsenic (dissolved)	mg/L	<0.050	NE	Discretionary	0.05
	Barium (dissolved)	mg/L	0.019	NE	Discretionary	2
	Boron (dissolved)	mg/L	1.4	NE	Discretionary	NE
	Cadmium (dissolved)	mg/L	<0.0050	NE	Discretionary	0.005
	Calcium (dissolved)	mg/L	26	NE	Discretionary	NE
	Cation Sum	meq/L	29.5	NE	Discretionary	NE
	Chloride	mg/L	480	NE	Discretionary	NE
	Chromium (dissolved)	mg/L	0.074	NE	Discretionary	0.1
	Copper (dissolved)	mg/L	<0.020	NE	Discretionary	NE
	Field Cond	umhos/cm	6730	NE	Discretionary	NE
	Field pH	SU	8.28	NE	Discretionary	NE
	Field Temp	°C	33	NE	Discretionary	NE
	Fluoride	mg/L	16	NE	Discretionary	4
	Iron (dissolved)	mg/L	<0.20	NE	Discretionary	NE
	Lead (dissolved)	mg/L	<0.0010	NE	Discretionary	0.05
	Magnesium (dissolved)	mg/L	0.71	NE	Discretionary	NE
	Manganese (dissolved)	mg/L	<0.020	NE	Discretionary	NE
	Mercury (dissolved)	mg/L	<0.00020	NE	Discretionary	0.002
	Nitrate/Nitrite (as N)	mg/L	26	NE	Discretionary	10
	pH	SU	9.50	NE	Discretionary	NE
	Potassium (dissolved)	mg/L	3.6	NE	Discretionary	NE
	Selenium (dissolved)	mg/L	0.0098	NE	Discretionary	0.05
	Silver (dissolved)	mg/L	<0.0050	NE	Discretionary	NE
	Sodium (dissolved)	mg/L	1000	NE	Discretionary	NE
	Spec Cond	umhos/cm	2700	NE	Discretionary	NE
	Sulfate	mg/L	320	NE	Discretionary	NE
	TDS	mg/L	1600	NE	Discretionary	NE
	Zinc (dissolved)	mg/L	<0.050	NE	Discretionary	NE
5/27/2004	Boron (dissolved)	mg/L	6.9	Resd	Quarterly	NE
	Cesium-137	pCi/L	≤50	50	Quarterly	110
	Chloride	mg/L	2600	Resd	Quarterly	NE
	Cobalt-60	pCi/L	≤100	100	Quarterly	200
	Field Cond	umhos/cm	12320	NE	Quarterly	NE
	Field pH	SU	7.81	NE	Quarterly	NE
	Field Temp	°C	29.8	NE	Quarterly	NE
	Fluoride	mg/L	7.6	Resd	Quarterly	4
	Potassium (dissolved)	mg/L	9.6	Resd	Quarterly	NE
	Tritium	pCi/L	≤1000	1000	Quarterly	20,000

TABLE 1A-10. 2004 WATER QUALITY DATA FOR WELL PV-R2A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
8/10/2004	Field Cond	umhos/cm	13910	NE	Discretionary	NE
	Field pH	SU	7.38	NE	Discretionary	NE
	Field TDS	mg/L	9,713	NE	Discretionary	NE
8/11/2004	Field Cond	umhos/cm	11030	NE	Discretionary	NE
	Field pH	SU	7.47	NE	Discretionary	NE
	Field TDS	mg/L	6,725	NE	Discretionary	NE
8/17/2004	Field Cond	umhos/cm	817	NE	Discretionary	NE
	Field pH	SU	7.9	NE	Discretionary	NE
	Field TDS	mg/L	6,418	NE	Discretionary	NE
8/18/2004	Field Cond	umhos/cm	928	NE	Discretionary	NE
	Field pH	SU	8.26	NE	Discretionary	NE
	Field TDS	mg/L	6,360	NE	Discretionary	NE
8/19/2004	Field Cond	umhos/cm	2945	NE	Discretionary	NE
	Field pH	SU	8.02	NE	Discretionary	NE
	Field TDS	mg/L	2,918	NE	Discretionary	NE
8/20/2004	Field Cond	umhos/cm	4808	NE	Discretionary	NE
	Field pH	SU	8.06	NE	Discretionary	NE
	Field TDS	mg/L	3,945	NE	Discretionary	NE
8/24/2004	Field Cond	umhos/cm	758	NE	Discretionary	NE
	Field pH	SU	8	NE	Discretionary	NE
	Field TDS	mg/L	4,615	NE	Discretionary	NE
8/25/2004	Field Cond	umhos/cm	4553	NE	Discretionary	NE
	Field pH	SU	8.25	NE	Discretionary	NE
	Field TDS	mg/L	2,753	NE	Discretionary	NE
8/26/2004	Alkalinity as CaCO3 (filtered	mg/L	130	NE	Discretionary	NE
	Alkalinity as CaCO3	mg/L	180	NE	Discretionary	NE
	Antimony (dissolved)	mg/L	<0.050	NE	Discretionary	0.006
	Arsenic (dissolved)	mg/L	<0.050	NE	Discretionary	0.05
	Barium (dissolved)	mg/L	0.035	NE	Discretionary	2
	Boron (dissolved)	mg/L	2	NE	Discretionary	NE
	Cadmium (dissolved)	mg/L	<0.0050	NE	Discretionary	0.005
	Calcium (dissolved)	mg/L	43	NE	Discretionary	NE
	Chloride	mg/L	740	NE	Discretionary	NE
	Chloride (filtered)	mg/L	750	NE	Discretionary	NE
	Chromium (dissolved)	mg/L	< 0.010	NE	Discretionary	0.1
	Field Cond	umhos/cm	3818	NE	Discretionary	NE
	Field pH	SU	8.14	NE	Discretionary	NE
	Fluoride (filtered)	mg/L	14	NE	Discretionary	4
	Fluoride	mg/L	14	NE	Discretionary	4
	Lead (dissolved)	mg/L	<0.0010	NE	Discretionary	0.05
	Magnesium (dissolved)	mg/L	6.8	NE	Discretionary	NE
	Mercury (dissolved)	mg/L	<0.00020	NE	Discretionary	0.002
	Nitrate/Nitrite (as N)	mg/L	30	NE	Discretionary	10
	Nitrate/Nitrite (as N) (filtered)	mg/L	29	NE	Discretionary	10
	pH (filtered)	SU	8.42	NE	Discretionary	NE
	pH	SU	8.37	NE	Discretionary	NE
	Potassium (dissolved)	mg/L	2.6	NE	Discretionary	NE
	Selenium (dissolved)	mg/L	0.0077	NE	Discretionary	0.05
	Sodium (dissolved)	mg/L	720	NE	Discretionary	NE
	Spec Cond	umhos/cm	3800	NE	Discretionary	NE

TABLE 1A-10. 2004 WATER QUALITY DATA FOR WELL PV-R2A

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
8/26/2004 (cont.)	Spec Cond (filtered)	umhos/cm	3800	NE	Discretionary	NE
	Sulfate (filtered)	mg/L	470	NE	Discretionary	NE
	Sulfate	mg/L	460	NE	Discretionary	NE
	TDS (filtered)	mg/L	2100	NE	Discretionary	NE
	TDS	mg/L	2300	NE	Discretionary	NE
9/15/2004	Boron (dissolved)	mg/L	5.5	Resd	Quarterly	NE
	Cesium-137	pCi/L	≤50	50	Quarterly	110
	Chloride	mg/L	2700	Resd	Quarterly	NE
	Cobalt-60	pCi/L	≤100	100	Quarterly	200
	Field Cond	umhos/cm	10810	NE	Quarterly	NE
	Field pH	SU	7.29	NE	Quarterly	NE
	Field Temp	°C	29.2	NE	Quarterly	NE
	Fluoride	mg/L	9.1	Resd	Quarterly	4
	Potassium (dissolved)	mg/L	6.5	Resd	Quarterly	NE
	Tritium	pCi/L	≤1000	1000	Quarterly	20,000
11/4/2004	Boron (dissolved)	mg/L	6.1	Resd	Quarterly	NE
	Cesium-137	pCi/L	≤50	50	Quarterly	110
	Chloride	mg/L	3300	Resd	Quarterly	NE
	Cobalt-60	pCi/L	≤100	100	Quarterly	200
	Field Cond	umhos/cm	15880	NE	Quarterly	NE
	Field pH	SU	7.44	NE	Quarterly	NE
	Field Temp	°C	28.1	NE	Quarterly	NE
	Fluoride	mg/L	10	Resd	Quarterly	4
	Potassium (dissolved)	mg/L	7.5	Resd	Quarterly	NE
	Tritium	pCi/L	≤1000	1000	Quarterly	20,000

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
Resd = Reserved
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

TABLE 1A-11. 2004 WATER QUALITY DATA FOR WELL PV-R2B

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
4/23/2004	Alkalinity as CaCO3	mg/L	120	NE	Discretionary	
	Arsenic	mg/L	<0.050	NE	Discretionary	0.05
	Barium	mg/L	0.076	NE	Discretionary	2
	Boron	mg/L	4.4	NE	Discretionary	NE
	Cadmium	mg/L	<0.0050	NE	Discretionary	0.005
	Calcium	mg/L	80	NE	Discretionary	NE
	Cation Sum	meq/L	1.30	NE	Discretionary	NE
	Chloride	mg/L	1700	NE	Discretionary	NE
	Chromium	mg/L	0.019	NE	Discretionary	0.1
	Copper	mg/L	<0.020	NE	Discretionary	NE
	Field Cond	umhos/cm	3750	NE	Discretionary	NE
	Field pH	SU	10.32	NE	Discretionary	NE
	Fluoride	mg/L	10	NE	Discretionary	4
	Iron	mg/L	<0.20	NE	Discretionary	NE
	Lead	mg/L	<0.0010	NE	Discretionary	0.05
	Magnesium	mg/L	9.5	NE	Discretionary	NE
	Manganese	mg/L	0.11	NE	Discretionary	NE
	Mercury	mg/L	<0.00020	NE	Discretionary	0.002
	Nitrate/Nitrite (as N)	mg/L	73	NE	Discretionary	10
	pH	SU	10.7	NE	Discretionary	NE
	Potassium	mg/L	7.5	NE	Discretionary	NE
	Selenium	mg/L	0.012	NE	Discretionary	0.05
	Silver	mg/L	<0.0050	NE	Discretionary	NE
	Sodium	mg/L	1700	NE	Discretionary	NE
	Spec Cond	umhos/cm	8000	NE	Discretionary	NE
	Sulfate	mg/L	1000	NE	Discretionary	NE
	TDS	mg/L	5100	NE	Discretionary	NE
	Zinc	mg/L	<0.050	NE	Discretionary	NE
7/28/2004	Field Cond	umhos/cm	9300	NE	Discretionary	NE
	Field pH	SU	11.21	NE	Discretionary	NE
8/6/2004	Field Cond	umhos/cm	5500	NE	Discretionary	NE
	Field pH	SU	10.92	NE	Discretionary	NE
8/10/2004	Field Cond	umhos/cm	4170	NE	Discretionary	NE
	Field pH	SU	10.01	NE	Discretionary	NE
	Field TDS	mg/L	2,455	NE	Discretionary	NE
8/11/2004	Field Cond	umhos/cm	4170	NE	Discretionary	NE
	Field pH	SU	9.27	NE	Discretionary	NE
	Field TDS	mg/L	1,883	NE	Discretionary	NE
8/12/2004	Field Cond	umhos/cm	3361	NE	Discretionary	NE
	Field pH	SU	9.17	NE	Discretionary	NE
	Field TDS	mg/L	2,014	NE	Discretionary	NE
8/13/2004	Field Cond	umhos/cm	2954	NE	Discretionary	NE
	Field pH	SU	9.02	NE	Discretionary	NE
	Field TDS	mg/L	1,790	NE	Discretionary	NE
8/17/2004	Field Cond	umhos/cm	3147	NE	Discretionary	NE
	Field pH	SU	9.36	NE	Discretionary	NE
	Field TDS	mg/L	1,935	NE	Discretionary	NE
8/18/2004	Field Cond	umhos/cm	3553	NE	Discretionary	NE
	Field pH	SU	9.33	NE	Discretionary	NE
	Field TDS	mg/L	2,473	NE	Discretionary	NE
8/19/2004	Field Cond	umhos/cm	2822	NE	Discretionary	NE
	Field pH	SU	9.33	NE	Discretionary	NE
	Field TDS	mg/L	1,658	NE	Discretionary	NE

TABLE 1A-11. 2004 WATER QUALITY DATA FOR WELL PV-R2B

SAMPLE DATE	PARAMETER	UNITS	RESULT	AL	SAMPLE TYPE	AWQS
8/20/2004	Field Cond	umhos/cm	3318	NE	Discretionary	NE
	Field pH	SU	9.3	NE	Discretionary	NE
	Field TDS	mg/L	1,796	NE	Discretionary	NE
8/24/2004	Field Cond	umhos/cm	4312	NE	Discretionary	NE
	Field pH	SU	9.85	NE	Discretionary	NE
	Field TDS	mg/L	1,603	NE	Discretionary	NE
8/25/2004	Field Cond	umhos/cm	3033	NE	Discretionary	NE
	Field pH	SU	9.32	NE	Discretionary	NE
	Field TDS	mg/L	1,678	NE	Discretionary	NE
8/26/2004	Alkalinity as CaCO3 (filtered)	mg/L	63	NE	Discretionary	NE
	Alkalinity as CaCO3	mg/L	48	NE	Discretionary	NE
	Antimony (dissolved)	mg/L	<0.050	NE	Discretionary	0.006
	Arsenic (dissolved)	mg/L	<0.050	NE	Discretionary	0.05
	Barium (dissolved)	mg/L	0.014	NE	Discretionary	2
	Boron (dissolved)	mg/L	0.89	NE	Discretionary	NE
	Cadmium (dissolved)	mg/L	<0.0050	NE	Discretionary	0.005
	Calcium (dissolved)	mg/L	18	NE	Discretionary	NE
	Chloride (filtered)	mg/L	510	NE	Discretionary	NE
	Chloride	mg/L	560	NE	Discretionary	NE
	Chromium (dissolved)	mg/L	0.049	NE	Discretionary	0.1
	Field Cond	umhos/cm	2778	NE	Discretionary	NE
	Field pH	SU	9.55	NE	Discretionary	NE
	Fluoride	mg/L	15	NE	Discretionary	4
	Fluoride (filtered)	mg/L	15	NE	Discretionary	4
	Lead (dissolved)	mg/L	<0.0010	NE	Discretionary	0.05
	Magnesium (dissolved)	mg/L	< 0.50	NE	Discretionary	NE
	Mercury (dissolved)	mg/L	<0.00020	NE	Discretionary	0.002
	Nitrate/Nitrite (as N) (filtered)	mg/L	20	NE	Discretionary	10
	Nitrate/Nitrite (as N)	mg/L	21	NE	Discretionary	10
	pH	SU	9.64	NE	Discretionary	NE
	pH	SU	9.55	NE	Discretionary	NE
	Potassium (dissolved)	mg/L	1.5	NE	Discretionary	NE
	Selenium (dissolved)	mg/L	0.0061	NE	Discretionary	0.05
	Sodium (dissolved)	mg/L	520	NE	Discretionary	NE
	Spec Cond (filtered)	umhos/cm	2600	NE	Discretionary	NE
	Spec Cond	umhos/cm	2900	NE	Discretionary	NE
	Sulfate (filtered)	mg/L	340	NE	Discretionary	NE
	Sulfate	mg/L	370	NE	Discretionary	NE
	TDS (filtered)	mg/L	1600	NE	Discretionary	NE
	TDS	mg/L	1600	NE	Discretionary	NE

AL = Alert Level
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
NE = Not established
< = Less than the indicated reporting limit

1. GROUNDWATER MONITORING

B. TRENDS IN GROUNDWATER CHEMISTRY

TABLE 1B-1. GENERALIZED 2004 TRENDS OF INDICATOR PARAMETER CONCENTRATIONS OVER TIME

WELL ID	GENERALIZED 2004 TRENDS IN CONCENTRATIONS			
	BORON	FLUORIDE	POTASSIUM	CHLORIDE
PV-14H	No Trend	No Trend	No Trend	No Trend
PV-193A	No Trend	No Trend	No Trend	No Trend
PV-195A	No Trend	No Trend	No Trend	No Trend
PV-195B	No Trend	No Trend	No Trend	No Trend
PV-206A	No Trend	No Trend	No Trend	No Trend
PV-206B	No Trend	No Trend	No Trend	No Trend
PV-33H	No Trend	No Trend	No Trend	No Trend
PV-34H	No Trend	No Trend	No Trend	No Trend
PV-R2A	No Trend	No Trend	No Trend	Increasing
PV-R2B	Decreasing	Increasing	Decreasing	Decreasing
Note: Only two 2004 sample events for PV-R2B.				

1. GROUNDWATER MONITORING

C. INDICATOR PARAMETER CONCENTRATION CONTOUR MAPS, AND ALL EXCEEDANCES VERIFIED DURING THE ONE-YEAR REPORTING PERIOD

SECTION 1C – INTRODUCTION

Section 2.7.5.1 A.1.c of the APP requested indicator parameter concentration contour maps and all exceedances verified during the one-year reporting period. As presented previously in the site characterization work completed for the APP and submitted to ADEQ, the site is composed of multiple levels of saturation resulting from the heterogeneous nature of the site geology, and a high degree of both spatial and temporal variability in inorganic water quality. These characteristics result in localized water level and water quality conditions. The water quality results, in particular, are not amenable to contouring, nor would the results be technically meaningful. As a result, rather than prepare contour maps of indicator parameter concentrations, selected quarterly data has been presented on Figures 1-1 through 1-4.

TABLE 1C-1. VERIFIED INDICATOR ALERT LEVEL EXCEEDANCES SUMMARY TABLE

SAMPLE DATE	WELL ID	SAMPLE TYPE	ANALYTICAL PARAMETER	INDICATOR ALERT LEVEL	ANALYTICAL RESULT
02/13/04	PV-206A	Quarterly	Potassium	9.7	14
04/06/04	PV-206A	Verification	Potassium	9.7	19
05/19/04	PV-206A	Quarterly & Contingency	Potassium	9.7	20
06/03/04	PV-206A	Contingency	Potassium	9.7	17
07/27/04	PV-206A	Contingency	Chloride	6,500	6,700
09/08/04	PV-206A	Quarterly, Contingency & Chloride Verification	Potassium	9.7	16
09/08/04	PV-206A	Quarterly, Contingency & Chloride Verification	Chloride	6,500	7,000
10/20/04	PV-206A	Quarterly & Contingency	Potassium	9.7	15
10/20/04	PV-206A	Quarterly & Contingency	Chloride	6,500	6,800
11/17/04	PV-206A	Contingency	Potassium	9.7	18
11/17/04	PV-206A	Contingency	Chloride	6,500	7,400
12/03/04	PV-206A	Discretionary	Chloride	6,500	7,200
12/03/04	PV-206A	Discretionary	Chloride	6,500	7,500

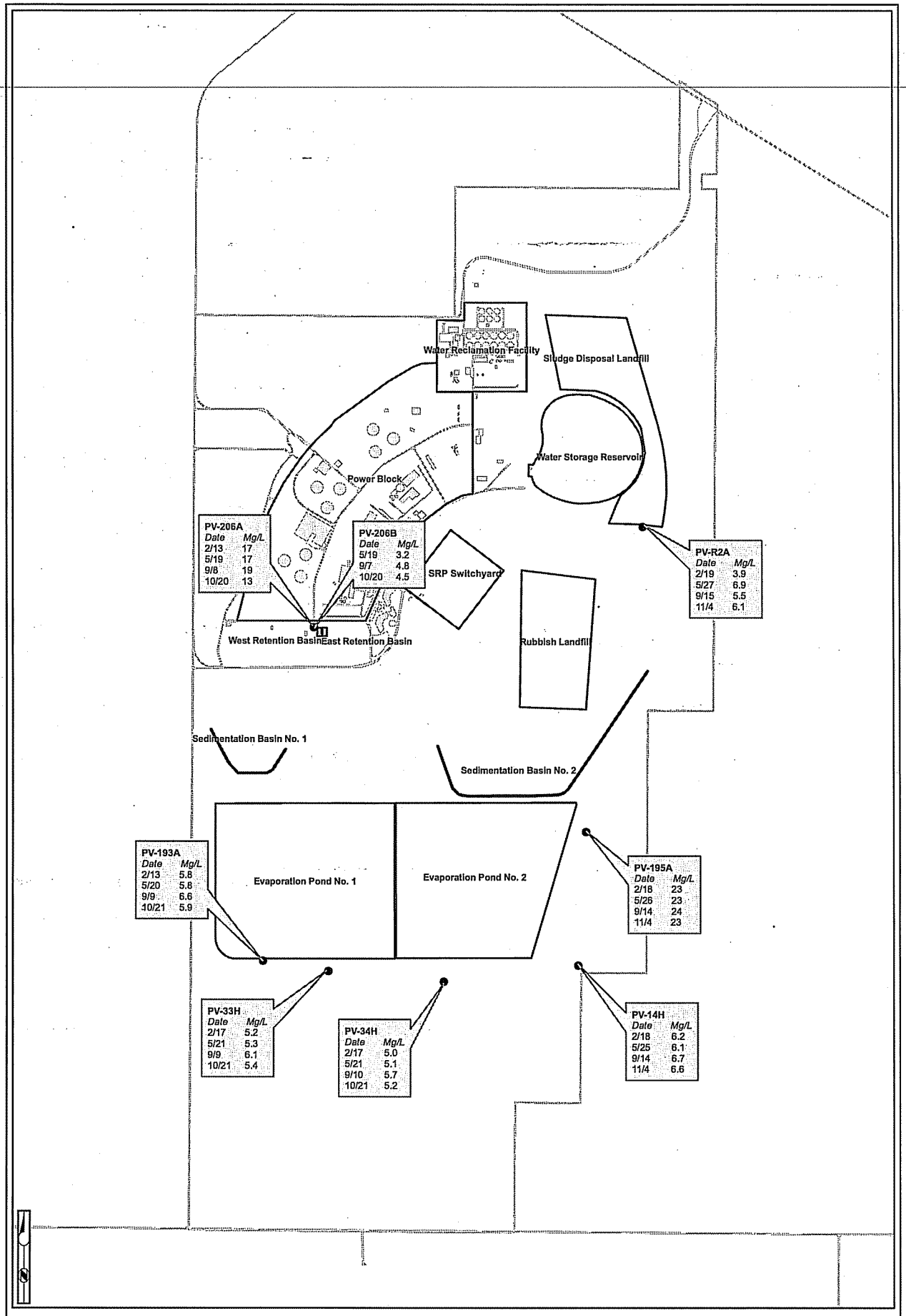
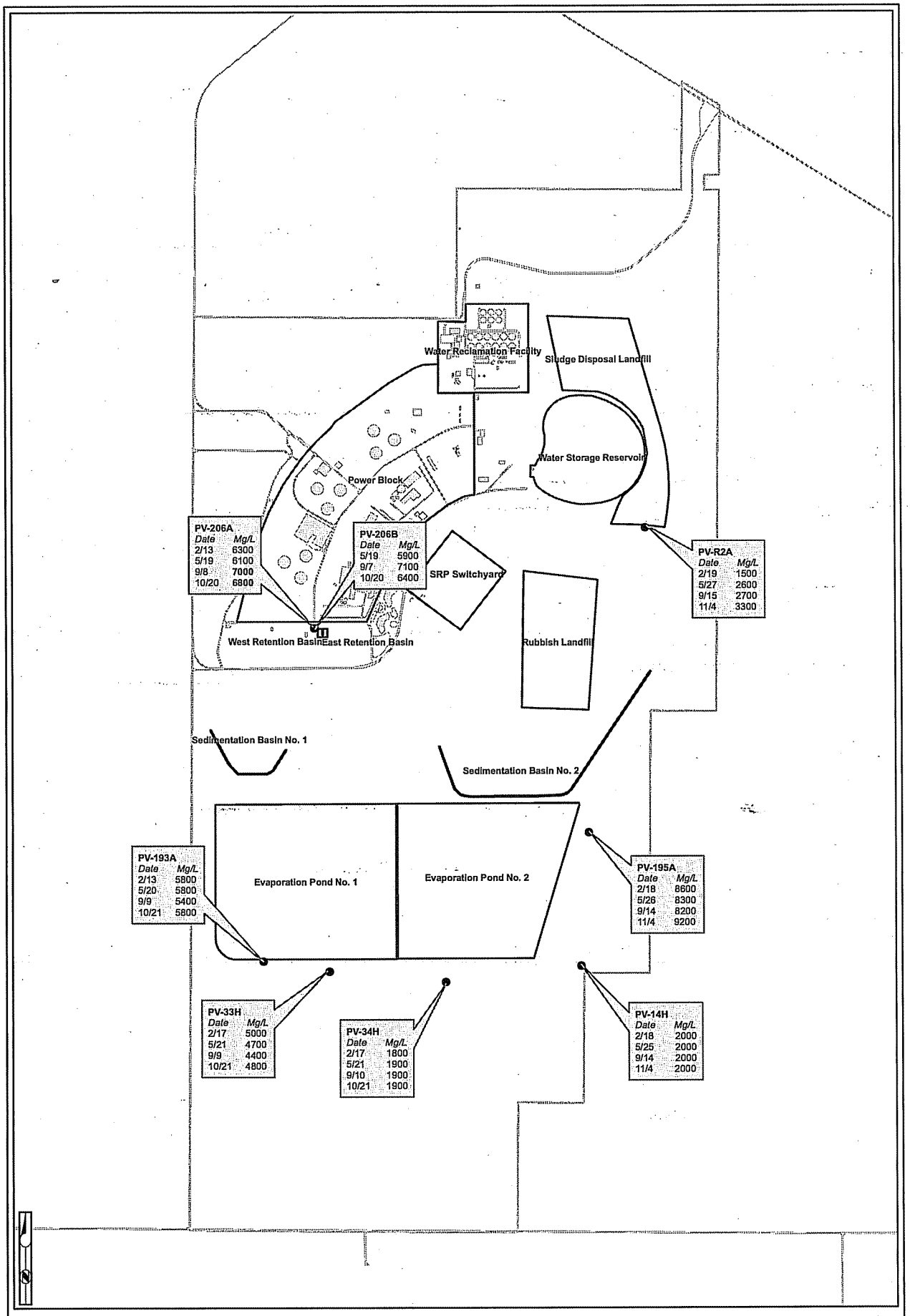


Figure 1-1
Palo Verde Nuclear Generating Station
Shallow Aquifer Wells
Selected 2004 Boron Concentrations

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186007 5/11/2005



0 1,000
Feet

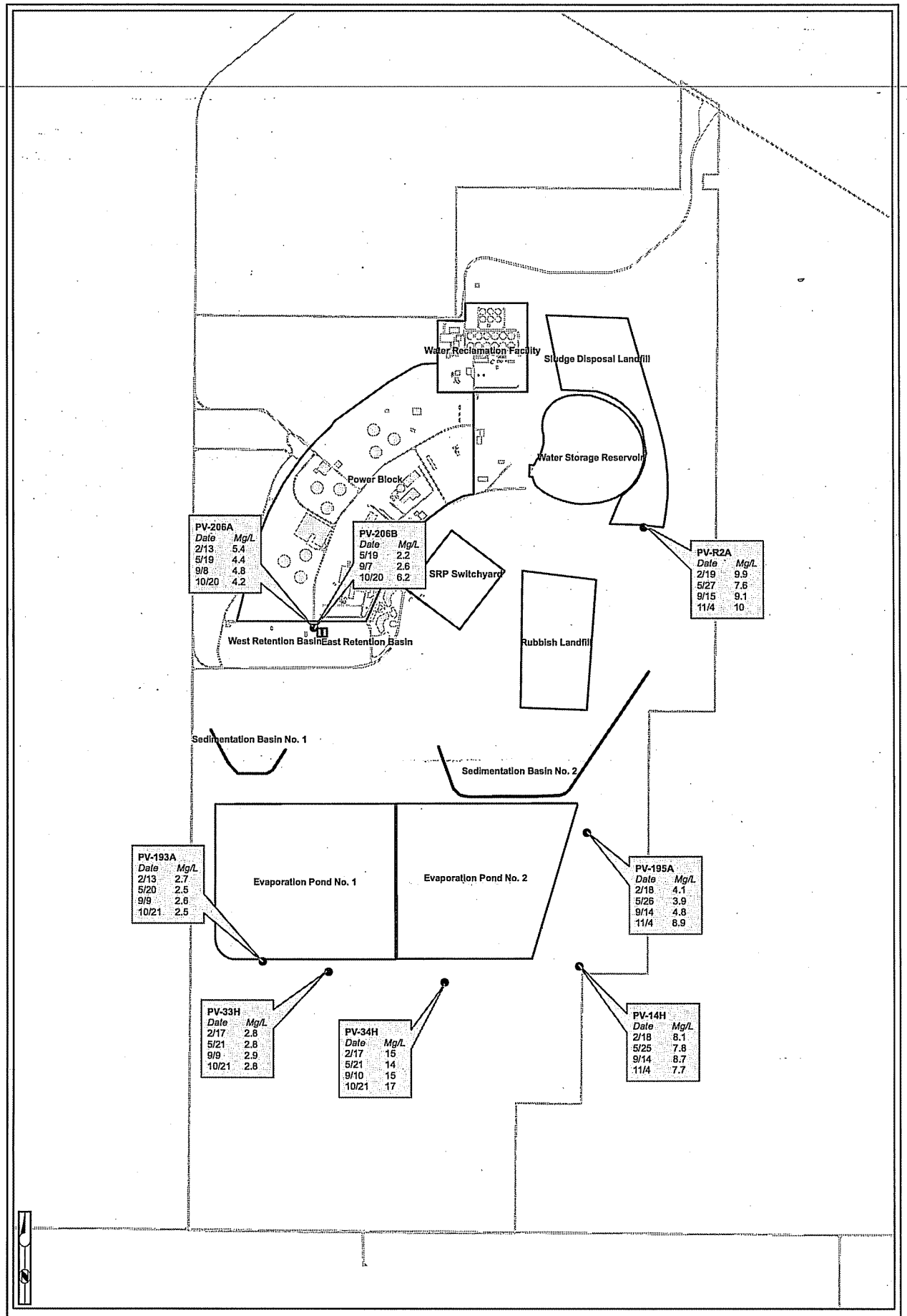
Legend

- Wells (Concentrations in mg/L Bold Text Indicates Exceedance)
- Facilities
- Site Boundary
- Buildings

BROWN AND CALDWELL

Figure 1-2
Palo Verde Nuclear Generating Station
Shallow Aquifer Wells
Selected 2004 Chloride Concentrations

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186008 5/11/2005



0 1,000
Feet

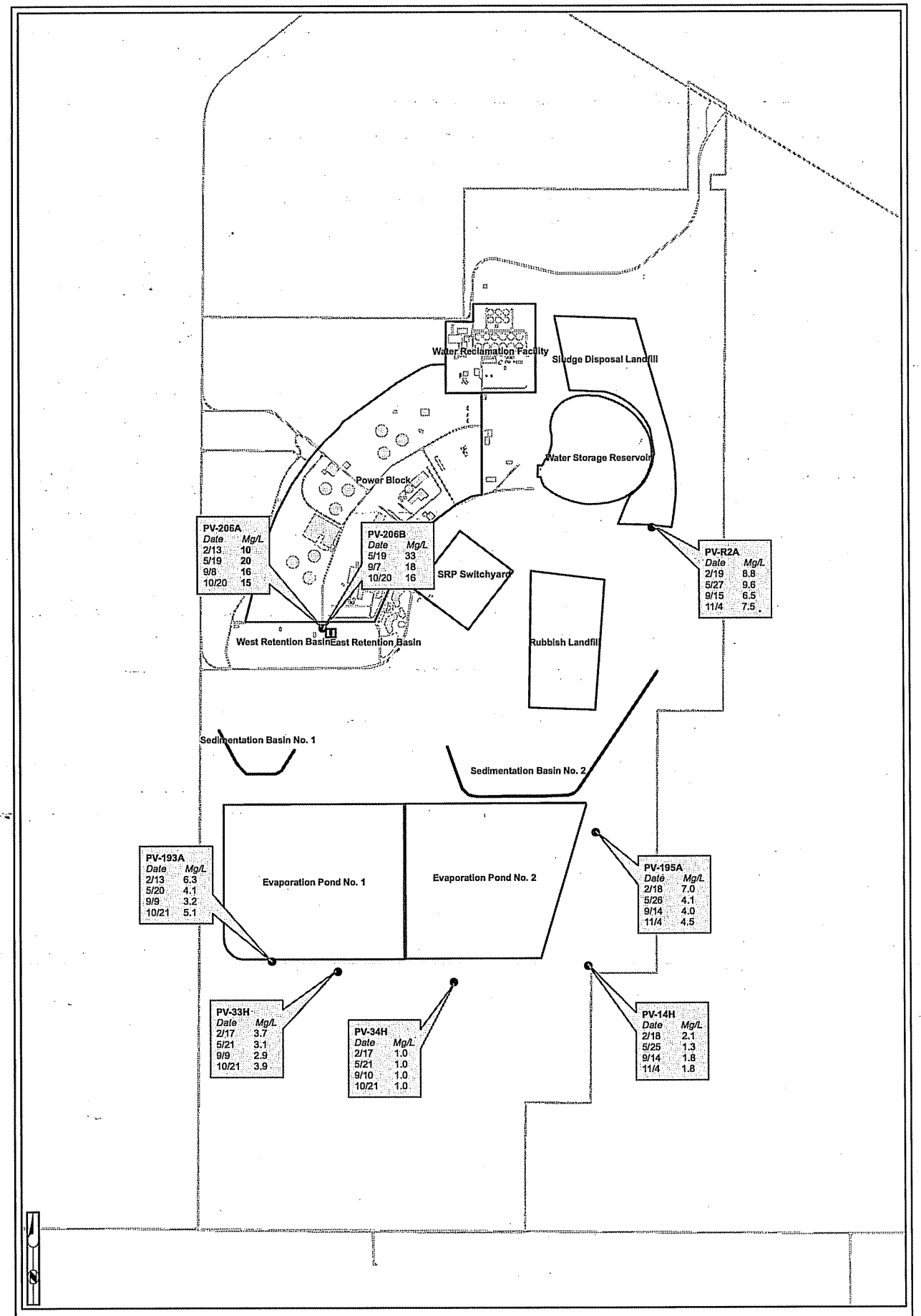
Legend

- Wells (Concentrations in mg/L Bold Text Indicates Exceedance)
- Facilities
- Site Boundary
- Buildings

BROWN AND CALDWELL

Figure 1-3
Palo Verde Nuclear Generating Station
Shallow Aquifer Wells
Selected 2004 Fluoride Concentrations

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186009 5/11/2005



0 1,000
Feet

Legend

Wells
(Concentrations in mg/L
Bold Text Indicates Exceedance)

Facilities

Site Boundary

Buildings

BROWN AND CALDWELL

Figure 1-4
Palo Verde Nuclear Generating Station
Shallow Aquifer Wells
Selected 2004 Potassium Concentrations

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186010 5/11/2005

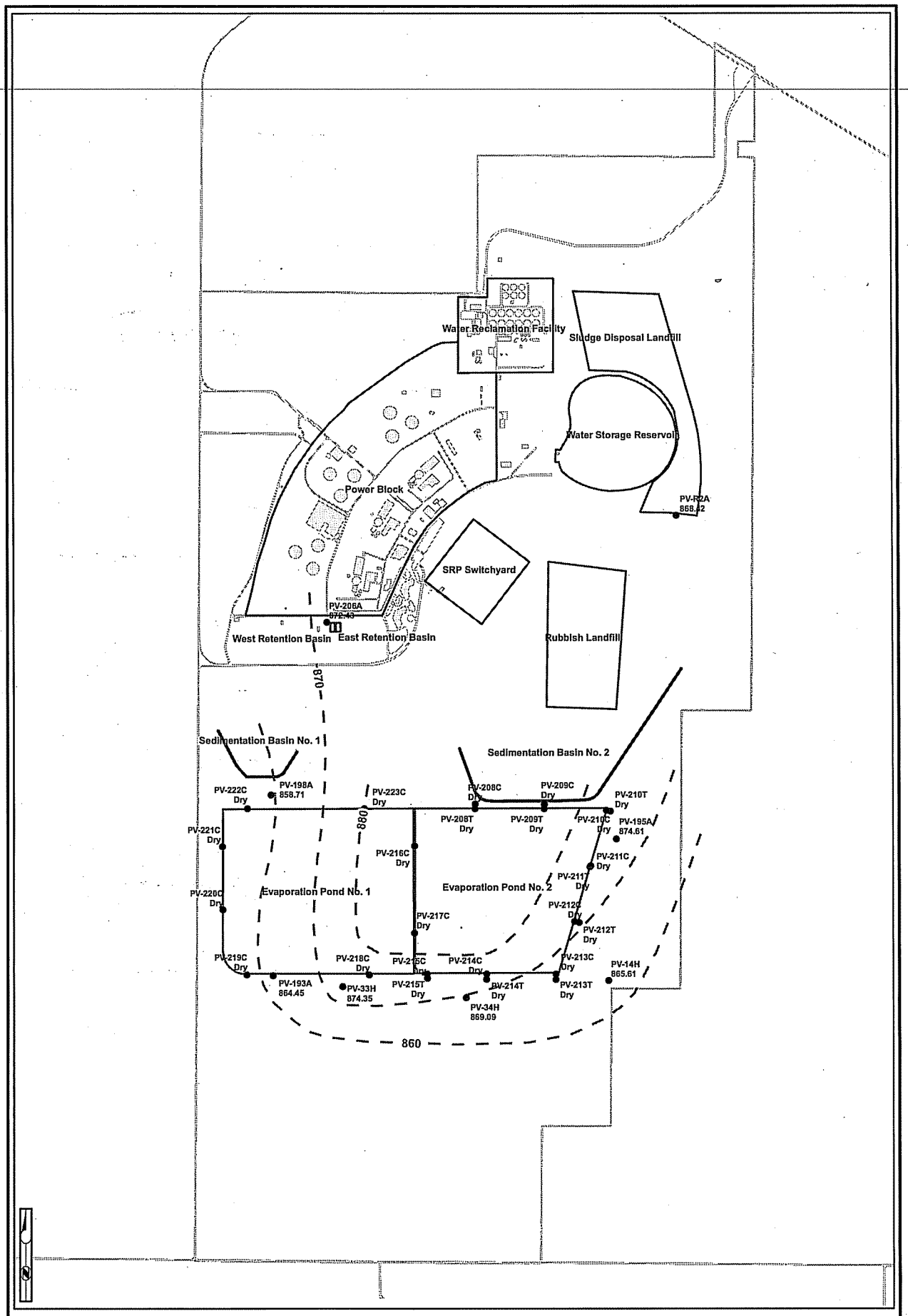
1. GROUNDWATER MONITORING

D. QUARTERLY SHALLOW GROUNDWATER MAPS AND ANNUAL REGIONAL GROUNDWATER EQUIPOTENTIAL MAPS

SECTION 1D – INTRODUCTION

The contouring of shallow water level data has been completed and quarterly shallow groundwater elevation contour maps are presented on Figures 1-5 through 1-8. The groundwater elevation contours were developed by hand. As previously described, the water level data also reflects the subsurface heterogeneity. Hand contouring of the data, in conjunction with some local knowledge, is generally required to generate an accurate contour map. In general, the water level elevation maps for 2004 remain consistent with historic shallow groundwater elevation maps. Due to the high shallow groundwater gradient across the site, caused by the low permeability of the shallow alluvial deposits, the location of each contour was estimated manually without the completion of any rigorous triangulation or interpolation techniques. This approach is considered appropriate for the data set utilized.

In Section 2.7.5.1 A.1d of the APP, the completion of a Regional Groundwater equipotential map is requested. Based on the number of wells, the frequency of data collection, and the water level complexities imposed from on-site pumping and different well completion depths, contouring of the regional aquifer water level elevation data was not completed, nor is it considered technically advisable. Historically, based on regional aquifer water level data collected both onsite and offsite, it has been shown that regional aquifer flow directions are to the south/southwest. This flow direction is similar to the natural pre-development groundwater flow direction with the current flow gradient likely being increased in response to pumping in the Centennial Wash area to the south of the PVNGS property. As part of presenting the on-site regional aquifer water level elevation data, the data has been provided in Table 1A-1 and posted on Figure 1-9. As an analysis of the data posted on Figure 1-9 indicates, a general groundwater flow direction to the south is present. However, due to the aforementioned effects from pumping and the shallow completion depth of monitoring well PV-216R relative to the deeper production (both current and inactive) wells, neither groundwater gradient or equipotential lines can be calculated.



0 1,000
Feet

Legend

PV-14H
865.61
Wells
(WL Elevation in Feet
Above Mean Sea Level)

Water Level
Elevation Contour

Facilities

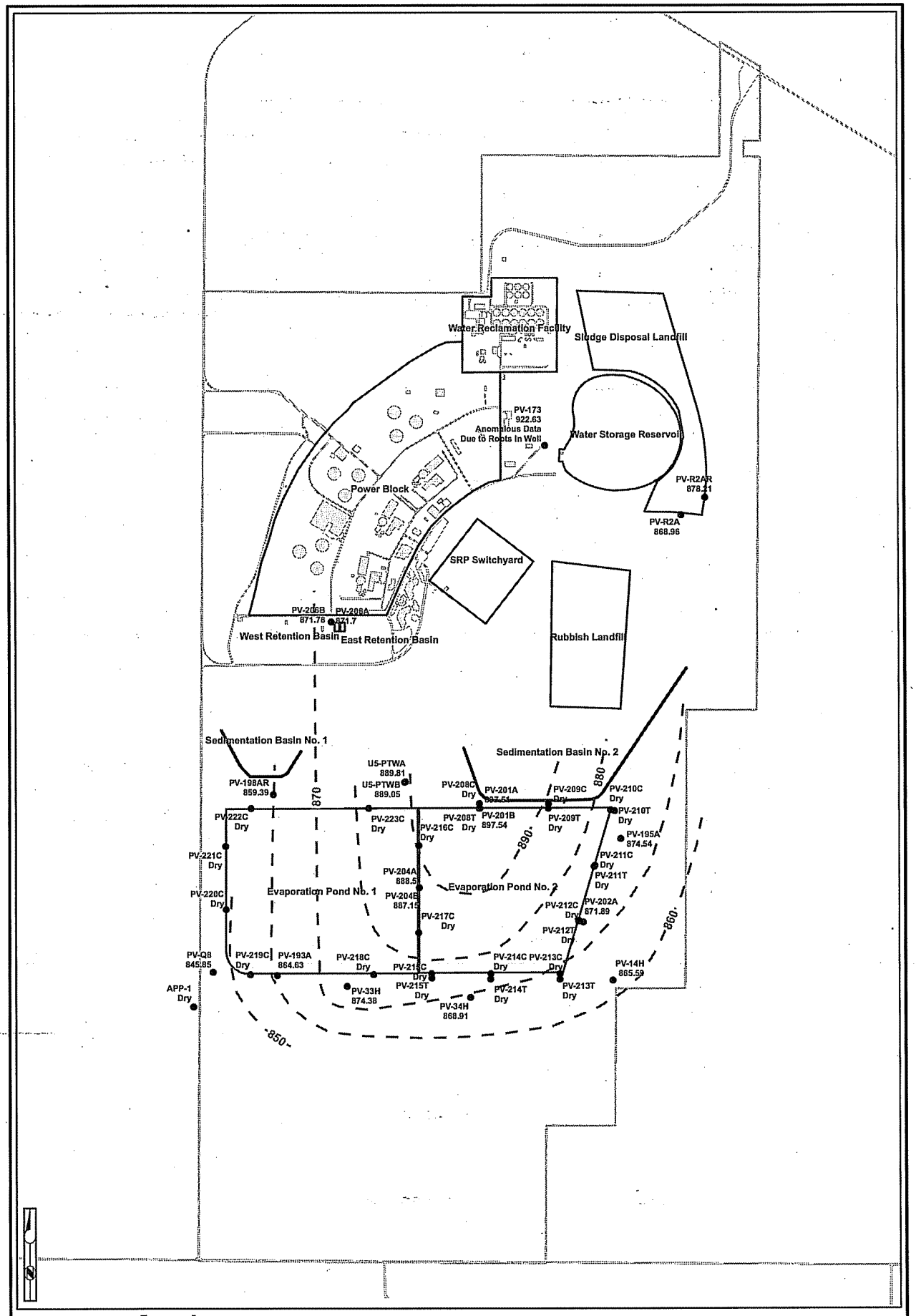
Site Boundary

Buildings

BROWN AND CALDWELL

Figure 1-5
Palo Verde Nuclear Generating Station
Quarterly Shallow Groundwater Contour Map
February 2004

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186002 5/11/2005



0 1,000
Feet

Legend

PV-14H
865.61
Wells
(WL Elevation in Feet
Above Mean Sea Level)

Water Level
Elevation Contour

Facilities

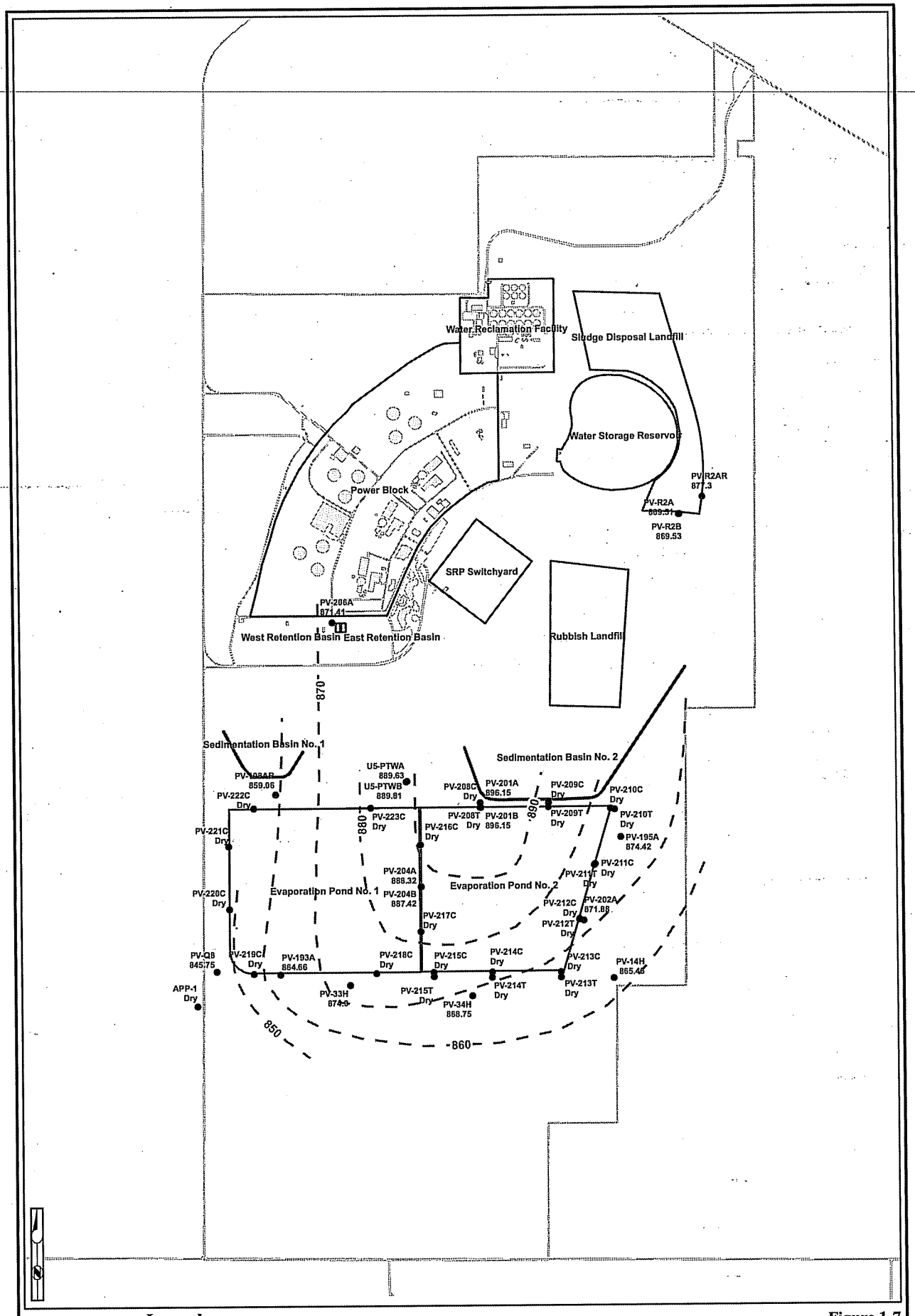
Site Boundary

Buildings

BROWN AND CALDWELL

Figure 1-6
Palo Verde Nuclear Generating Station
Quarterly Shallow Groundwater Contour Map
May 2004

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186003 5/11/2005



0 1,000
Feet

Legend

PV-14H
865.61
Wells
(WL Elevation in Feet
Above Mean Sea Level)

Water Level
Elevation Contour

Facilities

Site Boundary

Buildings

BROWN AND CALDWELL

Figure 1-7
Palo Verde Nuclear Generating Station
Quarterly Shallow Groundwater Contour Map
August 2004

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186004 5/11/2005

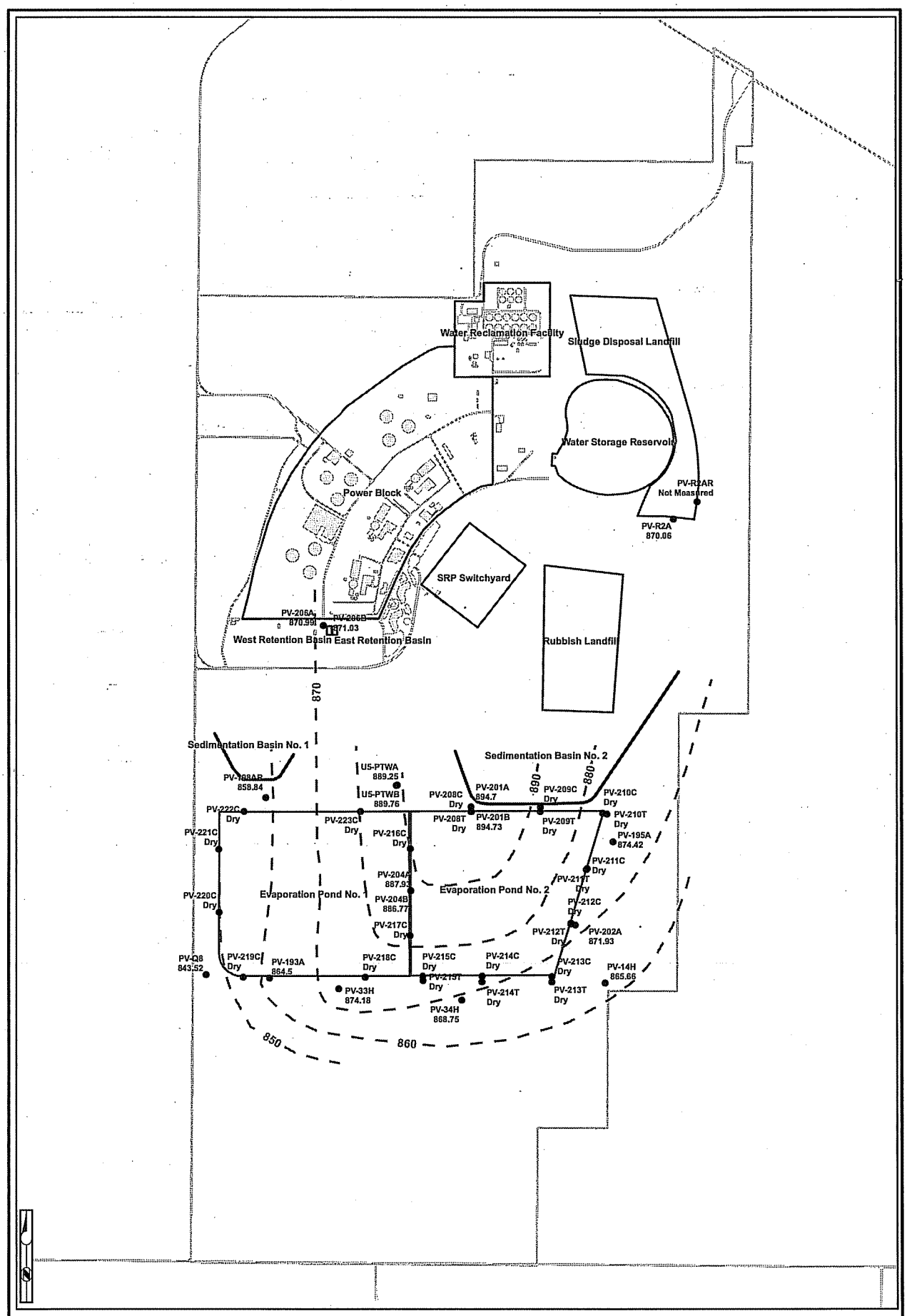
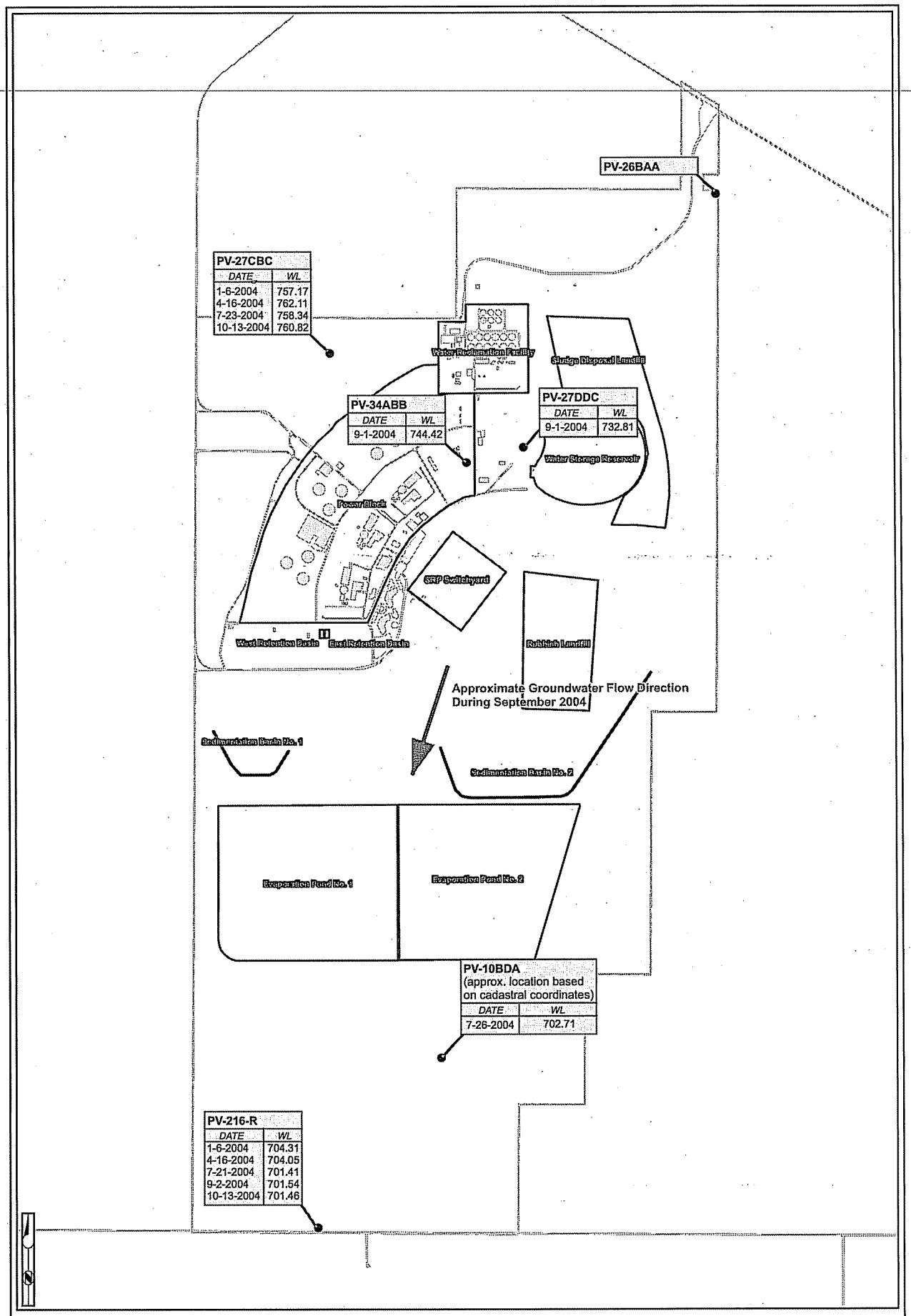


Figure 1-8

Palo Verde Nuclear Generating Station
Quarterly Shallow Groundwater Contour Map
November 2004



0 1,000
Feet

Legend

Wells
(WL Elevation in Feet
Above Mean Sea Level)

Facilities

Site Boundary

Buildings

BROWN AND CALDWELL

Figure 1-9
Palo Verde Nuclear Generating Station
Regional Wells
2004 Water Level Measurements

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186006 5/9/2005

2. IMPOUNDMENT MONITORING

A. PIEZOMETER AND SUMP MONITORING RESULTS

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-208C	01/29/04	942.37		Dry	25.5	Monthly
	02/20/04	942.37		Dry	25.5	Monthly
	03/02/04	942.37		Dry	25.5	Monthly
	04/08/04	942.37		Dry	25.5	Monthly
	05/05/04	942.37		Dry	25.5	Monthly & Weekly
	05/11/04	942.37		Dry	25.5	Weekly
	05/18/04	942.37		Dry	25.5	Weekly
	05/25/04	942.37		Dry	25.5	Weekly
	06/02/04	942.37		Dry	25.5	Monthly & Weekly
	06/11/04	942.37		Dry	25.5	Weekly
	06/15/04	942.37		Dry	25.5	Weekly
	06/24/04	942.37		Dry	25.5	Weekly
	07/01/04	942.37		Dry	25.5	Weekly
	07/09/04	942.37		Dry	25.5	Monthly & Weekly
	07/14/04	942.37		Dry	25.5	Weekly
	07/21/04	942.37		Dry	25.5	Weekly
	07/28/04	942.37		Dry	25.5	Weekly
	08/03/04	942.37		Dry	25.5	Monthly & Weekly
	08/11/04	942.37		Dry	25.5	Weekly
	08/19/04	942.37		Dry	25.5	Weekly
	08/25/04	942.37		Dry	25.5	Weekly
	09/01/04	942.37		Dry	25.5	Monthly & Weekly
	10/06/04	942.37		Dry	25.5	Monthly
	10/14/04	942.37		Dry	25.5	Weekly
	10/19/04	942.37		Dry	25.5	Weekly
	10/29/04	942.37		Dry	25.5	Weekly
	11/03/04	942.37		Dry	25.5	Monthly & Weekly
	11/09/04	942.37		Dry	25.5	Weekly
	11/16/04	942.37		Dry	25.5	Weekly
	11/22/04	942.37		Dry	25.5	Weekly
	12/01/04	943.37		Dry	25.5	Monthly & Weekly
	12/08/04	943.37		Dry	25.5	Weekly
	12/14/04	943.37		Dry	25.5	Weekly
	12/20/04	943.37		Dry	25.5	Weekly
	12/28/04	943.37		Dry	25.5	Weekly
PV-208T	01/29/04	921.72		Dry	15.5	Monthly
	02/20/04	921.72		Dry	15.5	Monthly
	03/02/04	921.72		Dry	15.5	Monthly
	04/08/04	921.72		Dry	15.5	Monthly
	05/05/04	921.72		Dry	15.5	Monthly & Weekly
	05/11/04	921.72		Dry	15.5	Weekly
	05/18/04	921.72		Dry	15.5	Weekly
	05/25/04	921.72		Dry	15.5	Weekly
	06/02/04	921.72		Dry	15.5	Monthly & Weekly
	06/11/04	921.72		Dry	15.5	Weekly
	06/15/04	921.72		Dry	15.5	Weekly
	06/22/04	921.72		Dry	15.5	Weekly
	07/01/04	921.72		Dry	15.5	Weekly
	07/09/04	921.72		Dry	15.5	Monthly & Weekly
	07/14/04	921.72		Dry	15.5	Weekly
	07/20/04	921.72		Dry	15.5	Weekly
	07/28/04	921.72		Dry	15.5	Weekly
	08/03/04	921.72		Dry	15.5	Monthly & Weekly
	08/11/04	921.72		Dry	15.5	Weekly
	08/19/04	921.72		Dry	15.5	Weekly
	08/25/04	921.72		Dry	15.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-208T (cont.)	09/01/04	921.72		Dry	15.5	Monthly & Weekly
	10/06/04	921.72		Dry	15.5	Monthly
	10/14/04	921.72		Dry	15.5	Weekly
	10/19/04	921.72		Dry	15.5	Weekly
	10/29/04	921.72		Dry	15.5	Weekly
	11/03/04	921.72		Dry	15.5	Monthly & Weekly
	11/09/04	921.72		Dry	15.5	Weekly
	11/16/04	921.72		Dry	15.5	Weekly
	11/22/04	921.72		Dry	15.5	Weekly
	12/01/04	921.72		Dry	15.5	Monthly & Weekly
	12/08/04	921.72		Dry	15.5	Weekly
	12/14/04	921.72		Dry	15.5	Weekly
	12/20/04	921.72		Dry	15.5	Weekly
	12/28/04	921.72		Dry	15.5	Weekly
PV-209C	01/29/04	942.71		Dry	35.5	Monthly
	02/20/04	942.71		Dry	35.5	Monthly
	03/02/04	942.71		Dry	35.5	Monthly
	04/08/04	942.71		Dry	35.5	Monthly
	05/05/04	942.71		Dry	35.5	Monthly & Weekly
	05/11/04	942.71		Dry	35.5	Weekly
	05/18/04	942.71		Dry	35.5	Weekly
	05/25/04	942.71		Dry	35.5	Weekly
	06/02/04	942.71		Dry	35.5	Monthly & Weekly
	06/11/04	942.71		Dry	35.5	Weekly
	06/15/04	942.71		Dry	35.5	Weekly
	06/24/04	942.71		Dry	35.5	Weekly
	07/01/04	942.71		Dry	35.5	Weekly
	07/09/04	942.71		Dry	35.5	Monthly & Weekly
	07/14/04	942.71		Dry	35.5	Weekly
	07/21/04	942.71		Dry	35.5	Weekly
	07/28/04	942.71		Dry	35.5	Weekly
	08/03/04	942.71		Dry	35.5	Monthly & Weekly
	08/11/04	942.71		Dry	35.5	Weekly
	08/19/04	942.71		Dry	35.5	Weekly
	08/25/04	942.71		Dry	35.5	Weekly
	09/01/04	942.71		Dry	35.5	Monthly & Weekly
	10/06/04	942.71		Dry	35.5	Monthly
	10/14/04	942.71		Dry	35.5	Weekly
	10/19/04	942.71		Dry	35.5	Weekly
	10/29/04	942.71		Dry	35.5	Weekly
	11/03/04	942.71		Dry	35.5	Monthly & Weekly
	11/09/04	942.71		Dry	35.5	Weekly
	11/16/04	942.71		Dry	35.5	Weekly
	11/22/04	942.71		Dry	35.5	Weekly
	12/01/04	942.71		Dry	35.5	Monthly & Weekly
	12/08/04	942.71		Dry	35.5	Weekly
	12/14/04	942.71		Dry	35.5	Weekly
	12/20/04	942.71		Dry	35.5	Weekly
	12/28/04	942.71		Dry	35.5	Weekly
PV-209T	01/29/04	923.88		Dry	15.5	Monthly
	02/20/04	923.88		Dry	15.5	Monthly
	03/02/04	923.88		Dry	15.5	Monthly
	04/08/04	923.88		Dry	15.5	Monthly
	05/05/04	923.88		Dry	15.5	Monthly & Weekly
	05/11/04	923.88		Dry	15.5	Weekly
	05/18/04	923.88		Dry	15.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-209T (cont.)	05/25/04	923.88		Dry	15.5	Weekly
	06/02/04	923.88		Dry	15.5	Monthly & Weekly
	06/11/04	923.88		Dry	15.5	Weekly
	06/15/04	923.88		Dry	15.5	Weekly
	06/22/04	923.88		Dry	15.5	Weekly
	07/01/04	923.88		Dry	15.5	Weekly
	07/09/04	923.88		Dry	15.5	Monthly & Weekly
	07/14/04	923.88		Dry	15.5	Weekly
	07/20/04	923.88		Dry	15.5	Weekly
	07/28/04	923.88		Dry	15.5	Weekly
	08/03/04	923.88		Dry	15.5	Monthly & Weekly
	08/11/04	923.88		Dry	15.5	Weekly
	08/19/04	923.88		Dry	15.5	Weekly
	08/25/04	923.88		Dry	15.5	Weekly
	09/01/04	923.88		Dry	15.5	Monthly & Weekly
	10/06/04	923.88		Dry	15.5	Monthly
	10/14/04	923.88		Dry	15.5	Weekly
	10/19/04	923.88		Dry	15.5	Weekly
	10/29/04	923.88		Dry	15.5	Weekly
	11/03/04	923.88		Dry	15.5	Monthly & Weekly
	11/09/04	923.88		Dry	15.5	Weekly
	11/16/04	923.88		Dry	15.5	Weekly
	11/22/04	923.88		Dry	15.5	Weekly
	12/01/04	923.88		Dry	15.5	Monthly & Weekly
	12/08/04	923.88		Dry	15.5	Weekly
	12/14/04	923.88		Dry	15.5	Weekly
	12/20/04	923.88		Dry	15.5	Weekly
	12/28/04	923.88		Dry	15.5	Weekly
PV-210C	01/29/04	941.80		Dry	36.5	Monthly
	02/20/04	941.80		Dry	36.5	Monthly
	03/02/04	941.80		Dry	36.5	Monthly
	04/08/04	941.80		Dry	36.5	Monthly
	05/05/04	941.80		Dry	36.5	Monthly & Weekly
	05/11/04	941.80		Dry	36.5	Weekly
	05/18/04	941.80		Dry	36.5	Weekly
	05/25/04	941.80		Dry	36.5	Weekly
	06/02/04	941.80		Dry	36.5	Monthly & Weekly
	06/11/04	941.80		Dry	36.5	Weekly
	06/15/04	941.80		Dry	36.5	Weekly
	06/24/04	941.80		Dry	36.5	Weekly
	07/01/04	941.80		Dry	36.5	Weekly
	07/09/04	941.80		Dry	36.5	Monthly & Weekly
	07/14/04	941.80		Dry	36.5	Weekly
	07/21/04	941.80		Dry	36.5	Weekly
	07/28/04	941.80		Dry	36.5	Weekly
	08/03/04	941.80		Dry	36.5	Monthly & Weekly
	08/11/04	941.80		Dry	36.5	Weekly
	08/19/04	941.80		Dry	36.5	Weekly
	08/25/04	941.80		Dry	36.5	Weekly
	09/01/04	941.80		Dry	36.5	Monthly & Weekly
	10/06/04	941.80		Dry	36.5	Monthly
	10/14/04	941.80		Dry	36.5	Weekly
	10/19/04	941.80		Dry	36.5	Weekly
	10/29/04	941.80		Dry	36.5	Weekly
	11/03/04	941.80		Dry	36.5	Monthly & Weekly
	11/09/04	941.80		Dry	36.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-210C (cont.)	11/16/04	941.80		Dry	36.5	Weekly
	11/22/04	941.80		Dry	36.5	Weekly
	12/01/04	941.80		Dry	36.5	Monthly & Weekly
	12/08/04	941.80		Dry	36.5	Weekly
	12/14/04	941.80		Dry	36.5	Weekly
	12/20/04	941.80		Dry	36.5	Weekly
	12/28/04	941.80		Dry	36.5	Weekly
PV-210T	01/29/04	923.04		Dry	15.5	Monthly
	02/20/04	923.04		Dry	15.5	Monthly
	03/02/04	923.04		Dry	15.5	Monthly
	04/08/04	923.04		Dry	15.5	Monthly
	05/05/04	923.04		Dry	15.5	Monthly & Weekly
	05/11/04	923.04		Dry	15.5	Weekly
	05/18/04	923.04		Dry	15.5	Weekly
	05/25/04	923.04		Dry	15.5	Weekly
	06/02/04	923.04		Dry	15.5	Monthly & Weekly
	06/11/04	923.04		Dry	15.5	Weekly
	06/15/04	923.04		Dry	15.5	Weekly
	06/22/04	923.04		Dry	15.5	Weekly
	07/01/04	923.04		Dry	15.5	Weekly
	07/09/04	923.04		Dry	15.5	Monthly & Weekly
	07/14/04	923.04		Dry	15.5	Weekly
	07/20/04	923.04		Dry	15.5	Weekly
	07/28/04	923.04		Dry	15.5	Weekly
	08/03/04	923.04		Dry	15.5	Monthly & Weekly
	08/11/04	923.04		Dry	15.5	Weekly
	08/19/04	923.04		Dry	15.5	Weekly
	08/25/04	923.04		Dry	15.5	Weekly
	09/01/04	923.04		Dry	15.5	Monthly & Weekly
	10/06/04	923.04		Dry	15.5	Monthly
	10/14/04	923.04		Dry	15.5	Weekly
	10/19/04	923.04		Dry	15.5	Weekly
	10/29/04	923.04		Dry	15.5	Weekly
	11/03/04	923.04		Dry	15.5	Monthly & Weekly
	11/09/04	923.04		Dry	15.5	Weekly
	11/16/04	923.04		Dry	15.5	Weekly
	11/22/04	923.04		Dry	15.5	Weekly
	12/01/04	923.04		Dry	15.5	Monthly & Weekly
	12/08/04	923.04		Dry	15.5	Weekly
	12/14/04	923.04		Dry	15.5	Weekly
	12/20/04	923.04		Dry	15.5	Weekly
	12/28/04	923.04		Dry	15.5	Weekly
PV-211C	01/29/04	942.01		Dry	31.5	Monthly
	02/20/04	942.01		Dry	31.5	Monthly
	03/02/04	942.01		Dry	31.5	Monthly
	04/08/04	942.01		Dry	31.5	Monthly
	05/05/04	942.01		Dry	31.5	Monthly & Weekly
	05/11/04	942.01		Dry	31.5	Weekly
	05/18/04	942.01		Dry	31.5	Weekly
	05/25/04	942.01		Dry	31.5	Weekly
	06/02/04	942.01		Dry	31.5	Monthly & Weekly
	06/11/04	942.01		Dry	31.5	Weekly
	06/15/04	942.01		Dry	31.5	Weekly
	06/24/04	942.01		Dry	31.5	Weekly
	07/01/04	942.01		Dry	31.5	Weekly
	07/09/04	942.01		Dry	31.5	Monthly & Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-211C (cont.)	07/14/04	942.01		Dry	31.5	Weekly
	07/21/04	942.01		Dry	31.5	Weekly
	07/28/04	942.01		Dry	31.5	Weekly
	08/03/04	942.01		Dry	31.5	Monthly & Weekly
	08/11/04	942.01		Dry	31.5	Weekly
	08/19/04	942.01		Dry	31.5	Weekly
	08/25/04	942.01		Dry	31.5	Weekly
	09/01/04	942.01		Dry	31.5	Monthly & Weekly
	10/06/04	942.01		Dry	31.5	Monthly
	10/14/04	942.01		Dry	31.5	Weekly
	10/19/04	942.01		Dry	31.5	Weekly
	10/29/04	942.01		Dry	31.5	Weekly
	11/03/04	942.01		Dry	31.5	Monthly & Weekly
	11/09/04	942.01		Dry	31.5	Weekly
	11/16/04	942.01		Dry	31.5	Weekly
	11/22/04	942.01		Dry	31.5	Weekly
	12/01/04	942.01		Dry	31.5	Monthly & Weekly
	12/08/04	942.01		Dry	31.5	Weekly
	12/14/04	942.01		Dry	31.5	Weekly
	12/20/04	942.01		Dry	31.5	Weekly
	12/28/04	942.01		Dry	31.5	Weekly
PV-211T	01/29/04	918.80		Dry	15.5	Monthly
	02/20/04	918.80		Dry	15.5	Monthly
	03/02/04	918.80		Dry	15.5	Monthly
	04/08/04	918.80		Dry	15.5	Monthly
	05/05/04	918.80		Dry	15.5	Monthly & Weekly
	05/11/04	918.80		Dry	15.5	Weekly
	05/18/04	918.80		Dry	15.5	Weekly
	05/25/04	918.80		Dry	15.5	Weekly
	06/02/04	918.80		Dry	15.5	Monthly & Weekly
	06/11/04	918.80		Dry	15.5	Weekly
	06/15/04	918.80		Dry	15.5	Weekly
	06/22/04	918.80		Dry	15.5	Weekly
	07/01/04	918.80		Dry	15.5	Weekly
	07/09/04	918.80		Dry	15.5	Monthly & Weekly
	07/14/04	918.80		Dry	15.5	Weekly
	07/20/04	918.80		Dry	15.5	Weekly
	07/28/04	918.80		Dry	15.5	Weekly
	08/03/04	918.80		Dry	15.5	Monthly & Weekly
	08/11/04	918.80		Dry	15.5	Weekly
	08/19/04	918.80		Dry	15.5	Weekly
	08/25/04	918.80		Dry	15.5	Weekly
	09/01/04	918.80		Dry	15.5	Monthly & Weekly
	10/06/04	918.80		Dry	15.5	Monthly
	10/14/04	918.80		Dry	15.5	Weekly
	10/19/04	918.80		Dry	15.5	Weekly
	10/29/04	918.80		Dry	15.5	Weekly
	11/03/04	918.80		Dry	15.5	Monthly & Weekly
	11/09/04	918.80		Dry	15.5	Weekly
	11/16/04	918.80		Dry	15.5	Weekly
	11/22/04	918.80		Dry	15.5	Weekly
	12/01/04	918.80		Dry	15.5	Monthly & Weekly
	12/08/04	918.80		Dry	15.5	Weekly
	12/14/04	918.80		Dry	15.5	Weekly
	12/20/04	918.80		Dry	15.5	Weekly
	12/28/04	918.80		Dry	15.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-212C	01/29/04	941.86		Dry	45.5	Monthly
	02/20/04	941.86		Dry	45.5	Monthly
	03/02/04	941.86		Dry	45.5	Monthly
	04/08/04	941.86		Dry	45.5	Monthly
	05/05/04	941.86		Dry	45.5	Monthly & Weekly
	05/11/04	941.86		Dry	45.5	Weekly
	05/18/04	941.86		Dry	45.5	Weekly
	05/25/04	941.86		Dry	45.5	Weekly
	06/02/04	941.86		Dry	45.5	Monthly & Weekly
	06/11/04	941.86		Dry	45.5	Weekly
	06/15/04	941.86		Dry	45.5	Weekly
	06/24/04	941.86		Dry	45.5	Weekly
	07/01/04	941.86		Dry	45.5	Weekly
	07/09/04	941.86		Dry	45.5	Monthly & Weekly
	07/14/04	941.86		Dry	45.5	Weekly
	07/21/04	941.86		Dry	45.5	Weekly
	07/28/04	941.86		Dry	45.5	Weekly
	08/03/04	941.86		Dry	45.5	Monthly & Weekly
	08/11/04	941.86		Dry	45.5	Weekly
	08/19/04	941.86		Dry	45.5	Weekly
	08/25/04	941.86		Dry	45.5	Weekly
	09/01/04	941.86		Dry	45.5	Monthly & Weekly
	10/06/04	941.86		Dry	45.5	Monthly
	10/14/04	941.86		Dry	45.5	Weekly
	10/19/04	941.86		Dry	45.5	Weekly
	10/29/04	941.86		Dry	45.5	Weekly
	11/03/04	941.86		Dry	45.5	Monthly & Weekly
	11/09/04	941.86		Dry	45.5	Weekly
	11/16/04	941.86		Dry	45.5	Weekly
	11/22/04	941.86		Dry	45.5	Weekly
	12/01/04	941.86		Dry	45.5	Monthly & Weekly
	12/08/04	941.86		Dry	45.5	Weekly
	12/14/04	941.86		Dry	45.5	Weekly
	12/20/04	941.86		Dry	45.5	Weekly
	12/28/04	941.86		Dry	45.5	Weekly
PV-212T	01/29/04	914.50		Dry	15.5	Monthly
	02/20/04	914.50		Dry	15.5	Monthly
	03/02/04	914.50		Dry	15.5	Monthly
	04/08/04	914.50		Dry	15.5	Monthly
	05/05/04	914.50		Dry	15.5	Monthly & Weekly
	05/11/04	914.50		Dry	15.5	Weekly
	05/18/04	914.50		Dry	15.5	Weekly
	05/25/04	914.50		Dry	15.5	Weekly
	06/02/04	914.50		Dry	15.5	Monthly & Weekly
	06/11/04	914.50		Dry	15.5	Weekly
	06/15/04	914.50		Dry	15.5	Weekly
	06/22/04	914.50		Dry	15.5	Weekly
	07/01/04	914.50		Dry	15.5	Weekly
	07/09/04	914.50		Dry	15.5	Monthly & Weekly
	07/14/04	914.50		Dry	15.5	Weekly
	07/20/04	914.50		Dry	15.5	Weekly
	07/28/04	914.50		Dry	15.5	Weekly
	08/03/04	914.50		Dry	15.5	Monthly & Weekly
	08/11/04	914.50		Dry	15.5	Weekly
	08/19/04	914.50		Dry	15.5	Weekly
	08/25/04	914.50		Dry	15.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-212T (cont.)	09/01/04	914.50		Dry	15.5	Monthly & Weekly
	10/06/04	914.50		Dry	15.5	Monthly
	10/14/04	914.50		Dry	15.5	Weekly
	10/19/04	914.50		Dry	15.5	Weekly
	10/29/04	914.50		Dry	15.5	Weekly
	11/03/04	914.50		Dry	15.5	Monthly & Weekly
	11/09/04	914.50		Dry	15.5	Weekly
	11/16/04	914.50		Dry	15.5	Weekly
	11/22/04	914.50		Dry	15.5	Weekly
	12/01/04	914.50		Dry	15.5	Monthly & Weekly
	12/08/04	914.50		Dry	15.5	Weekly
	12/14/04	914.50		Dry	15.5	Weekly
	12/20/04	914.50		Dry	15.5	Weekly
	12/28/04	914.50		Dry	15.5	Weekly
PV-213C	01/29/04	941.76		Dry	49.5	Monthly
	02/20/04	941.76		Dry	49.5	Monthly
	03/02/04	941.76		Dry	49.5	Monthly
	04/08/04	941.76		Dry	49.5	Monthly
	05/05/04	941.76		Dry	49.5	Monthly & Weekly
	05/11/04	941.76		Dry	49.5	Weekly
	05/18/04	941.76		Dry	49.5	Weekly
	05/25/04	941.76		Dry	49.5	Weekly
	06/02/04	941.76		Dry	49.5	Monthly & Weekly
	06/11/04	941.76		Dry	49.5	Weekly
	06/15/04	941.76		Dry	49.5	Weekly
	06/24/04	941.76		Dry	49.5	Weekly
	07/01/04	941.76		Dry	49.5	Weekly
	07/09/04	941.76		Dry	49.5	Monthly & Weekly
	07/14/04	941.76		Dry	49.5	Weekly
	07/21/04	941.76		Dry	49.5	Weekly
	07/28/04	941.76		Dry	49.5	Weekly
	08/03/04	941.76		Dry	49.5	Monthly & Weekly
	08/11/04	941.76		Dry	49.5	Weekly
	08/19/04	941.76		Dry	49.5	Weekly
	08/25/04	941.76		Dry	49.5	Weekly
	09/01/04	941.76		Dry	49.5	Monthly & Weekly
	10/06/04	941.76		Dry	49.5	Monthly
	10/14/04	941.76		Dry	49.5	Weekly
	10/19/04	941.76		Dry	49.5	Weekly
	10/29/04	941.76		Dry	49.5	Weekly
	11/03/04	941.76		Dry	49.5	Monthly & Weekly
	11/09/04	941.76		Dry	49.5	Weekly
	11/16/04	941.76		Dry	49.5	Weekly
	11/22/04	941.76		Dry	49.5	Weekly
	12/01/04	941.76		Dry	49.5	Monthly & Weekly
	12/08/04	941.76		Dry	49.5	Weekly
	12/14/04	941.76		Dry	49.5	Weekly
	12/20/04	941.76		Dry	49.5	Weekly
	12/28/04	941.76		Dry	49.5	Weekly
PV-213T	01/29/04	909.22		Dry	15.5	Monthly
	02/20/04	909.22		Dry	15.5	Monthly
	03/02/04	909.22		Dry	15.5	Monthly
	04/08/04	909.22		Dry	15.5	Monthly
	05/05/04	909.22		Dry	15.5	Monthly & Weekly
	05/11/04	909.22		Dry	15.5	Weekly
	05/18/04	909.22		Dry	15.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-213T (cont.)	05/25/04	909.22		Dry	15.5	Weekly
	06/02/04	909.22		Dry	15.5	Monthly & Weekly
	06/11/04	909.22		Dry	15.5	Weekly
	06/15/04	909.22		Dry	15.5	Weekly
	06/22/04	909.22		Dry	15.5	Weekly
	07/01/04	909.22		Dry	15.5	Weekly
	07/09/04	909.22		Dry	15.5	Monthly & Weekly
	07/14/04	909.22		Dry	15.5	Weekly
	07/20/04	909.22		Dry	15.5	Weekly
	07/28/04	909.22		Dry	15.5	Weekly
	08/03/04	909.22		Dry	15.5	Monthly & Weekly
	08/11/04	909.22		Dry	15.5	Weekly
	08/19/04	909.22		Dry	15.5	Weekly
	08/25/04	909.22		Dry	15.5	Weekly
	09/01/04	909.22		Dry	15.5	Monthly & Weekly
	10/06/04	909.22		Dry	15.5	Monthly
	10/14/04	909.22		Dry	15.5	Weekly
	10/19/04	909.22		Dry	15.5	Weekly
	10/29/04	909.22		Dry	15.5	Weekly
	11/03/04	909.22		Dry	15.5	Monthly & Weekly
	11/09/04	909.22		Dry	15.5	Weekly
	11/16/04	909.22		Dry	15.5	Weekly
	11/22/04	909.22		Dry	15.5	Weekly
	12/01/04	909.22		Dry	15.5	Monthly & Weekly
	12/08/04	909.22		Dry	15.5	Weekly
	12/14/04	909.22		Dry	15.5	Weekly
	12/20/04	909.22		Dry	15.5	Weekly
	12/28/04	909.22		Dry	15.5	Weekly
PV-214C	01/29/04	942.20		Dry	50.5	Monthly
	02/20/04	942.20		Dry	50.5	Monthly
	03/02/04	942.20		Dry	50.5	Monthly
	04/08/04	942.20		Dry	50.5	Monthly
	05/05/04	942.20		Dry	50.5	Monthly & Weekly
	05/11/04	942.20		Dry	50.5	Weekly
	05/18/04	942.20		Dry	50.5	Weekly
	05/25/04	942.20		Dry	50.5	Weekly
	06/02/04	942.20		Dry	50.5	Monthly & Weekly
	06/11/04	942.20		Dry	50.5	Weekly
	06/15/04	942.20		Dry	50.5	Weekly
	06/24/04	942.20		Dry	50.5	Weekly
	07/01/04	942.20		Dry	50.5	Weekly
	07/09/04	942.20		Dry	50.5	Monthly & Weekly
	07/14/04	942.20		Dry	50.5	Weekly
	07/21/04	942.20		Dry	50.5	Weekly
	07/28/04	942.20		Dry	50.5	Weekly
	08/03/04	942.20		Dry	50.5	Monthly & Weekly
	08/11/04	942.20		Dry	50.5	Weekly
	08/19/04	942.20		Dry	50.5	Weekly
	08/25/04	942.20		Dry	50.5	Weekly
	09/01/04	942.20		Dry	50.5	Monthly & Weekly
	10/06/04	942.20		Dry	50.5	Monthly
	10/14/04	942.20		Dry	50.5	Weekly
	10/19/04	942.20		Dry	50.5	Weekly
	10/29/04	942.20		Dry	50.5	Weekly
	11/03/04	942.20		Dry	50.5	Monthly & Weekly
	11/09/04	942.20		Dry	50.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-214C (cont.)	11/16/04	942.20		Dry	50.5	Weekly
	11/22/04	942.20		Dry	50.5	Weekly
	12/01/04	942.20		Dry	50.5	Monthly & Weekly
	12/08/04	942.20		Dry	50.5	Weekly
	12/14/04	942.20		Dry	50.5	Weekly
	12/20/04	942.20		Dry	50.5	Weekly
	12/28/04	942.20		Dry	50.5	Weekly
PV-214T	01/29/04	907.15		Dry	15.5	Monthly
	02/20/04	907.15		Dry	15.5	Monthly
	03/02/04	907.15		Dry	15.5	Monthly
	04/08/04	907.15		Dry	15.5	Monthly
	05/05/04	907.15		Dry	15.5	Monthly & Weekly
	05/11/04	907.15		Dry	15.5	Weekly
	05/18/04	907.15		Dry	15.5	Weekly
	05/25/04	907.15		Dry	15.5	Weekly
	06/02/04	907.15		Dry	15.5	Monthly & Weekly
	06/11/04	907.15		Dry	15.5	Weekly
	06/15/04	907.15		Dry	15.5	Weekly
	06/22/04	907.15		Dry	15.5	Weekly
	07/01/04	907.15		Dry	15.5	Weekly
	07/09/04	907.15		Dry	15.5	Monthly & Weekly
	07/14/04	907.15		Dry	15.5	Weekly
	07/20/04	907.15		Dry	15.5	Weekly
	07/28/04	907.15		Dry	15.5	Weekly
	08/03/04	907.15		Dry	15.5	Monthly & Weekly
	08/11/04	907.15		Dry	15.5	Weekly
	08/19/04	907.15		Dry	15.5	Weekly
	08/25/04	907.15		Dry	15.5	Weekly
	09/01/04	907.15		Dry	15.5	Monthly & Weekly
	10/06/04	907.15		Dry	15.5	Monthly
	10/14/04	907.15		Dry	15.5	Weekly
	10/19/04	907.15		Dry	15.5	Weekly
	10/29/04	907.15		Dry	15.5	Weekly
	11/03/04	907.15		Dry	15.5	Monthly & Weekly
	11/09/04	907.15		Dry	15.5	Weekly
	11/16/04	907.15		Dry	15.5	Weekly
	11/22/04	907.15		Dry	15.5	Weekly
	12/01/04	907.15		Dry	15.5	Monthly & Weekly
	12/08/04	907.15		Dry	15.5	Weekly
	12/14/04	907.15		Dry	15.5	Weekly
	12/20/04	907.15		Dry	15.5	Weekly
	12/28/04	907.15		Dry	15.5	Weekly
PV-215C	01/29/04	941.84		Dry	40.5	Monthly
	02/20/04	941.84		Dry	40.5	Monthly
	03/02/04	941.84		Dry	40.5	Monthly
	04/08/04	941.84		Dry	40.5	Monthly
	05/05/04	941.84		Dry	40.5	Monthly & Weekly
	05/11/04	941.84		Dry	40.5	Weekly
	05/18/04	941.84		Dry	40.5	Weekly
	05/25/04	941.84		Dry	40.5	Weekly
	06/02/04	941.84		Dry	40.5	Monthly & Weekly
	06/11/04	941.84		Dry	40.5	Weekly
	06/15/04	941.84		Dry	40.5	Weekly
	06/24/04	941.84		Dry	40.5	Weekly
	07/01/04	941.84		Dry	40.5	Weekly
	07/09/04	941.84		Dry	40.5	Monthly & Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-215C (cont.)	07/14/04	941.84		Dry	40.5	Weekly
	07/21/04	941.84		Dry	40.5	Weekly
	07/28/04	941.84		Dry	40.5	Weekly
	08/03/04	941.84		Dry	40.5	Monthly & Weekly
	08/11/04	941.84		Dry	40.5	Weekly
	08/19/04	941.84		Dry	40.5	Weekly
	08/25/04	941.84		Dry	40.5	Weekly
	09/01/04	941.84		Dry	40.5	Monthly & Weekly
	10/06/04	941.84		Dry	40.5	Monthly
	10/14/04	941.84		Dry	40.5	Weekly
	10/19/04	941.84		Dry	40.5	Weekly
	10/29/04	941.84		Dry	40.5	Weekly
	11/03/04	941.84		Dry	40.5	Monthly & Weekly
	11/09/04	941.84		Dry	40.5	Weekly
	11/16/04	941.84		Dry	40.5	Weekly
	11/22/04	941.84		Dry	40.5	Weekly
	12/01/04	941.84		Dry	40.5	Monthly & Weekly
	12/08/04	941.84		Dry	40.5	Weekly
	12/14/04	941.84		Dry	40.5	Weekly
	12/20/04	941.84		Dry	40.5	Weekly
	12/28/04	941.84		Dry	40.5	Weekly
PV-215T	01/29/04	917.13		Dry	15.5	Monthly
	02/20/04	917.13		Dry	15.5	Monthly
	03/02/04	917.13		Dry	15.5	Monthly
	04/08/04	917.13		Dry	15.5	Monthly
	05/05/04	917.13		Dry	15.5	Monthly & Weekly
	05/11/04	917.13		Dry	15.5	Weekly
	05/18/04	917.13		Dry	15.5	Weekly
	05/25/04	917.13		Dry	15.5	Weekly
	06/02/04	917.13		Dry	15.5	Monthly & Weekly
	06/11/04	917.13		Dry	15.5	Weekly
	06/15/04	917.13		Dry	15.5	Weekly
	06/22/04	917.13		Dry	15.5	Weekly
	07/01/04	917.13		Dry	15.5	Weekly
	07/09/04	917.13		Dry	15.5	Monthly & Weekly
	07/14/04	917.13		Dry	15.5	Weekly
	07/20/04	917.13		Dry	15.5	Weekly
	07/28/04	917.13		Dry	15.5	Weekly
	08/03/04	917.13		Dry	15.5	Monthly & Weekly
	08/11/04	917.13		Dry	15.5	Weekly
	08/19/04	917.13		Dry	15.5	Weekly
	08/25/04	917.13		Dry	15.5	Weekly
	09/01/04	917.13		Dry	15.5	Monthly & Weekly
	10/06/04	917.13		Dry	15.5	Monthly
	10/14/04	917.13		Dry	15.5	Weekly
	10/19/04	917.13		Dry	15.5	Weekly
	10/29/04	917.13		Dry	15.5	Weekly
	11/03/04	917.13		Dry	15.5	Monthly & Weekly
	11/09/04	917.13		Dry	15.5	Weekly
	11/16/04	917.13		Dry	15.5	Weekly
	11/22/04	917.13		Dry	15.5	Weekly
	12/01/04	917.13		Dry	15.5	Monthly & Weekly
	12/08/04	917.13		Dry	15.5	Weekly
	12/14/04	917.13		Dry	15.5	Weekly
	12/20/04	917.13		Dry	15.5	Weekly
	12/28/04	917.13		Dry	15.5	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-216C	01/29/04	943.00		Dry	21	Monthly
	02/19/04	943.00		Dry	21	Monthly
	03/02/04	943.00		Dry	21	Monthly
	04/08/04	943.00		Dry	21	Monthly
	05/05/04	943.00		Dry	21	Monthly & Weekly
	05/11/04	943.00		Dry	21	Weekly
	05/18/04	943.00		Dry	21	Weekly
	05/25/04	943.00		Dry	21	Weekly
	06/02/04	943.00		Dry	21	Monthly & Weekly
	06/11/04	943.00		Dry	21	Weekly
	06/15/04	943.00		Dry	21	Weekly
	06/22/04	943.00		Dry	21	Weekly
	07/01/04	943.00		Dry	21	Weekly
	07/09/04	943.00		Dry	21	Monthly & Weekly
	07/14/04	943.00		Dry	21	Weekly
	07/21/04	943.00		Dry	21	Weekly
	07/28/04	943.00		Dry	21	Weekly
	08/03/04	943.00		Dry	21	Monthly & Weekly
	08/11/04	943.00		Dry	21	Weekly
	08/19/04	943.00		Dry	21	Weekly
	08/25/04	943.00		Dry	21	Weekly
	09/01/04	943.00		Dry	21	Monthly & Weekly
	10/06/04	943.00		Dry	21	Monthly
	10/14/04	943.00		Dry	21	Weekly
	10/19/04	943.00		Dry	21	Weekly
	10/29/04	943.00		Dry	21	Weekly
	11/03/04	943.00		Dry	21	Monthly & Weekly
	11/09/04	943.00		Dry	21	Weekly
	11/16/04	943.00		Dry	21	Weekly
	11/22/04	943.00		Dry	21	Weekly
	12/01/04	943.00		Dry	21	Monthly & Weekly
	12/08/04	943.00		Dry	21	Weekly
	12/14/04	943.00		Dry	21	Weekly
	12/20/04	943.00		Dry	21	Weekly
	12/28/04	943.00		Dry	21	Weekly
PV-217C	01/29/04	943.00		Dry	34	Monthly
	02/19/04	943.00		Dry	34	Monthly
	03/02/04	943.00		Dry	34	Monthly
	04/08/04	943.00		Dry	34	Monthly
	05/05/04	943.00		Dry	34	Monthly & Weekly
	05/11/04	943.00		Dry	34	Weekly
	05/18/04	943.00		Dry	34	Weekly
	05/25/04	943.00		Dry	34	Weekly
	06/02/04	943.00		Dry	34	Monthly & Weekly
	06/11/04	943.00		Dry	34	Weekly
	06/15/04	943.00		Dry	34	Weekly
	06/22/04	943.00		Dry	34	Weekly
	07/01/04	943.00		Dry	34	Weekly
	07/09/04	943.00		Dry	34	Monthly & Weekly
	07/14/04	943.00		Dry	34	Weekly
	07/28/04	943.00		Dry	34	Weekly
	08/03/04	943.00		Dry	34	Monthly & Weekly
	08/11/04	943.00		Dry	34	Weekly
	08/19/04	943.00		Dry	34	Weekly
	08/25/04	943.00		Dry	34	Weekly
	09/01/04	943.00		Dry	34	Monthly & Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-217C (cont.)	10/06/04	943.00		Dry	34	Monthly
	10/14/04	943.00		Dry	34	Weekly
	10/19/04	943.00		Dry	34	Weekly
	10/29/04	943.00		Dry	34	Weekly
	11/03/04	943.00		Dry	34	Monthly & Weekly
	11/09/04	943.00		Dry	34	Weekly
	11/16/04	943.00		Dry	34	Weekly
	11/22/04	943.00		Dry	34	Weekly
	12/01/04	943.00		Dry	34	Monthly & Weekly
	12/08/04	943.00		Dry	34	Weekly
	12/14/04	943.00		Dry	34	Weekly
	12/20/04	943.00		Dry	34	Weekly
	12/28/04	943.00		Dry	34	Weekly
PV-218C	01/29/04	943.00		Dry	34	Monthly
	02/19/04	943.00		Dry	34	Monthly
	03/02/04	943.00		Dry	34	Monthly
	04/08/04	943.00		Dry	34	Monthly
	05/05/04	943.00		Dry	34	Monthly & Weekly
	05/11/04	943.00		Dry	34	Weekly
	05/18/04	943.00		Dry	34	Weekly
	05/25/04	943.00		Dry	34	Weekly
	06/02/04	943.00		Dry	34	Monthly & Weekly
	06/11/04	943.00		Dry	34	Weekly
	06/15/04	943.00		Dry	34	Weekly
	06/22/04	943.00		Dry	34	Weekly
	07/01/04	943.00		Dry	34	Weekly
	07/09/04	943.00		Dry	34	Monthly & Weekly
	07/14/04	943.00		Dry	34	Weekly
	07/21/04	943.00		Dry	34	Weekly
	07/28/04	943.00		Dry	34	Weekly
	08/03/04	943.00		Dry	34	Monthly & Weekly
	08/11/04	943.00		Dry	34	Weekly
	08/19/04	943.00		Dry	34	Weekly
	08/25/04	943.00		Dry	34	Weekly
	09/01/04	943.00		Dry	34	Monthly & Weekly
	10/06/04	943.00		Dry	34	Monthly
	10/14/04	943.00		Dry	34	Weekly
	10/19/04	943.00		Dry	34	Weekly
	10/29/04	943.00		Dry	34	Weekly
	11/03/04	943.00		Dry	34	Monthly & Weekly
	11/09/04	943.00		Dry	34	Weekly
	11/16/04	943.00		Dry	34	Weekly
	11/22/04	943.00		Dry	34	Weekly
	12/01/04	943.00		Dry	34	Monthly & Weekly
	12/08/04	943.00		Dry	34	Weekly
	12/14/04	943.00		Dry	34	Weekly
	12/20/04	943.00		Dry	34	Weekly
	12/28/04	943.00		Dry	34	Weekly
PV-219C	01/29/04	943.00		Dry	25	Monthly
	02/19/04	943.00		Dry	25	Monthly
	03/02/04	943.00		Dry	25	Monthly
	04/08/04	943.00		Dry	25	Monthly
	05/05/04	943.00		Dry	25	Monthly & Weekly
	05/11/04	943.00		Dry	25	Weekly
	05/18/04	943.00		Dry	25	Weekly
	05/25/04	943.00		Dry	25	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-219C (cont.)	06/02/04	943.00		Dry	25	Monthly & Weekly
	06/11/04	943.00		Dry	25	Weekly
	06/15/04	943.00		Dry	25	Weekly
	06/22/04	943.00		Dry	25	Weekly
	07/01/04	943.00		Dry	25	Weekly
	07/09/04	943.00		Dry	25	Monthly & Weekly
	07/14/04	943.00		Dry	25	Weekly
	07/21/04	943.00		Dry	25	Weekly
	07/28/04	943.00		Dry	25	Weekly
	08/03/04	943.00		Dry	25	Monthly & Weekly
	08/11/04	943.00		Dry	25	Weekly
	08/19/04	943.00		Dry	25	Weekly
	08/25/04	943.00		Dry	25	Weekly
	09/01/04	943.00		Dry	25	Monthly & Weekly
	10/06/04	943.00		Dry	25	Monthly
	10/14/04	943.00		Dry	25	Weekly
	10/19/04	943.00		Dry	25	Weekly
	10/29/04	943.00		Dry	25	Weekly
	11/03/04	943.00		Dry	25	Weekly
	11/09/04	943.00		Dry	25	Weekly
	11/16/04	943.00		Dry	25	Weekly
	11/22/04	943.00		Dry	25	Weekly
	12/01/04	943.00		Dry	25	Monthly & Weekly
	12/08/04	943.00		Dry	25	Weekly
	12/14/04	943.00		Dry	25	Weekly
	12/20/04	943.00		Dry	25	Weekly
	12/28/04	943.00		Dry	25	Weekly
PV-220C	01/29/04	943.00		Dry	25	Monthly
	02/19/04	943.00		Dry	25	Monthly
	03/02/04	943.00		Dry	25	Monthly
	04/08/04	943.00		Dry	25	Monthly
	05/05/04	943.00		Dry	25	Monthly & Weekly
	05/11/04	943.00		Dry	25	Weekly
	05/18/04	943.00		Dry	25	Weekly
	05/25/04	943.00		Dry	25	Weekly
	06/02/04	943.00		Dry	25	Monthly & Weekly
	06/11/04	943.00		Dry	25	Weekly
	06/15/04	943.00		Dry	25	Weekly
	06/22/04	943.00		Dry	25	Weekly
	07/01/04	943.00		Dry	25	Weekly
	07/09/04	943.00		Dry	25	Monthly & Weekly
	07/14/04	943.00		Dry	25	Weekly
	07/21/04	943.00		Dry	25	Weekly
	07/28/04	943.00		Dry	25	Weekly
	08/03/04	943.00		Dry	25	Monthly & Weekly
	08/11/04	943.00		Dry	25	Weekly
	08/19/04	943.00		Dry	25	Weekly
	08/25/04	943.00		Dry	25	Weekly
	09/01/04	943.00		Dry	25	Monthly & Weekly
	10/06/04	943.00		Dry	25	Monthly
	10/14/04	943.00		Dry	25	Weekly
	10/19/04	943.00		Dry	25	Weekly
	10/29/04	943.00		Dry	25	Weekly
	11/03/04	943.00		Dry	25	Monthly & Weekly
	11/09/04	943.00		Dry	25	Weekly
	11/16/04	943.00		Dry	25	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-220C (cont.)	11/22/04	943.00		Dry	25	Weekly
	12/01/04	943.00		Dry	25	Monthly & Weekly
	12/08/04	943.00		Dry	25	Weekly
	12/14/04	943.00		Dry	25	Weekly
	12/20/04	943.00		Dry	25	Weekly
	12/28/04	943.00		Dry	25	Weekly
PV-221C	01/29/04	943.00		Dry	17	Monthly
	02/19/04	943.00		Dry	17	Monthly
	03/02/04	943.00		Dry	17	Monthly
	04/08/04	943.00		Dry	17	Monthly
	05/05/04	943.00		Dry	17	Monthly & Weekly
	05/11/04	943.00		Dry	17	Weekly
	05/18/04	943.00		Dry	17	Weekly
	05/25/04	943.00		Dry	17	Weekly
	06/02/04	943.00		Dry	17	Monthly & Weekly
	06/11/04	943.00		Dry	17	Weekly
	06/15/04	943.00		Dry	17	Weekly
	06/22/04	943.00		Dry	17	Weekly
	07/01/04	943.00		Dry	17	Weekly
	07/09/04	943.00		Dry	17	Monthly & Weekly
	07/14/04	943.00		Dry	17	Weekly
	07/21/04	943.00		Dry	17	Weekly
	07/28/04	943.00		Dry	17	Weekly
	08/03/04	943.00		Dry	17	Monthly & Weekly
	08/11/04	943.00		Dry	17	Weekly
	08/19/04	943.00		Dry	17	Weekly
	08/25/04	943.00		Dry	17	Weekly
	09/01/04	943.00		Dry	17	Monthly & Weekly
	10/06/04	943.00		Dry	17	Monthly
	10/14/04	943.00		Dry	17	Weekly
	10/19/04	943.00		Dry	17	Weekly
	10/29/04	943.00		Dry	17	Weekly
	11/03/04	943.00		Dry	17	Monthly & Weekly
	11/09/04	943.00		Dry	17	Weekly
	11/16/04	943.00		Dry	17	Weekly
	11/22/04	943.00		Dry	17	Weekly
	12/01/04	943.00		Dry	17	Monthly & Weekly
	12/08/04	943.00		Dry	17	Weekly
	12/14/04	943.00		Dry	17	Weekly
	12/20/04	943.00		Dry	17	Weekly
	12/28/04	943.00		Dry	17	Weekly
PV-222C	01/29/04	943.00		Dry	17	Monthly
	02/19/04	943.00		Dry	17	Monthly
	03/02/04	943.00		Dry	17	Monthly
	04/08/04	943.00		Dry	17	Monthly
	05/05/04	943.00		Dry	17	Monthly & Weekly
	05/11/04	943.00		Dry	17	Weekly
	05/18/04	943.00		Dry	17	Weekly
	05/25/04	943.00		Dry	17	Weekly
	06/02/04	943.00		Dry	17	Monthly & Weekly
	06/11/04	943.00		Dry	17	Weekly
	06/15/04	943.00		Dry	17	Weekly
	06/22/04	943.00		Dry	17	Weekly
	07/01/04	943.00		Dry	17	Weekly
	07/09/04	943.00		Dry	17	Monthly & Weekly
	07/14/04	943.00		Dry	17	Weekly

TABLE 2A-1. PIEZOMETER WATER LEVEL SUMMARY TABLE

SAMPLE LOCATION	DATE MEASURED	ELEVATION TOP OF CASING	MEASURED DEPTH TO WATER	ELEVATION WATER LAVEL	ALERT LEVEL DTW	TYPE OF MEASUREMENT
PV-222C (cont.)	07/21/04	943.00		Dry	17	Weekly
	07/28/04	943.00		Dry	17	Weekly
	08/03/04	943.00		Dry	17	Monthly & Weekly
	08/11/04	943.00		Dry	17	Weekly
	08/19/04	943.00		Dry	17	Weekly
	08/25/04	943.00		Dry	17	Weekly
	09/01/04	943.00		Dry	17	Monthly & Weekly
	10/06/04	943.00		Dry	17	Monthly
	10/14/04	943.00		Dry	17	Weekly
	10/19/04	943.00		Dry	17	Weekly
	10/29/04	943.00		Dry	17	Weekly
	11/03/04	943.00		Dry	17	Monthly & Weekly
	11/09/04	943.00		Dry	17	Weekly
	11/16/04	943.00		Dry	17	Weekly
	11/22/04	943.00		Dry	17	Weekly
	12/01/04	943.00		Dry	17	Monthly & Weekly
	12/08/04	943.00		Dry	17	Weekly
	12/14/04	943.00		Dry	17	Weekly
	12/20/04	943.00		Dry	17	Weekly
	12/28/04	943.00		Dry	17	Weekly
PV-223C	01/29/04	943.00		Dry	21.5	Monthly
	02/19/04	943.00		Dry	21.5	Monthly
	03/02/04	943.00		Dry	21.5	Monthly
	04/08/04	943.00		Dry	21.5	Monthly
	05/05/04	943.00		Dry	21.5	Monthly & Weekly
	05/11/04	943.00		Dry	21.5	Weekly
	05/18/04	943.00		Dry	21.5	Weekly
	05/25/04	943.00		Dry	21.5	Weekly
	06/02/04	943.00		Dry	21.5	Monthly & Weekly
	06/11/04	943.00		Dry	21.5	Weekly
	06/15/04	943.00		Dry	21.5	Weekly
	06/22/04	943.00		Dry	21.5	Weekly
	07/01/04	943.00		Dry	21.5	Weekly
	07/09/04	943.00		Dry	21.5	Monthly & Weekly
	07/14/04	943.00		Dry	21.5	Weekly
	07/21/04	943.00		Dry	21.5	Weekly
	07/28/04	943.00		Dry	21.5	Weekly
	08/03/04	943.00		Dry	21.5	Monthly & Weekly
	08/11/04	943.00		Dry	21.5	Weekly
	08/19/04	943.00		Dry	21.5	Weekly
	08/25/04	943.00		Dry	21.5	Weekly
	09/01/04	943.00		Dry	21.5	Monthly & Weekly
	10/06/04	943.00		Dry	21.5	Monthly
	10/14/04	943.00		Dry	21.5	Weekly
	10/19/04	943.00		Dry	21.5	Weekly
	10/29/04	943.00		Dry	21.5	Weekly
	11/03/04	943.00		Dry	21.5	Monthly & Weekly
	11/09/04	943.00		Dry	21.5	Weekly
	11/16/04	943.00		Dry	21.5	Weekly
	11/22/04	943.00		Dry	21.5	Weekly
	12/01/04	943.00		Dry	21.5	Monthly & Weekly
	12/08/04	943.00		Dry	21.5	Weekly
	12/14/04	943.00		Dry	21.5	Weekly
	12/20/04	943.00		Dry	21.5	Weekly
	12/28/04	943.00		Dry	21.5	Weekly

TABLE 2A-2. 2004 SUMP MONITORING RESULTS

	SAMPLE DATE	FIELD pH (SU)	FIELD CONDUCTIVITY (umhos/cm)	POTASSIUM (mg/L)	TRITIUM (pCi/L)	CESIUM-137 (pCi/L)	COBALT-60 (pCi/L)
Evaporation Pond 1 SE Sump	01/27/04	7.90	120,300				
	02/03/04	7.86	137,500				
	02/06/04	8.08	126,200				
	02/13/04	8.04	133,400				
	02/20/04	8.13	136,600				
	02/26/04	8.11	133,000				
	03/04/04	8.12	132,400				
	03/11/04	8.19	135,800				
	03/17/04	8.08	129,800				
	04/07/04	7.95	133,900				
	04/16/04	8.25	137,900				
	04/29/04	8.31	135,500				
	05/06/04	8.23	135,600				
	05/21/04	8.04	142,800				
	05/28/04	8.02	137,700				
	06/16/04	7.84	136,000				
	07/08/04	7.92	--				
	07/28/04	7.79	142,800				
	08/27/04	7.85	144,000				
	09/28/04	7.60	147,300				
	10/13/04	7.70	71,000				
	10/20/04	7.84	156,400				
Evaporation Pond 1 SW Sump	9/1/04	7.57	83,100				
	10/13/04	7.5	98,000				
	10/20/04	7.74	105,400				
Evaporation Pond 2 NE Sump	11/9/04	6.81	857	18	≤3,000	≤18	≤15
Evaporation Pond 2 SW Sump	2004	DRY					
Evaporation Pond 2 SW Sump	2004	DRY					
Retention Basin Common Sump	2004	DRY					
Response Level*		**<4, >11**	**NE**	**700**	**3,000**	**18**	**15**
AWQS		**NE**	**NE**	**NE**	**20,000**	**110**	**200**

*Applies only to EP2 and RB
AWQS = Aquifer water quality standard
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
NE = Not established
≤ = Less than or equal to the indicated reporting limit

2. IMPOUNDMENT MONITORING

B. SUMMARIES OF ANALYTICAL RESULTS

TABLE 2B-1. INORGANICS AND ORGANICS RESULTS FOR THE EAST RETENTION BASIN

ANALYTE	UNITS	03/31/04	06/23/04	09/22/04	9/30/2004 (resample)	10/26/04	AWQS
INORGANICS							
Antimony (Dissolved)	mg/L	<0.010	<0.010	<0.010		<0.010	0.006
Arsenic (Dissolved)	mg/L	<0.015	<0.015	<0.015		<0.015	0.05
Barium (Dissolved)	mg/L	<0.010	<0.010	<0.010		0.029	2
Beryllium (Dissolved)	mg/L	<0.0050	<0.0050	<0.0050		<0.0050	0.004
Boron (Dissolved)	mg/L	1.400	0.990	2.300		0.610	NE
Cadmium (Dissolved)	mg/L	<0.0050	<0.0050	<0.010		<0.0050	0.005
Chromium (Dissolved)	mg/L	<0.010	<0.010	<0.010		0.230	0.01
Potassium (Dissolved)	mg/L	0.970	17.000	6.300		<3.000	NE
Nickel (Dissolved)	mg/L	<0.040	<0.040	<0.040		0.200	0.1
Lead (Dissolved)	mg/L	<0.0050	<0.0020	<0.0010		0.057	0.05
Selenium (Dissolved)	mg/L	0.032	0.0058	<0.0050		<0.025	0.05
Thallium (Dissolved)	mg/L	<0.0050	<0.0020	<0.0010		<0.0050	0.002
Mercury (Dissolved)	mg/L	<0.00020	<0.00020	<0.00020		0.0027	0.002
Chloride	mg/L	66	370	200		380	NE
Fluoride	mg/L	<10	<5.0	<5.0		17	4.0
Sulfate	mg/L	9300	5500	10000		9800	NE
Nitrate/Nitrite (as N)	mg/L	0.85	4.0	2.4		0.68	10
Specific Conductance	umhos/cm	20000	14000	54000		16000	NE
ORGANICS							
cis-1,2-Dichloroethene	mg/L	<0.00030	<0.00030	<0.00030		<0.00030	0.07
Styrene	mg/L	<0.00030	<0.00030	<0.00030		<0.00030	0.1
Benzene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
Bromodichloro-methane	mg/L	<0.0050	<0.0050	<0.0050		<0.025	NA
Bromoform	mg/L	<0.0050	<0.0050	<0.0050		<0.025	NA
Carbontetrachloride	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
Chlorobenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.1
Dibromochloromethane	mg/L	<0.0050	<0.0050	<0.0050		<0.025	NA
Chloroform	mg/L	<0.0050	0.034	0.0081		0.200	NA
1, 2-Dichlorobenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.6
1, 4-Dichlorobenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.075
1, 2-Dichloroethane	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
trans-1,2 Dichloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.1
1, 1-Dichloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.007
1, 2-Dichloropropane	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
1, 1, 2-Trichloroethane	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
Trichloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
Vinyl chloride	mg/L	<0.010	<0.010	<0.010		<0.050	0.002
Xylenes(Total)	mg/L	<0.010	<0.010	<0.010		<0.050	10
Ethylbenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.7
Methylenechloride	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
Tetrachloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.005
Toluene	mg/L	<0.0050	<0.0050	<0.0050		<0.025	1
1, 1, 1-Trichloroethane	mg/L	<0.0050	<0.0050	<0.0050		<0.025	0.20
Acenaphthene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Acenaphthalyene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Anthracene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Benzo (a-anthracene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Benzo (b)fluoranthene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Benzo (ghi)perylene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Benzo (a)pyrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Bis (2-ethylhexyl)phthalate	mg/L	<0.010	<0.010	0.160*	<0.010	<0.010	0.006

TABLE 2B-1. INORGANICS AND ORGANICS RESULTS FOR THE EAST RETENTION BASIN

ANALYTE	UNITS	03/31/04	06/23/04	09/22/04	9/30/2004 (resample)	10/26/04	AWQS
Chrysene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Dibenzo (a,h)anthracene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Fluoranthene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Fluorene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Hexachlorobenzene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	0.001
Hexachlorocyclopentadiene	mg/L	<0.050	<0.050	<0.050*	<0.050	<0.050	0.05
Indeno (1,2,3-cd)pyrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Naphthalene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Pentachlorophenol	mg/L	<0.050	<0.050	<0.050*	<0.050	<0.050	0.001
Phenanthrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
Pyrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	NE
1,2,4-Trichlorobenzene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010	0.07
2, 3, 7, 8-TCDD(Dioxin)	mg/L	$<1.6\times10^{-15}$	$<3.0\times10^{-16}$	$<9.7\times10^{-16}$		$<3.8\times10^{-15}$	3.0×10^{-8}

AWQS = Aquifer water quality standard
mg/L = milligrams per liter
< = Less than the indicated reporting limit
NE = Not established
* = 625 Samples for 9/22/04 exceeded the hold time. Samples for 09/30/04 were taken to replace the 09/22/04 samples.
Samples were collected in 2004 at the East Retention Basin for initial characterization.

TABLE 2B-2. OPERATIONAL (ODCM) RADIONUCLIDE RESULTS FOR THE EAST RETENTION BASIN

DATE	pH SU	Hydrazine mg/L	Tritium pCi/l	Ce-141 pCi/l	Ce-144 pCi/l	Co-58 pCi/l	Co-60 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Fe-59 pCi/l	I-131 pCi/l	Mn-54 pCi/l	Mo-99 pCi/l	Zn-65 pCi/l
01/01/04		1.92												
01/03/04	9.90	0.10	1960	≤ 33.042	≤ 169.98	≤ 23.349	≤ 56.905	≤ 64.422	64.340	≤ 59.987	≤ 29.429	≤ 37.407	≤ 18.949	≤ 85.155
01/06/04	9.49	0.08	≤ 1400	≤ 35.747	≤ 142.33	≤ 26.176	≤ 31.712	≤ 40.837	≤ 57.435	≤ 59.456	≤ 23.899	≤ 27.477	≤ 18.337	≤ 67.085
01/10/04	9.77	0.10	1800	≤ 43.471	≤ 147.21	≤ 48.762	≤ 42.994	≤ 59.941	≤ 56.407	≤ 93.975	≤ 31.205	≤ 36.015	≤ 21.575	≤ 129.08
01/13/04	9.81	0.80	1990	≤ 39.003	≤ 174.47	≤ 35.509	≤ 35.667	≤ 57.592	55.080	≤ 69.535	≤ 30.622	≤ 37.407	≤ 19.540	≤ 76.853
01/17/04	9.61	0.10	2600	≤ 44.950	≤ 180.05	≤ 33.343	≤ 40.305	≤ 61.854	≤ 52.560	≤ 77.600	≤ 32.064	≤ 26.325	≤ 19.193	≤ 76.854
01/20/04	9.52	0.24	≤ 1420	≤ 32.731	≤ 147.85	≤ 26.016	≤ 56.502	≤ 37.415	≤ 55.709	≤ 17.317	≤ 28.606	≤ 25.855	≤ 17.426	≤ 53.158
01/24/04	9.57	1.43	3550	≤ 36.329	≤ 160.14	≤ 38.347	≤ 46.724	64.740	48.260	≤ 77.596	≤ 30.186	≤ 33.062	≤ 20.742	≤ 67.657
01/29/04	9.58	0.07	4480	≤ 29.410	≤ 153.42	≤ 38.664	≤ 70.192	≤ 67.073	≤ 70.724	≤ 73.592	≤ 41.740	≤ 28.562	≤ 14.948	≤ 59.517
02/02/04	9.60	3.80	1820	≤ 36.760	≤ 181.21	≤ 33.966	≤ 40.305	≤ 63.864	≤ 61.889	≤ 59.984	≤ 29.42	≤ 26.324	≤ 20.932	≤ 87.517
02/07/04	9.44	0.88	3750	≤ 43.305	≤ 147.93	≤ 31.301	≤ 35.667	≤ 60.366	≤ 61.646	≤ 59.997	≤ 25.941	≤ 11.444	≤ 19.124	≤ 95.525
02/11/04	9.22	1.56	2110	≤ 40.443	≤ 206.29	≤ 44.488	≤ 46.724	36.500	56.970	≤ 47.535	≤ 31.137	≤ 26.324	≤ 20.601	≤ 101.960
02/15/04	9.48	2.10	4100	≤ 32.446	≤ 148.58	≤ 36.978	≤ 46.545	≤ 63.865	≤ 47.496	≤ 50.455	≤ 32.576	≤ 30.518	≤ 19.079	≤ 87.52
02/19/04	9.27	1.10	1290	≤ 37.797	≤ 188.84	≤ 44.671	≤ 87.741	≤ 77.091	≤ 67.569	≤ 66.488	≤ 30.598	≤ 40.938	≤ 18.210	≤ 105.980
02/22/04	9.35	2.40	6030	≤ 31.774	≤ 166.00	≤ 20.430	≤ 40.305	≤ 43.679	≤ 52.048	≤ 69.571	≤ 24.869	≤ 26.326	≤ 19.359	≤ 67.662
02/25/04	9.18	0.72	2070	≤ 40.194	≤ 152.42	≤ 40.451	≤ 31.938	≤ 23.407	≤ 45.084	≤ 47.537	≤ 33.022	≤ 30.827	≤ 21.687	≤ 67.657
02/28/04	9.43	2.36	2950	≤ 35.493	≤ 138.08	≤ 30.604	≤ 49.002	≤ 34.176	≤ 28.839	≤ 71.288	≤ 28.439	≤ 30.518	≤ 21.139	≤ 19.708
03/03/04	9.06	0.45	7340	≤ 29.003	≤ 175.01	≤ 40.448	≤ 40.305	≤ 41.632	≤ 42.785	≤ 81.037	≤ 25.451	≤ 42.036	≤ 18.674	≤ 53.612
03/06/04	9.68	0.49	≤ 1470	≤ 36.908	≤ 171.34	≤ 28.770	≤ 56.905	≤ 29.481	≤ 34.884	≤ 84.343	≤ 29.411	≤ 41.831	≤ 19.736	≤ 67.661
03/09/04	9.77	0.30	≤ 1470	≤ 31.875	≤ 122.32	≤ 28.204	≤ 55.088	≤ 47.167	≤ 41.353	≤ 38.739	≤ 28.029	≤ 36.190	≤ 18.402	≤ 73.805
03/12/04	9.11	0.32	≤ 1440	≤ 33.506	≤ 118.67	≤ 27.761	≤ 14.482	≤ 35.753	≤ 34.778	≤ 73.601	≤ 24.484	≤ 29.674	≤ 17.778	≤ 96.27
03/14/04	9.43	0.50	≤ 1180	≤ 35.658	≤ 173.46	≤ 30.241	≤ 50.029	≤ 31.508	≤ 33.291	≤ 76.435	≤ 28.607	≤ 36.381	≤ 18.210	≤ 56.785
03/17/04	9.08	0.13	2910	≤ 36.529	≤ 164.33	≤ 40.034	≤ 62.898	≤ 54.589	≤ 59.245	≤ 93.960	≤ 36.869	≤ 27.983	≤ 20.004	≤ 66.008
03/24/04	9.25	0.13	1570	≤ 29.040	≤ 156.35	≤ 31.237	≤ 60.133	≤ 21.327	≤ 33.809	≤ 61.792	≤ 14.401	≤ 19.196	≤ 19.826	≤ 87.646
03/28/04	9.21	0.71	≤ 1540	≤ 34.634	≤ 142.31	≤ 35.139	≤ 33.957	≤ 35.101	≤ 44.634	≤ 65.325	≤ 22.249	≤ 36.984	≤ 18.510	≤ 63.270
04/01/04	9.27	0.04	1840	≤ 39.469	≤ 120.22	≤ 39.017	≤ 40.305	≤ 47.018	≤ 32.179	≤ 59.993	≤ 24.355	≤ 28.309	≤ 21.080	≤ 87.520
04/04/04	9.89	0.87	2380	≤ 36.232	≤ 190.13	≤ 42.814	≤ 69.724	≤ 26.165	≤ 35.999	≤ 79.269	≤ 22.710	≤ 31.049	≤ 23.398	≤ 69.656
04/06/04	9.70	0.10	≤ 1460	≤ 145.200	≤ 648.39	≤ 67.783	≤ 89.946	≤ 66.121	≤ 68.018	≤ 133.590	≤ 64.266	≤ 57.933	≤ 76.951	≤ 156.880
04/09/04	9.48	3.69	2280	≤ 41.781	≤ 174.22	≤ 39.030	≤ 40.305	≤ 45.136	≤ 35.823	≤ 69.568	≤ 30.558	≤ 30.519	≤ 20.427	≤ 91.34
04/13/04	9.69	1.80	2640	≤ 35.835	≤ 181.63	≤ 33.186	≤ 31.938	≤ 13.710	≤ 55.937	≤ 70.058	≤ 31.356	≤ 30.517	≤ 21.060	≤ 67.657
04/15/04	9.37	0.74	2430	≤ 34.053	≤ 167.67	≤ 18.751	≤ 57.635	≤ 42.383	≤ 23.772	≤ 73.580	≤ 28.489	≤ 25.340	≤ 15.923	≤ 96.265
04/19/04	9.59	1.00	≤ 1460	≤ 39.503	≤ 150.19	≤ 31.019	≤ 62.697	≤ 39.741	≤ 33.809	≤ 61.761	≤ 26.982	≤ 29.878	≤ 19.636	≤ 47.616
04/23/04	9.33	1.68	1800	≤ 35.814	≤ 151.53	≤ 33.180	≤ 65.180	≤ 50.373	≤ 47.168	≤ 69.550	≤ 27.016	≤ 46.012	≤ 21.609	≤ 95.524
04/27/04	9.63	1.51	≤ 1440	≤ 37.295	≤ 145.00	≤ 29.715	≤ 40.306	≤ 50.395	≤ 43.264	≤ 60.035	≤ 26.095	≤ 36.187	≤ 21.226	≤ 78.445
05/01/04	9.30	2.23	2810	≤ 34.033	≤ 176.07	≤ 35.474	≤ 62.898	≤ 39.466	≤ 47.812	≤ 100.770	≤ 29.903	≤ 49.161	≤ 20.588	≤ 129.070
05/05/04	9.56	4.30	≤ 1120	≤ 34.055	≤ 158.13	≤ 27.132	≤ 49.908	≤ 24.862	≤ 39.593	≤ 76.491	≤ 21.858	≤ 30.144	≤ 19.635	≤ 86.517
05/08/04	9.70	4.00	≤ 1590	≤ 34.754	≤ 150.18	≤ 20.770	≤ 54.697	≤ 33.430	≤ 28.795	≤ 75.750	≤ 22.115	≤ 31.350	≤ 19.673	≤ 17.502
05/11/04	9.39	1.28	2880	≤ 26.443	≤ 119.99	≤ 28.200	≤ 89.252	≤ 32.240	≤ 48.103	≤ 38.729	≤ 37.852	≤ 28.814	≤ 15.204	≤ 73.80
05/15/04	9.17	1.97	2910	≤ 25.418	≤ 112.29	≤ 28.892	≤ 28.813	≤ 31.060	≤ 36.896	≤ 54.164	≤ 18.325	≤ 23.885	≤ 12.780	≤ 17.792
05/18/04	9.33	0.89	2190	≤ 27.418	≤ 126.21	≤ 23.410	≤ 43.195	≤ 21.231	≤ 34.666	≤ 44.749	≤ 19.514	≤ 26.802	≤ 15.639	≤ 70.810
05/23/04	9.39	1.83	2190	≤ 28.014	≤ 137.79	≤ 35.589	≤ 43.734	≤ 38.706	≤ 39.497	≤ 82.621	≤ 24.514	≤ 36.362	≤ 14.636	≤ 93.136
05/26/04	9.70	0.89	3340	≤ 27.020	≤ 135.35	≤ 21.379	≤ 28.813	≤ 37.828	≤ 29.513	≤ 46.202	≤ 25.044	≤ 18.927	≤ 15.087	≤ 17.793
05/29/04	9.34	1.90	≤ 1080	≤ 32.778	≤ 145.70	≤ 25.191	≤ 39.365	≤ 7.242	≤ 24.466	≤ 78.112	≤ 25.712	≤ 33.264	≤ 18.873	≤ 71.978
06/01/04	8.96	0.73	1550	≤ 34.569	≤ 162.90	≤ 28.114	≤ 33.957	≤ 32.160	≤ 33.407	≤ 40.031	≤ 20.473	≤ 25.715	≤ 18.376	≤ 66.039
06/05/04	9.25	0.80	1390	≤ 34.842	≤ 166.56	≤ 34.408	≤ 33.957	≤ 34.472	≤ 24.466	≤ 64.924	≤ 22.995	≤ 33.264	≤ 18.582	≤ 50.323
06/09/04	9.55	0.37	1770	≤ 34.809	≤ 124.14	≤ 35.586	≤ 43.734	≤ 47.166	≤ 62.240	≤ 67.981	≤ 12.902	≤ 10.592	≤ 15.739	≤ 73.801
06/13/04	9.19	1.18	≤ 1160	≤ 34.778	≤ 166.79	≤ 27.379	≤ 54.257	≤ 51.054	≤ 50.138	≤ 75.194	≤ 30.217	≤ 35.671	≤ 13.590	≤ 102.46
06/17/04	9.27	0.13	1760	≤ 35.909	≤ 141.61	≤ 23.987	≤ 39.366	≤ 44.619	≤ 45.213	≤ 50.508	≤ 24.378	≤ 28.391	≤ 19.326	≤ 80.425
06/20/04	8.20	0.08	≤ 1100	≤ 34.355	≤ 146.71	≤ 35.145	≤ 54.914	≤ 34.472	≤ 31.272	≤ 40.028	≤ 29.241	≤ 17.578	≤ 20.061	≤ 62.241
06/24/04	9.59	1.68	1140	≤ 37.290	≤ 143.34	≤ 41.262	≤ 49.637	≤ 61.618	73.440	≤ 82.634	≤ 26.781	≤ 10.592	≤ 18.337	≤ 27.130
06/28/04	9.49	2.58	1350	≤ 23.012	≤ 164.90	≤ 43.916	≤ 36.360	≤ 34.658	≤ 47.711	≤ 54.159	≤ 21.015	≤ 27.689	≤ 17.017	≤ 48.402
6/30/2004*			2333 (±209)	≤30000	≤3000	≤1500	≤200	≤75	8.22 (±4.21)	≤800	≤100	≤2000	≤20000	≤ 375.000
07/02/04	9.50	0.19	1250	≤ 35.969	≤ 168.77	≤ 28.912	≤ 26.908	≤ 41.987	≤ 32.054	≤ 58.566	≤ 25.166	≤ 31.319	≤ 20.384	≤ 50.326
07/06/04	9.19	0.31	2850	≤ 29.598	≤ 138.71	≤ 23.414	≤ 36.360	≤ 42.516	≤ 38.985	≤ 42.931	≤ 24.238	≤ 30.134	≤ 15.187	≤ 17.793
07/10/04	9.51	0.93	1790	≤ 29.941	≤ 123.27	≤ 45.318	≤ 55.190	≤ 65.796	≤ 57.528	≤ 24.064	≤ 35.531	≤ 41.433	≤ 14.500	≤ 73.801
07/14/04	9.25	0.07	3620	≤ 35.062	≤ 159.17	≤ 40.039	≤ 55.392	≤ 31.274	≤ 38.699	≤ 81.066	≤ 32.856	≤ 49.860	≤ 21.656	≤ 91.42

TABLE 2B-2. OPERATIONAL (ODCM) RADIONUCLIDE RESULTS FOR THE EAST RETENTION BASIN

DATE	pH SU	Hydrazine mg/L	Tritium pCi/l	Ce-141 pCi/l	Ce-144 pCi/l	Co-58 pCi/l	Co-60 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Fe-59 pCi/l	I-131 pCi/l	Mn-54 pCi/l	Mo-99 pCi/l	Zn-65 pCi/l
07/17/04	9.51	1.10	2430	≤ 34.803	≤ 150.94	≤ 17.806	≤ 39.103	≤ 37.399	≤ 37.935	≤ 58.543	≤ 21.843	≤ 26.970	≤ 15.158	≤ 84.356
07/21/04	9.33	0.04	≤ 1200	≤ 29.687	≤ 167.72	≤ 32.003	≤ 51.575	≤ 37.035	≤ 34.197	≤ 50.536	≤ 24.878	≤ 13.529	≤ 15.679	≤ 60.281
07/24/04	9.41	0.01	1690	≤ 26.116	≤ 130.09	≤ 29.070	≤ 74.152	≤ 33.218	≤ 40.618	≤ 61.854	≤ 27.357	≤ 29.729	≤ 17.292	≤ 85.123
07/26/04	9.34	0.00	4260	≤ 41.153	≤ 144.41	≤ 33.968	≤ 39.366	≤ 33.962	≤ 27.300	≤ 67.799	≤ 24.784	≤ 25.714	≤ 19.404	≤ 64.509
07/28/04	9.05	0.01	2540	≤ 35.908	≤ 161.24	≤ 31.211	≤ 33.957	≤ 24.861	≤ 29.279	≤ 69.663	≤ 23.999	≤ 28.546	≤ 22.273	≤ 33.275
07/31/04	8.97	0.23	1800	≤ 37.829	≤ 140.03	≤ 10.367	≤ 55.190	≤ 32.241	≤ 57.537	≤ 65.473	≤ 26.763	≤ 46.915	≤ 17.347	≤ 73.803
08/02/04	9.44	0.10	≤ 1070	≤ 28.543	≤ 137.02	≤ 40.984	≤ 16.076	≤ 52.630	≤ 38.358	≤ 106.880	≤ 29.054	≤ 28.814	≤ 13.996	≤ 73.803
08/04/04	9.35	0.01	≤ 1080	≤ 31.262	≤ 128.77	≤ 25.876	≤ 26.908	≤ 18.789	≤ 29.876	≤ 75.225	≤ 27.458	≤ 32.177	≤ 20.288	≤ 66.038
08/07/04	9.48	0.98	2280	≤ 33.833	≤ 138.26	≤ 32.240	≤ 42.994	≤ 50.832	≤ 38.269	≤ 23.611	≤ 23.515	≤ 26.366	≤ 16.960	≤ 87.043
08/10/04	9.43	0.94	≤ 1090	≤ 23.530	≤ 101.51	≤ 6.823	≤ 36.361	≤ 31.062	≤ 32.212	≤ 42.955	≤ 23.057	≤ 26.747	≤ 15.035	≤ 17.80
08/14/04	9.34	1.80	1250	≤ 27.621	≤ 148.10	≤ 6.820	≤ 53.714	≤ 25.179	≤ 32.212	≤ 42.929	≤ 21.538	≤ 23.885	≤ 15.380	≤ 44.680
08/18/04	9.37	0.66	2140	≤ 27.591	≤ 161.38	≤ 28.201	≤ 16.076	≤ 61.617	≤ 48.103	≤ 65.467	≤ 21.962	≤ 28.814	≤ 12.450	≤ 73.802
08/22/04	9.79	1.50	1290	≤ 32.758	≤ 149.57	≤ 33.489	≤ 43.925	≤ 39.248	≤ 29.797	≤ 61.378	≤ 23.270	≤ 22.181	≤ 18.809	≤ 86.515
08/26/04	9.43	0.73	2560	≤ 34.631	≤ 120.06	≤ 40.704	≤ 43.734	≤ 32.240	≤ 58.217	≤ 65.461	≤ 22.332	≤ 41.433	≤ 18.752	≤ 93.133
08/30/04	9.74	1.41	1050	≤ 27.510	≤ 137.33	≤ 17.218	≤ 60.281	≤ 36.114	≤ 45.413	≤ 14.709	≤ 27.026	≤ 25.714	≤ 19.833	≤ 16.592
09/03/04	9.35	1.29	2530	≤ 32.055	≤ 168.94	≤ 22.961	≤ 33.957	≤ 40.206	≤ 40.932	≤ 63.503	≤ 28.57	≤ 32.177	≤ 18.100	≤ 16.593
09/07/04	9.65	1.37	≤ 1040	≤ 28.778	≤ 198.11	≤ 48.358	≤ 46.725	≤ 41.622	≤ 48.853	≤ 49.280	≤ 30.356	≤ 29.839	≤ 22.029	≤ 78.434
09/10/04	9.48	1.93	2290	≤ 29.552	≤ 119.74	≤ 21.377	≤ 24.715	≤ 25.179	≤ 29.530	≤ 54.163	≤ 25.421	≤ 34.290	≤ 17.095	≤ 89.859
09/14/04	9.37	3.00	2960	≤ 28.830	≤ 111.80	≤ 21.400	≤ 28.814	≤ 26.795	≤ 29.513	≤ 42.992	≤ 18.555	≤ 18.931	≤ 16.349	≤ 61.10
09/17/04	9.50	2.10	2200	≤ 33.925	≤ 152.41	≤ 17.733	≤ 10.591	≤ 37.951	≤ 26.449	≤ 25.038	≤ 16.416	≤ 27.689	≤ 15.105	≤ 70.810
09/21/04	9.46	1.50	5230	≤ 29.092	≤ 142.14	≤ 34.534	≤ 70.183	≤ 51.051	≤ 38.699	≤ 81.052	≤ 31.861	≤ 10.286	≤ 17.941	≤ 91.421
09/25/04	9.19	1.91	2370	≤ 27.251	≤ 166.32	≤ 23.411	≤ 37.628	≤ 32.376	≤ 29.513	≤ 54.165	≤ 24.625	≤ 23.885	≤ 20.906	≤ 17.792
09/29/04	9.06	0.15	2010	≤ 31.120	≤ 146.09	≤ 21.729	≤ 47.051	≤ 40.205	≤ 20.139	≤ 50.499	≤ 21.122	≤ 17.281	≤ 16.484	≤ 68.774
10/02/04	9.26	1.38	3060	≤ 29.980	≤ 120.66	≤ 41.256	≤ 55.190	≤ 47.167	≤ 69.071	≤ 24.064	≤ 24.565	≤ 42.153	≤ 16.422	≤ 38.450
10/05/04	9.10	1.35	2520	≤ 31.675	≤ 146.73	≤ 31.213	≤ 26.908	≤ 24.862	≤ 33.625	≤ 56.416	≤ 27.959	≤ 22.182	≤ 18.243	≤ 49.657
10/08/04	9.39	2.37	4400	≤ 29.001	≤ 131.89	≤ 18.551	≤ 28.813	≤ 18.904	≤ 29.513	≤ 54.164	≤ 32.228	≤ 26.802	≤ 17.160	≤ 61.082
10/11/04	9.54	2.10	2070	≤ 29.549	≤ 139.61	≤ 18.550	≤ 10.591	≤ 21.231	≤ 29.530	≤ 54.159	≤ 21.505	≤ 18.927	≤ 13.006	≤ 17.79
10/14/04	9.45	0.58	2900	≤ 28.451	≤ 137.78	≤ 10.365	≤ 63.981	≤ 51.254	≤ 36.310	≤ 95.753	≤ 21.935	≤ 46.413	≤ 16.465	≤ 93.131
10/17/04	9.48	2.24	3260	≤ 35.106	≤ 151.43	≤ 21.943	≤ 47.943	≤ 35.101	≤ 29.876	≤ 50.509	≤ 23.841	≤ 21.410	≤ 20.242	≤ 60.276
10/21/04	9.27	2.40	2010	≤ 32.188	≤ 107.27	≤ 26.677	≤ 39.977	≤ 40.693	≤ 22.405	≤ 25.909	≤ 21.015	≤ 26.802	≤ 16.338	≤ 61.081
10/24/04	9.86	1.60	2800	≤ 36.621	≤ 164.78	≤ 21.940	≤ 33.957	≤ 25.844	≤ 36.062	≤ 56.406	≤ 30.416	≤ 28.693	≤ 16.459	≤ 49.655
10/28/04	9.45	1.20	≤ 1050	≤ 30.365	≤ 125.96	≤ 28.259	≤ 33.957	≤ 28.308	≤ 39.649	≤ 58.546	≤ 23.737	≤ 43.508	≤ 14.292	≤ 45.139
10/31/04	9.46	0.50	≤ 1100	≤ 38.261	≤ 131.94	≤ 18.363	≤ 43.925	≤ 24.862	≤ 24.466	≤ 50.505	≤ 18.84	≤ 28.693	≤ 17.676	≤ 45.139
11/04/04	9.58	1.40	5260	≤ 40.116	≤ 187.77	≤ 42.590	≤ 53.051	≤ 41.622	≤ 42.507	≤ 89.920	≤ 33.507	≤ 36.366	≤ 23.782	≤ 83.961
11/07/04	9.27	3.44	2080	≤ 21.149	≤ 135.25	≤ 23.409	≤ 36.360	≤ 21.231	≤ 26.449	≤ 62.787	≤ 20.156	≤ 23.884	≤ 13.573	≤ 70.810
11/11/04	9.24	0.86	4590	≤ 36.889	≤ 126.97	≤ 17.805	≤ 26.908	≤ 32.160	≤ 29.797	≤ 58.539	≤ 22.335	≤ 35.870	≤ 17.295	≤ 79.247
11/13/04	8.93	0.04	3120	≤ 25.994	≤ 130.00	≤ 35.585	≤ 43.734	≤ 31.801	≤ 44.072	≤ 82.604	≤ 26.181	≤ 10.591	≤ 15.220	≤ 107.97
11/15/04	9.47	0.26	2030	≤ 34.481	≤ 149.32	≤ 31.211	≤ 43.469	≤ 41.066	≤ 21.353	≤ 71.303	≤ 29.390	≤ 29.649	≤ 19.376	≤ 64.509
11/18/04	9.34	0.30	2490	≤ 31.442	≤ 168.50	≤ 33.490	≤ 39.366	≤ 33.288	≤ 39.229	≤ 61.379	≤ 29.387	≤ 31.186	≤ 17.432	≤ 56.963
11/20/04	9.37	0.77	2240	≤ 27.567	≤ 144.98	≤ 21.374	≤ 47.034	≤ 21.231	≤ 26.449	≤ 42.911	≤ 18.300	≤ 22.713	≤ 17.557	≤ 48.400
11/27/04	9.22	1.20	≤ 1130	≤ 36.332	≤ 164.87	≤ 31.212	≤ 43.698	≤ 42.481	≤ 36.124	≤ 53.923	≤ 25.523	≤ 31.186	≤ 19.734	≤ 56.963
11/30/04	8.74	0.20	1340	≤ 36.059	≤ 172.61	≤ 41.255	≤ 43.734	≤ 40.686	≤ 53.079	≤ 95.768	≤ 32.359	≤ 36.361	≤ 19.626	≤ 73.801
12/03/04	9.36	0.30	1900	≤ 35.006	≤ 172.36	≤ 25.872	≤ 42.692	0.000		≤ 47.849	≤ 19.835	≤ 28.693	≤ 20.074	≤ 60.273
Release Limit	**6-11**	**10**	**1,000,000**	**30,000**	**3,000**	**20,000**	**3,000**	**2,000**	**2,000**	**10,000**	**1,000**	**30,000**	**20,000**	**5,000**

SU = standard units
mg/L = milligrams per liter
pCi/L = picocuries per liter
ODCM = Offsite Dose Calculation Manual
AWQS = Aquifer water quality standard
*Sample collected with characterization samples

TABLE 2B-3. INORGANICS AND ORGANICS RESULTS FOR THE WEST RETENTION BASIN

ANALYTE	UNITS	3/31/04	6/23/04	9/22/04	9/30/2004 RESAMPLE	10/26/04	11/2/2004 RESAMPLE	AWQS
INORGANICS								
Antimony (dissolved)	mg/L	<0.010	<0.010	<0.010		<0.010		0.006
Arsenic (dissolved)	mg/L	<0.015	<0.015	<0.015		<0.015		0.05
Barium (dissolved)	mg/L	<0.010	0.015	<0.010		<0.010		2
Beryllium (dissolved)	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.004
Boron (dissolved)	mg/L	1.9	2.8	2.5		1.7		NE
Cadmium (dissolved)	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Chromium (dissolved)	mg/L	<0.010	<0.010	<0.010		<0.010		0.01
Potassium (dissolved)	mg/L	<3.000	44	1.4		0.42		NE
Nickel (dissolved)	mg/L	<0.040	<0.040	<0.040		<0.040		0.1
Lead (dissolved)	mg/L	<0.0050	<0.0020	<0.0010		<0.0050		0.05
Selenium (dissolved)	mg/L	0.043	0.0057	0.0078		<0.025		0.05
Thallium (dissolved)	mg/L	<0.0050	<0.0020	<0.0010		<0.0050		0.002
Mercury (dissolved)	mg/L	<0.00020	<0.00020	<0.00020		<0.00020		0.002
Chloride	mg/L	120	820	110		81		NE
Fluoride	mg/L	<10	<5.0	9.6		6.3		4
Sulfate	mg/L	9,400	5100	13,000		7,000		NE
Nitrate/ Nitrite (as N)	mg/L	0.77	14	0.4		0.13		10
Specific Conductance	umhos/cm	18,000	14,000	59,000		13,000		NE
ORGANICS								0
CIS-1,2-Dichloroethene	mg/L	<0.00030	<0.00030	<0.00030		<0.00030		0.07
Styrene	mg/L	<0.00030	<0.00030	<0.00030		<0.00030		0.1
Benzene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Bromodichloromethane	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		NA
Bromoform	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		NA
Carbon tetrachloride	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Chlorobenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.1
Dibromochloromethane	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		NA
Chloroform	mg/L	0.03	0.02	0.016		0.029		NA
1, 2-Dichlorobenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.6
1, 4-Dichlorobenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.075
1, 2-Dichloroethane	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
trans-1,2 Dichloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.1
1, 1-Dichloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.007
1, 2-Dichloropropane	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
1, 1, 2-Trichloroethane	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Trichloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Vinyl chloride	mg/L	<0.010	<0.010	<0.010		<0.010		0.002
Xylenes (Total)	mg/L	<0.010	<0.010	<0.010		<0.010		10

TABLE 2B-3. INORGANICS AND ORGANICS RESULTS FOR THE WEST RETENTION BASIN

ANALYTE	UNITS	3/31/04	6/23/04	9/22/04	9/30/2004 RESAMPLE	10/26/04	11/2/2004 RESAMPLE	AWQS
Ethylbenzene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.7
Methylene chloride	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Tetrachloroethene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.005
Toluene	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		1
1, 1, 1-Trichloroethane	mg/L	<0.0050	<0.0050	<0.0050		<0.0050		0.2
Acenaphthene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Acenaphthalyene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Anthracene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Benzo (a) anthracene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Benzo (b) fluoranthene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Benzo (ghi) perylene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Benzo (a) pyrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Bis (2-ethylhexyl) phthalate	mg/L	<0.010	<0.010	0.059*	<0.010	<0.010		0.006
Chrysene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Dibenzo (a,h) anthracene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Fluoranthene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Fluorene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Hexachlorobenzene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		0.001
Hexachlorocyclopentadiene	mg/L	<0.050	<0.050	<0.050*	<0.050	<0.050		0.05
Indeno (1,2,3-cd) pyrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Naphthalene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Pentachlorophenol	mg/L	<0.050	<0.050	<0.050*	<0.050	<0.050		0.001
Phenanthrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
Pyrene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		NE
1,2,4-Trichlorobenzene	mg/L	<0.010	<0.010	<0.010*	<0.010	<0.010		0.07
2, 3, 7, 8-TCDD (Dioxin)	mg/L	<2.4x10-15	<5.4x10-16	<9.2x10-16		**	<1.6x10-15	3.0x10-8

AWQS = Aquifer water quality standard
mg/L = milligrams per liter
umhos/com = micro mhos per centimeter
< = Less than the indicated reporting limit
NE = Not established
* = 625 Samples for 9/22/04 exceeded the hold time. Samples for 09/30/04 were taken to replace the 09/22/04 samples.
** = Sample bottle broken. Resampled for Dioxin on 11/02/04.
Samples were collected at the West Retention Basin in 2004 for initial characterization.

TABLE 2B-4. OPERATIONAL (ODCM) RADIONUCLIDES RESULTS FOR THE WEST RETENTION BASIN

DATE	pH SU	Hydrazine ppm	Tritium pCi/l	Ce-141 pCi/l	Ce-144 pCi/l	Co-58 pCi/l	Co-60 uCi/gm	Co-60 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Fe-59 pCi/l	I-131 pCi/l	Mn-54 uCi/gm	Mn-54 pCi/l	Mo-99 pCi/l	Zn-65 pCi/l
01/01/04	9.63	1.16	1930	≤ 31.398	≤ 95.11	≤ 47.452	6.79E-08	≤ 67.900	≤ 55.359	≤ 56.661	≤ 25.192	≤ 33.959	5.84E-08	≤ 58.355	≤ 12.635	≤ 97.600
01/04/04	9.70	0.17	3130													
01/08/04	9.68	0.10	≤ 1430	≤ 23.715	≤ 134.58	≤ 38.664	3.94E-08	≤ 39.396	≤ 77.453	≤ 56.279	≤ 73.590	≤ 22.793	3.20E-08	≤ 31.978	≤ 16.846	≤ 65.803
01/12/04	9.56	0.40	1270	≤ 38.151	≤ 188.25	≤ 40.448	4.64E-08	≤ 46.364	≤ 63.152	≤ 42.130	≤ 69.536	≤ 25.812	3.41E-08	≤ 34.052	≤ 19.588	≤ 78.432
01/15/04	9.38	0.42	2910	≤ 33.725	≤ 202.51	≤ 33.341	1.17E-08	≤ 11.740	≤ 61.853	≤ 58.967	≤ 47.534	≤ 30.634	3.05E-08	≤ 30.517	≤ 17.894	≤ 85.154
01/19/04	9.45	0.20	≤ 1540	≤ 36.690	≤ 162.21	≤ 32.357	3.19E-08	≤ 31.939	≤ 61.115	≤ 55.869	≤ 59.996	≤ 27.371	2.94E-08	≤ 29.367	≤ 17.311	≤ 66.263
01/23/04	9.48	0.13	4140	≤ 34.227	≤ 181.39	≤ 31.685	3.57E-08	≤ 35.667	≤ 59.001	≤ 41.214	≤ 77.591	≤ 31.125	3.05E-08	≤ 30.517	≤ 19.627	≤ 67.656
01/26/04	9.36	0.84	2670	≤ 24.655	≤ 132.18	≤ 41.653	1.71E-08	≤ 17.061	≤ 54.225	≤ 70.180	≤ 68.550	≤ 28.073	1.09E-08	≤ 10.928	≤ 14.609	≤ 97.605
01/31/04	9.59	1.00	3150	≤ 42.213	≤ 179.97	≤ 31.688	4.03E-08	≤ 40.305	≤ 55.320	≤ 48.831	≤ 71.278	≤ 31.506	4.02E-08	≤ 40.202	≤ 19.299	≤ 76.854
02/05/04	9.52	1.20	3730	≤ 37.433	≤ 157.11	≤ 29.333	5.18E-08	≤ 51.768	≤ 57.277	≤ 54.408	≤ 57.484	≤ 28.499	3.49E-08	≤ 34.868	≤ 19.224	≤ 90.871
02/09/04	9.01	8.65	3350	≤ 33.976	≤ 176.55	≤ 44.062	5.21E-08	≤ 52.137	61.930	≤ 62.880	≤ 47.538	≤ 26.282	3.74E-08	≤ 37.407	≤ 18.824	≤ 102.760
02/13/04	9.29	2.40	1750	≤ 36.342	≤ 137.97	≤ 29.912	3.57E-08	≤ 35.667	≤ 44.784	≤ 35.707	≤ 36.638	≤ 24.443	2.82E-08	≤ 28.152	≤ 20.638	≤ 67.658
02/17/04	9.60	3.02	2830	≤ 38.200	≤ 160.95	≤ 27.964	4.01E-08	≤ 40.085	26.710	≤ 60.633	≤ 73.553	≤ 29.741	3.41E-08	≤ 34.057	≤ 21.094	≤ 67.668
02/21/04	9.40	1.60	2750	≤ 41.707	≤ 193.80	≤ 37.828	4.67E-08	≤ 46.725	34.220	≤ 57.113	≤ 79.158	≤ 34.842	4.20E-08	≤ 42.041	≤ 22.678	≤ 93.773
02/24/04	9.21	1.50	2480	≤ 36.839	≤ 165.51	≤ 42.164	4.67E-08	≤ 46.725	34.830	≤ 48.990	≤ 60.000	≤ 32.239	2.94E-08	≤ 29.368	≤ 20.660	≤ 102.760
02/27/04	9.42	1.50	2510	≤ 36.483	≤ 163.68	≤ 33.343	3.19E-08	≤ 31.938	≤ 41.622	≤ 46.669	≤ 38.122	≤ 34.884	3.05E-08	≤ 30.518	≤ 21.748	≤ 95.523
03/01/04	9.28	2.78	2090	≤ 32.344	≤ 197.91	≤ 42.168	4.94E-08	≤ 49.433	≤ 43.287	≤ 56.888	≤ 66.494	≤ 31.217	4.00E-08	≤ 40.035	≤ 19.971	≤ 72.445
03/04/04	9.42	0.76	3010	≤ 34.493	≤ 168.83	≤ 30.604	4.31E-08	≤ 43.053	≤ 34.189	≤ 25.787	≤ 50.456	≤ 20.638	3.05E-08	≤ 30.518	≤ 20.570	≤ 78.436
03/08/04	9.27	3.77	≤ 1460	≤ 36.332	≤ 174.10	≤ 33.343	4.03E-08	≤ 40.305	≤ 41.622	≤ 48.990	≤ 59.990	≤ 27.481	3.43E-08	≤ 34.321	≤ 17.461	≤ 78.434
03/10/04	9.27	0.17	2050	≤ 41.994	≤ 174.90	≤ 36.400	5.69E-08	≤ 56.905	≤ 40.428	≤ 30.314	≤ 60.011	≤ 33.496	2.97E-08	≤ 29.694	≤ 22.624	≤ 78.439
03/13/04	9.29	0.27	1910	≤ 39.269	≤ 147.62	≤ 42.892	5.21E-08	≤ 52.137	≤ 42.556	≤ 35.122	≤ 73.487	≤ 21.928	3.43E-08	≤ 34.321	≤ 18.630	≤ 75.688
03/16/04	9.59	0.18	11500	≤ 35.258	≤ 162.29	≤ 30.599	5.86E-08	≤ 58.557	≤ 34.175	≤ 38.843	≤ 71.271	≤ 33.003	3.05E-08	≤ 30.517	≤ 18.861	≤ 87.517
03/19/04	9.09	2.11	2070	≤ 36.695	≤ 191.76	≤ 27.951	5.68E-08	≤ 56.766	≤ 29.497	≤ 37.566	≤ 79.118	≤ 24.551	3.43E-08	≤ 34.322	≤ 21.333	≤ 91.251
03/21/04	9.35	0.24	1680	≤ 39.980	≤ 181.38	≤ 52.622	4.67E-08	≤ 46.725	≤ 38.134	≤ 44.149	≤ 47.541	≤ 24.446	3.74E-08	≤ 37.408	≤ 21.846	≤ 78.435
03/22/04	9.01	0.91	2050	≤ 35.342	≤ 163.68	≤ 33.968	1.17E-08	≤ 11.740	≤ 38.146	≤ 45.517	≤ 59.989	≤ 32.585	2.09E-08	≤ 20.860	≤ 17.617	≤ 65.709
03/26/04	9.35	0.01	1650	≤ 41.235	≤ 194.44	≤ 36.261	6.43E-08	≤ 64.311	≤ 46.248	≤ 43.598	≤ 73.589	≤ 24.921	3.71E-08	≤ 37.072	≤ 19.237	≤ 65.803
03/30/04	9.42	0.01	2400	≤ 36.636	≤ 145.22	≤ 31.288	5.76E-08	≤ 57.635	≤ 35.753	≤ 48.514	≤ 64.232	≤ 22.789	4.24E-08	≤ 42.421	≤ 18.117	≤ 65.808
04/02/04	9.57	1.17	3020	≤ 29.086	≤ 159.14	≤ 36.704	8.27E-08	≤ 82.696	≤ 55.362	≤ 35.037	≤ 82.027	≤ 22.393	2.97E-08	≤ 29.732	≤ 11.250	≤ 28.434
04/05/04	9.38	0.25	≤ 1420	≤ 37.433	≤ 142.42	≤ 37.482	6.45E-08	≤ 64.473	≤ 33.846	≤ 33.809	≤ 61.739	≤ 32.680	1.85E-08	≤ 18.496	≤ 15.821	≤ 77.724
04/07/04	9.68	1.80	≤ 1500	≤ 35.165	≤ 148.95	≤ 18.120	4.16E-08	≤ 41.646	≤ 26.165	≤ 35.999	≤ 42.202	≤ 24.924	1.85E-08	≤ 18.496	≤ 16.930	≤ 77.724
04/11/04	9.42	0.76	≤ 1460	≤ 32.454	≤ 152.64	≤ 29.580	5.46E-08	≤ 54.562	≤ 36.941	≤ 31.729	≤ 68.892	≤ 29.166	2.71E-08	≤ 27.058	≤ 18.588	≤ 42.913
04/14/04	9.40	1.08	2610	≤ 39.421	≤ 154.09	≤ 41.667	6.12E-08	≤ 61.215	≤ 38.134	≤ 32.179	≤ 60.606	≤ 31.218	3.41E-08	≤ 34.051	≤ 20.374	≤ 53.611
04/17/04	9.40	0.81	1780	≤ 35.773	≤ 166.11	≤ 41.566	6.52E-08	≤ 65.180	≤ 40.843	≤ 43.064	≤ 59.989	≤ 30.072	2.63E-08	≤ 26.325	≤ 20.303	≤ 19.708
04/21/04	9.57	0.70	≤ 1490	≤ 36.430	≤ 141.14	≤ 24.837	5.07E-08	≤ 50.720	≤ 30.333	≤ 27.389	≤ 75.193	≤ 27.377	3.75E-08	≤ 37.508	≤ 17.666	≤ 47.613
04/25/04	9.41	2.67	3200	≤ 39.095	≤ 159.66	≤ 53.993	6.52E-08	≤ 65.179	≤ 47.358	≤ 29.233	≤ 77.594	≤ 25.902	3.07E-08	≤ 30.701	≤ 20.549	≤ 92.800
04/29/04	9.25	1.70	1910	≤ 39.857	≤ 165.79	≤ 29.521	3.19E-08	≤ 31.938	≤ 38.134	≤ 32.179	≤ 70.071	≤ 30.860	3.48E-08	≤ 34.782	≤ 20.561	≤ 67.659
05/03/04	9.46	2.10	≤ 1510	≤ 37.241	≤ 209.19	≤ 41.447	5.21E-08	≤ 52.137	≤ 42.016	≤ 50.088	≤ 77.599	≤ 28.232	4.01E-08	≤ 40.112	≤ 19.064	≤ 100.280
05/07/04	9.40	2.90	1580	≤ 31.241	≤ 145.09	≤ 18.120	5.46E-08	≤ 54.562	≤ 26.165	≤ 28.795	≤ 63.147	≤ 26.075	3.02E-08	≤ 30.193	≤ 18.759	≤ 62.876
05/10/04	9.41	6.45	≤ 1570	≤ 39.398	≤ 165.67	≤ 18.752	5.76E-08	≤ 57.635	≤ 47.062	≤ 35.140	≤ 21.435	≤ 20.512	3.12E-08	≤ 31.199	≤ 21.312	≤ 24.188
05/13/04	9.30	0.97	≤ 1450	≤ 40.050	≤ 171.46	≤ 41.679	5.13E-08	≤ 51.332	≤ 33.690	≤ 32.179	≤ 60.619	≤ 29.793	3.66E-08	≤ 36.644	≤ 19.378	≤ 82.807
05/17/04	9.20	1.74	2400	≤ 29.229	≤ 131.06	≤ 27.136	5.16E-08	≤ 51.575	≤ 36.603	≤ 35.656	≤ 40.031	≤ 27.329	3.81E-08	≤ 38.056	≤ 18.617	≤ 16.593
05/21/04	9.26	1.22	≤ 1080	≤ 25.795	≤ 133.19	≤ 10.367	1.61E-08	≤ 16.076	≤ 40.686	≤ 44.072	≤ 24.066	≤ 30.188	4.70E-08	≤ 47.037	≤ 16.938	≤ 120.480
05/24/04	9.50	1.18	2820	≤ 31.001	≤ 140.11	≤ 37.557	2.88E-08	≤ 28.813	≤ 21.231	≤ 29.513	≤ 42.917	≤ 21.984	2.27E-08	≤ 22.713	≤ 12.333	≤ 17.792
05/27/04	9.55	2.10	3170	≤ 30.711	≤ 144.15	≤ 28.108	4.79E-08	≤ 47.942	≤ 26.759	≤ 29.797	≤ 71.298	≤ 19.743	2.82E-08	≤ 28.170	≤ 18.788	≤ 69.199
05/30/04	9.31	1.70	≤ 1080	≤ 37.867	≤ 151.10	≤ 21.729	4.47E-08	≤ 44.714	≤ 32.160	≤ 32.054	≤ 65.324	≤ 31.150	3.26E-08	≤ 32.622	≤ 18.915	≤ 45.138
06/03/04	9.22	0.73	1630	≤ 30.802	≤ 173.49	≤ 34.532	6.29E-08	≤ 62.898	≤ 55.523	≤ 50.138	≤ 110.800	≤ 20.018	1.03E-08	≤ 10.286	≤ 20.351	≤ 66.882
06/07/04	9.25	0.70	2700	≤ 25.023	≤ 137.53	≤ 49.447	4.37E-08	≤ 43.734	≤ 51.255	≤ 32.660	≤ 65.470	≤ 24.843	1.06E-08	≤ 10.592	≤ 16.730	≤ 104.390
06/11/04	9.44	1.20	2600	≤ 25.466	≤ 106.16	≤ 39.727	2.88E-08	≤ 28.813	≤ 21.231	≤ 38.371	≤ 54.175	≤ 18.526	2.68E-08	≤ 26.803	≤ 14.955	≤ 17.793
06/15/04	9.21	0.09	1780	≤ 32.253	≤ 133.19	≤ 35.588	6.76E-08	≤ 67.615	≤ 52.630	≤ 48.103	≤ 76.787	≤ 26.749	3.64E-08	≤ 36.362	≤ 17.399	≤ 93.135
06/18/04	9.14	0.40	1120	≤ 27.441	≤ 154.77	≤ 33.024	2.69E-08	≤ 26.909	≤ 34.474	≤ 30.465	≤ 58.604	≤ 26.107	2.74E-08	≤ 27.376	≤ 19.631	≤ 16.595
06/22/04	9.17	0.03	≤ 1050	≤ 33.916	≤ 140.56	≤ 30.680	4.39E-08	≤ 43.925	≤ 37.760	≤ 29.621	≤ 65.330	≤ 26.739	2.57E-08	≤ 25.715	≤ 16.488	≤ 66.036
06/26/04	9.51	1.91	1100	≤ 32.262	≤ 140.19	≤ 18.552	1.06E-08	≤ 10.591	≤ 52.336	≤ 40.981	≤ 62.795	≤ 14.171	1.89E-08	≤ 18.927	≤ 16.875	≤ 17.792
06/30/04	9.63	0.17	1820	≤ 27.744	≤ 143.21	≤ 32.163	3.40E-08	≤ 33.957	≤ 44.619	≤ 48.453	≤ 58.541	≤ 28.579	3.09E-08	≤ 30.850	≤ 16.965	≤ 94.918
6/30/2004*			1973 (±203)	≤ 30000.000	≤ 3000.00	≤ 1500.000		≤ 200.000	75.000	13.71 (±5.52	≤ 800.000	≤ 100.000		≤ 2000.000	≤ 20000.000	≤ 375.000
07/04/04	9.20	0.20	≤ 1080	≤ 28.533	≤ 163.05	≤ 27.072	4.79E-08	≤ 47.942	≤ 18.222	≤ 35.656	≤ 40.016	≤ 19.739	2.82E-08	≤ 28.170	≤ 18.945	≤ 45.138
07/08/04	9.34	0.11	2400	≤ 37.472	≤ 158.35	≤ 20.315	2.69E-08	≤ 26.908	≤ 28.822	≤ 30.129	≤ 71.190	≤ 27.362	2.57E-08	≤ 25.715	≤ 18.403	≤ 64.296
07/12/04	9.26	0.07	2590	≤ 35.317	≤ 144.58	≤ 28.107	2.84E-08	≤ 28.435	≤ 31.871	≤ 43.754	≤ 76.697	≤ 21.924	6.46E-09	≤ 6.461	≤ 20.356	≤ 69.199
07/15/04	9.43	0.50	2730	≤ 23.573	≤ 159.65	≤ 27.151	3.80E-08	≤ 38.002	≤ 33.544	≤ 32.212	≤ 55.305	≤ 21.160	1.89E-08	≤ 18.929	≤ 13.895	≤ 17.795
07/18/04	9.47	0.27	1970	≤ 32.620	≤ 141.91	≤ 18.541	3.48E-08	≤ 34.767	≤ 37.196	≤ 38.801	≤ 39.872	≤ 26.299	2.19E-08	≤ 21.888	≤ 16.403	≤ 65.828
07/23/04	9.33	0.14	1260	≤ 29.670	≤ 170.57	≤ 28.113	2.69E-08	≤ 26.908	≤ 28.308	≤ 32.126	≤ 76.723	≤ 27.774	3.22E-08	≤ 32.177	≤ 18.836	≤ 91.267
07/25/04	9.46	0.10	1290	≤ 32.328	≤ 152.90	≤ 30.678	4.37E-08	≤ 43.698	≤ 32.864	≤ 37.492	≤ 44.659	≤ 22.996	2.68E-08	≤ 26.811	≤ 21.172	≤ 56.962
07/27/04	9.01	0.00	2050	≤ 34.709	≤ 145.73	≤ 33.002	4.77E-08	≤ 47.739	≤ 35.101	≤ 39.229	≤ 58.543	≤ 27.332	2.22E-08	≤ 22.181	≤ 20.339	≤ 73.684
07/30/04	8.77	0.00	1410	≤ 36.651	≤ 159.88	≤ 28.259	4.29E-08	≤ 42.926	≤ 32.160	≤ 33.693	≤ 73.526	≤ 29.184	2.57E-08	≤ 25.714	≤ 18.312	≤ 45.139

TABLE 2B-4. OPERATIONAL (ODCM) RADIONUCLIDES RESULTS FOR THE WEST RETENTION BASIN

DATE	pH SU	Hydrazine ppm	Tritium pCi/l	Ce-141 pCi/l	Ce-144 pCi/l	Co-58 pCi/l	Co-60 uCi/gm	Co-60 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Fe-59 pCi/l	I-131 pCi/l	Mn-54 uCi/gm	Mn-54 pCi/l	Mo-99 pCi/l	Zn-65 pCi/l
08/01/04	9.24	0.24	≤ 1100	≤ 32.708	≤ 146.12	≤ 35.588	4.37E-08	≤ 43.734	≤ 29.328	≤ 61.147	≤ 24.065	≤ 18.558	2.88E-08	≤ 28.814	≤ 13.571	≤ 27.129
08/03/04	9.33	0.01	≤ 1040	≤ 34.277	≤ 178.41	≤ 28.997	3.40E-08	≤ 33.957	≤ 28.822	≤ 40.824	≤ 50.511	≤ 20.740	2.85E-08	≤ 28.547	≤ 20.740	≤ 66.038
08/05/04	9.57	0.09	1260	≤ 36.375	≤ 156.98	≤ 28.992	3.94E-08	≤ 39.365	≤ 36.411	≤ 40.824	≤ 40.014	≤ 20.606	3.06E-08	≤ 30.567	≤ 18.032	≤ 73.683
08/08/04	9.04	0.24	≤ 1100	≤ 34.569	≤ 184.95	≤ 31.348	4.37E-08	≤ 43.698	≤ 28.822	≤ 34.130	≤ 50.514	≤ 23.855	2.87E-08	≤ 28.694	≤ 19.520	≤ 42.406
08/12/04	9.33	1.73	≤ 1060	≤ 32.051	≤ 175.69	≤ 28.851	4.77E-08	≤ 47.739	≤ 27.781	≤ 23.898	≤ 58.553	≤ 26.118	3.07E-08	≤ 30.703	≤ 17.391	≤ 45.140
08/16/04	9.28	2.30	1440	≤ 32.481	≤ 165.23	≤ 17.219	4.29E-08	≤ 42.926	≤ 35.345	≤ 29.876	≤ 61.378	≤ 17.455	1.96E-08	≤ 19.633	* ≤ 19.485	≤ 73.684
08/19/04	9.61	1.27	2240	≤ 38.144	≤ 159.77	≤ 26.041	3.94E-08	≤ 39.365	≤ 39.871	≤ 47.109	≤ 67.803	≤ 27.345	2.37E-08	≤ 23.697	10.540	≤ 33.276
08/24/04	9.52	1.25	2830	≤ 26.433	≤ 113.61	≤ 34.322	5.52E-08	≤ 55.191	≤ 40.688	≤ 69.071	≤ 65.525	≤ 26.881	2.88E-08	≤ 28.818	≤ 13.511	≤ 27.133
08/28/04	9.35	0.81	1760	≤ 31.121	≤ 130.54	≤ 32.237	8.24E-08	≤ 82.405	≤ 37.970	≤ 62.167	≤ 43.042	≤ 22.758	4.09E-08	≤ 40.938	≤ 19.975	≤ 118.260
09/01/04	9.53	1.89	1180	≤ 33.415	≤ 119.41	≤ 35.616	4.37E-08	≤ 43.735	≤ 11.852	≤ 39.498	≤ 24.094	≤ 20.988	3.64E-08	≤ 36.368	≤ 13.585	≤ 93.156
09/05/04	9.21	0.70	2280	≤ 27.248	≤ 145.93	≤ 30.515	1.06E-08	≤ 10.591	≤ 26.793	≤ 32.212	≤ 63.868	≤ 18.319	6.96E-09	≤ 6.957	≤ 18.280	≤ 58.533
09/09/04	9.39	1.89	2460	≤ 34.014	≤ 133.37	≤ 6.819	1.06E-08	≤ 10.591	≤ 7.804	≤ 26.449	≤ 42.919	≤ 21.559	2.39E-08	≤ 23.885	≤ 16.479	≤ 17.792
09/12/04	9.29	1.48	2690	≤ 30.583	≤ 116.34	≤ 6.819	4.35E-08	≤ 43.506	≤ 21.231	≤ 22.815	≤ 62.786	≤ 18.316	1.89E-08	≤ 18.927	≤ 15.034	≤ 70.810
09/15/04	9.45	3.00	1930	≤ 29.278	≤ 137.40	≤ 28.705	3.82E-08	≤ 38.206	≤ 35.733	≤ 34.130	≤ 56.421	≤ 24.194	3.23E-08	≤ 32.303	≤ 14.553	≤ 71.022
09/19/04	9.28	1.30	2660	≤ 32.418	≤ 181.29	≤ 35.151	6.08E-08	≤ 60.792	≤ 33.289	≤ 42.836	≤ 41.457	≤ 26.500	2.22E-08	≤ 22.183	≤ 19.436	≤ 56.968
09/23/04	9.25	1.90	3470	≤ 31.947	≤ 121.98	≤ 30.288	1.06E-08	≤ 10.591	≤ 21.231	≤ 26.449	≤ 54.178	≤ 17.810	3.30E-08	≤ 32.998	≤ 14.406	≤ 58.536
09/27/04	9.17	2.50	2650	≤ 38.112	≤ 139.81	≤ 25.365	3.40E-08	≤ 33.957	≤ 40.412	≤ 35.591	≤ 63.495	≤ 25.376	3.11E-08	≤ 31.054	≤ 17.338	≤ 64.510
09/30/04	9.11	0.70	2560	≤ 39.645	≤ 173.35	≤ 40.041	8.24E-08	≤ 82.405	≤ 54.590	≤ 56.888	≤ 37.363	≤ 28.203	4.09E-08	≤ 40.940	≤ 19.262	≤ 87.045
10/04/04	9.21	2.19	5150	≤ 34.470	≤ 132.88	≤ 22.152	4.79E-08	≤ 47.942	≤ 24.862	≤ 29.279	≤ 76.709	≤ 21.465	2.87E-08	≤ 28.693	≤ 18.540	≤ 66.037
10/07/04	9.30	2.75	2480	≤ 32.099	≤ 141.40	≤ 18.551	3.64E-08	≤ 36.360	≤ 39.789	≤ 36.896	≤ 42.922	≤ 21.029	2.77E-08	≤ 27.689	≤ 16.622	≤ 52.697
10/10/04	9.43	0.90	3170	≤ 18.808	≤ 116.95	≤ 23.409	2.88E-08	≤ 28.813	≤ 36.834	≤ 32.212	≤ 54.159	28.990	2.28E-08	≤ 22.786	≤ 18.126	≤ 48.402
10/13/04	9.48	1.46	2400	≤ 33.709	≤ 134.72	≤ 30.678	9.89E-09	≤ 9.891	≤ 34.705	≤ 33.693	≤ 40.017	≤ 28.741	2.35E-08	≤ 23.507	≤ 16.179	≤ 80.423
10/16/04	9.16	1.20	2070	≤ 28.730	≤ 125.28	≤ 30.617	6.79E-08	≤ 67.901	≤ 35.404	≤ 52.004	≤ 68.547	≤ 22.209	3.75E-08	≤ 37.517	≤ 14.380	≤ 85.125
10/19/04	9.64	1.20	2290	≤ 31.317	≤ 110.59	≤ 23.410	4.22E-08	≤ 42.152	≤ 21.231	≤ 29.513	≤ 55.478	≤ 16.420	2.39E-08	≤ 23.885	≤ 19.510	≤ 79.012
10/22/04	9.68	0.45	3070	≤ 31.501	≤ 136.79	≤ 26.680	4.35E-08	≤ 43.506	≤ 36.834	≤ 32.212	≤ 54.166	≤ 26.206	2.77E-08	≤ 27.689	≤ 13.363	≤ 92.773
10/26/04	9.36	1.49	1900	≤ 32.072	≤ 146.21	≤ 41.295	1.61E-08	≤ 16.077	≤ 32.243	≤ 53.610	≤ 103.010	≤ 20.018	2.88E-08	≤ 28.820	≤ 16.396	≤ 73.822
10/29/04	9.32	0.14	3850	≤ 25.462	≤ 95.14	≤ 6.820	3.64E-08	≤ 36.360	≤ 21.231	≤ 34.652	≤ 15.779	≤ 19.090	2.39E-08	≤ 23.885	≤ 12.016	≤ 48.403
11/02/04	9.43	1.18	4860	≤ 30.335	≤ 117.79	≤ 28.207	4.37E-08	≤ 43.734	≤ 32.241	≤ 36.310	≤ 65.488	≤ 25.372	2.86E-08	≤ 28.570	≤ 12.632	≤ 27.130
11/05/04	9.30	0.50	1650	≤ 34.469	≤ 146.31	≤ 23.407	1.06E-08	≤ 10.591	≤ 29.762	≤ 26.449	≤ 56.741	≤ 24.181	1.89E-08	≤ 18.926	≤ 15.065	≤ 48.401
11/09/04	8.88	0.23	2010	≤ 28.925	≤ 165.71	≤ 25.873	3.40E-08	≤ 33.957	≤ 36.724	≤ 29.954	≤ 63.492	≤ 24.871	3.13E-08	≤ 31.317	≤ 15.983	≤ 82.568
11/12/04	9.30	0.66	3290	≤ 26.331	≤ 128.78	≤ 35.615	4.37E-08	≤ 43.735	≤ 32.243	≤ 48.103	≤ 95.892	≤ 24.673	4.69E-08	≤ 46.922	≤ 10.285	≤ 27.135
11/14/04	9.11	0.10	2230	≤ 24.300	≤ 122.45	≤ 30.285	1.06E-08	≤ 10.591	≤ 26.793	≤ 29.513	≤ 42.926	≤ 17.734	3.56E-08	≤ 35.617	≤ 14.881	≤ 61.083
11/17/04	9.55	0.40	3060	≤ 27.778	≤ 123.60	≤ 30.281	2.88E-08	≤ 28.813	≤ 29.762	≤ 29.530	≤ 62.785	≤ 22.078	3.23E-08	≤ 32.296	≤ 13.951	≤ 17.792
11/19/04	9.45	0.13	3120	≤ 34.469	≤ 143.81	≤ 18.548	2.88E-08	≤ 28.813	≤ 31.060	≤ 38.794	≤ 25.906	≤ 14.235	2.39E-08	≤ 23.884	≤ 14.217	≤ 48.401
11/22/04	9.48	0.58	1510	≤ 31.630	≤ 127.22	≤ 23.411	1.06E-08	≤ 10.591	≤ 26.793	≤ 26.489	≤ 44.752	≤ 20.004	3.01E-08	≤ 30.083	≤ 13.350	≤ 77.239
11/24/04	9.52	3.25	3120	≤ 34.272	≤ 142.62	≤ 23.931	5.43E-08	≤ 54.256	≤ 45.752	≤ 38.269	≤ 82.673	≤ 31.862	2.64E-08	≤ 26.366	≤ 21.226	≤ 72.444
11/25/04	9.33	0.40	≤ 1130	≤ 36.614	≤ 149.07	≤ 18.362	3.94E-08	≤ 39.365	≤ 35.101	≤ 37.492	≤ 65.328	≤ 20.620	3.13E-08	≤ 31.317	≤ 16.879	≤ 66.036
11/28/04	9.30	0.94	≤ 1080	≤ 30.267	≤ 165.20	≤ 34.535	6.29E-08	≤ 62.898	≤ 11.496	≤ 46.608	≤ 23.610	≤ 30.678	2.80E-08	≤ 27.984	≤ 18.036	≤ 72.444
12/02/04	9.37	0.14	2780	≤ 27.718	≤ 119.31	≤ 28.202	1.61E-08	≤ 16.076	≤ 47.167	≤ 42.078	≤ 65.469	≤ 28.284	2.75E-08	≤ 27.536	≤ 15.127	≤ 73.802
12/05/04	9.74	0.51	2820	≤ 28.660	≤ 121.40	≤ 18.552	1.06E-08	≤ 10.591	≤ 33.542	≤ 18.079	≤ 42.924	≤ 21.574	2.93E-08	≤ 29.292	≤ 18.154	≤ 61.082
12/06/04	9.60	0.01	1560	≤ 30.770	≤ 101.62	≤ 28.200	1.61E-08	≤ 16.076	≤ 46.915	≤ 39.497	≤ 84.421	≤ 31.694	4.22E-08	≤ 42.153	≤ 16.433	≤ 27.129
12/08/04	9.50	0.16	1620	≤ 22.333	≤ 119.99	≤ 45.136	5.52E-08	≤ 55.190	≤ 32.240	≤ 45.691	≤ 65.463	≤ 21.955	4.07E-08	≤ 40.695	≤ 17.921	≤ 73.801
12/10/04	9.90	0.30	2280	≤ 27.686	≤ 132.51	≤ 18.550	4.22E-08	≤ 42.152	≤ 33.542	≤ 18.079	≤ 54.159	≤ 22.943	2.16E-08	≤ 21.606	≤ 18.817	≤ 48.402
12/12/04	9.75	0.40	1540	≤ 36.038	≤ 176.28	≤ 25.191	2.69E-08	≤ 26.908	≤ 42.169	≤ 32.054	≤ 14.711	≤ 23.301	3.13E-08	≤ 31.317	≤ 17.049	≤ 68.775
12/14/04	9.57	0.18	≤ 1120	≤ 37.010	≤ 106.87	≤ 28.257	2.48E-08	≤ 24.809	≤ 28.308	≤ 40.824	≤ 40.014	≤ 24.770	3.94E-08	≤ 39.353	≤ 18.462	≤ 67.329
12/16/04	9.43	0.58	1270	≤ 34.718	≤ 163.75	≤ 6.330	4.39E-08	≤ 43.925	≤ 43.288	≤ 34.130	≤ 71.957	≤ 24.182	2.87E-08	≤ 28.693	≤ 16.677	≤ 45.139
12/18/04	9.53	0.40	3360	≤ 32.117	≤ 136.44	≤ 35.598	3.51E-08	≤ 35.086	≤ 40.378	≤ 44.073	≤ 76.820	≤ 30.963	4.22E-08	≤ 42.156	≤ 15.325	≤ 67.297
12/21/04	9.55	0.10	2640	≤ 33.709	≤ 144.86	≤ 35.139	4.39E-08	≤ 43.925	≤ 42.481	≤ 33.319	≤ 63.486	≤ 22.993	2.22E-08	≤ 22.181	≤ 19.545	≤ 58.538
12/23/04	9.30	0.00	1930	≤ 35.021	≤ 151.31	≤ 30.678	9.89E-09	≤ 9.891	≤ 38.688	≤ 27.388	≤ 47.850	≤ 26.015	2.98E-08	≤ 29.789	≤ 20.393	≤ 45.138
12/25/04	9.55	0.21	4180	≤ 46.846	≤ 139.31	≤ 40.036	5.67E-08	≤ 56.723	≤ 37.970	≤ 42.702	≤ 55.313	≤ 36.470	4.59E-08	≤ 45.931	≤ 19.855	≤ 26.630
12/27/04	9.43	0.00	3520	≤ 32.283	≤ 121.71	≤ 23.418	4.22E-08	≤ 42.152	≤ 39.815	≤ 34.666	≤ 42.944	≤ 20.060	2.39E-08	≤ 23.887	≤ 17.120	≤ 84.665
12/30/04	9.25	0.10	2640	≤ 31.032	≤ 158.64	≤ 33.009	4.79E-08	≤ 47.943	≤ 30.115	≤ 37.994	≤ 14.715	≤ 25.326	2.47E-08	≤ 24.738	≤ 19.445	≤ 76.076
Release Limit	**6-11**	**10**	**1,000,000**	**30,000**	**3,000**	**20,000**		**3,000**	**2,000**	**2,000**	**10,000**	**1,000**		**30,000**	**20,000**	**5,000**

ODCM = Offsite Dose Calculation Manual
* Sample collected with characterization samples.

TABLE 2B-5. INORGANIC RESULTS FOR EVAPORATION POND #1

ANALYTE	UNITS	06/16/04	11/02/04	AWQS
Field pH*	SU	NA	NA	NE
Field Temperature	°C	NA	NA	NE
Field Conductivity	umhos/cm	NA	NA	NE
Antimony (dissolved)	mg/L	--	0.086	0.006
Arsenic (dissolved)	mg/L	--	0.12	0.05
Beryllium (dissolved)	mg/L	--	0.0066	0.004
Boron (dissolved)	mg/L	56.8	66	NE
Cadmium (dissolved)	mg/L	--	<0.025	0.005
Chromium (dissolved)	mg/L	--	0.019	0.1
Total Alkalinity (as CaCO3)	mg/L	832	700	NE
Chloride	mg/L	93000**	74,000	NE
Fluoride	mg/L	<500**	7.2	4
pH*	SU	8.7	8.4	NE
Potassium (dissolved)	mg/L	3320	3700	NE
Lead (dissolved)	mg/L	--	0.015	0.05
Nickel (dissolved)	mg/L	--	0.72	0.1
Nitrate/Nitrite (as Nitrogen)	mg/L	706	1,100	10
Selenium (dissolved)	mg/L	--	0.082	0.05
Sulfate	mg/L	39000**	19,000	NE
Thallium (dissolved)	mg/L	--	<0.100	0.002
TDS	mg/L	164,000	270,000	NE
Total Trihalomethanes	mg/L	--	0.0029	0.1
Calcium (dissolved)	mg/L	--	780	NE
Magnesium (dissolved)	mg/L	--	320	NE
Sodium (dissolved)	mg/L	--	44,000	NE
Cation Anion Balance		--	-10.8	NE

*Alert Level for pH is 4-11.
** Missed parameter holding time
AWQS = Aquifer Water Quality Standard
SU
NA = Not applicable
NE = Not established
°C = Degrees Celsius
umhos/cm = micromhos per centimeter
mg/L = milligrams per liter
< = Less than the indicated reporting limit.

TABLE 2B-6. OPERATIONAL (ODCM) RADIONUCLIDES RESULTS FOR EVAPORATION POND #1

DATE	Tritium pCi/l	Mn-54 pCi/l	Co-58 pCi/l	Fe-59 pCi/l	Co-60 pCi/l	Zn-65 pCi/l	Nb-95 pCi/l	Zr-95 pCi/l	I-131 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Ba-140 pCi/l	La-140 pCi/l
01/27/04		<15	<11	<26	<14	<25	<15	<19	<12	<12	<14	<44	<13
02/24/04		<11	<12	<24	<10	<30	<11	<19	<9	<11	<11	<33	<12
03/29/04	954 ± 181	<13	<12	<23	<13	<29	<10	<20	<10	<10	<10	<34	<9
04/27/04		<12	<11	<22	<15	<27	<12	<21	<12	<11	<12	<37	<13
05/25/04		<9	<10	<26	<13	<30	<10	<14	<10	<8	<11	<32	<15
06/29/04	1266 ± 184	<10	<8	<24	<15	<27	<10	<19	<8	<10	<12	<31	<7
07/27/04		<11	<13	<25	<13	<30	<12	<22	<10	<11	<12	<38	<12
08/31/04		<11	<10	<23	<13	<30	<12	<20	18 ± 7	<9	<12	<39	<12
09/28/04	864 ± 176	<12	<13	<30	<13	<30	<13	<25	<12	<10	<13	<40	<10
10/26/04		<11	<10	<23	<13	<30	<12	<17	<9	<9	<11	<34	<12
11/30/04		<13	<13	<27	<14	<30	<14	<20	<12	<10	<11	<42	<10
12/27/04	867 ± 178	<11	<9	<26	<13	<25	<9	<15	<11	<9	<10	<32	<15
Release Limit	**30,000**	**1,000**	**1,000**	**400**	**300**	**300**	**400**	**400**	**20**	**30**	**50**	**200**	**200**

pCi/l = picoCuries per liter
< = Less than the indicated reporting limit
ODCM = Offsite Dose Calculation Manual
NE - Not Established
AWQS = Aquifer water quality standard

TABLE 2B-7. INORGANIC RESULTS FOR EVAPORATION POND #2

ANALYTE	UNITS	06/16/04	11/02/04	AWQS
Field pH*	SU	NA	NA	NE
Field Temperature	°C	NA	NA	NE
Field Conductivity	umhos/cm	NA	NA	NE
Antimony (dissolved)	mg/L	--	0.049	0.006
Arsenic (dissolved)	mg/L	--	<0.150	0.05
Beryllium (dissolved)	mg/L	--	0.0048	0.004
Boron (dissolved)	mg/L	32.0	37.0	NE
Cadmium (dissolved)	mg/L	--	<0.050	0.005
Chromium (dissolved)	mg/L	--	0.029	0.1
Total Alkalinity (as CaCO3)	mg/L	149	210	NE
Chloride	mg/L	51,000**	41000	NE
Fluoride	mg/L	<500**	2.7	4
pH*	SU	8.7	8.8	NE
Potassium (dissolved)	mg/L	1580	1800	NE
Lead (dissolved)	mg/L	--	<0.100	0.05
Nickel (dissolved)	mg/L	--	0.380	0.1
Nitrate/Nitrite (as Nitrogen)	mg/L	326	440	10
Selenium (dissolved)	mg/L	--	0.041	0.05
Sulfate	mg/L	21,000**	22000	NE
Thallium (dissolved)	mg/L	--	<0.100	0.002
Total dissolved solids	mg/L	92000	200000	NE
Total Trihalomethanes	mg/L	--	0.0115	0.1
Calcium (dissolved)	mg/L	--	660	NE
Magnesium (dissolved)	mg/L	--	270	NE
Sodium (dissolved)	mg/L	--	32000	NE
Cation Anion Balance		--	-5.0	NE

*Alert Level for pH is 4-11.
** Missed parameter holding time
AWQS
SU
NA = Not applicable
NE = Not established
°C = Degrees Celsius
umhos/cm = micromhos per centimeter
mg/L = milligrams per liter
< = Less than the indicated reporting limit.
-- = Not analyzed

TABLE 2B-8. OPERATIONAL (ODCM) RADIONUCLIDES RESULTS FOR EVAPORATION POND #2

DATE	Tritium pCi/l	Mn-54 pCi/l	Co-58 pCi/l	Fe-59 pCi/l	Co-60 pCi/l	Zn-65 pCi/l	Nb-95 pCi/l	Zr-95 pCi/l	I-131 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Ba-140 pCi/l	La-140 pCi/l
01/27/04		<10	<10	<23	<11	<26	<10	<20	<12	<10	<14	<37	<14
02/24/04		<12	<11	<28	<15	<30	<11	<21	<12	<10	<14	<42	<14
03/29/04	1284 ± 184	<12	<14	<26	<13	<25	<11	<22	<15	<11	<14	<42	<15
04/27/04		<10	<11	<24	<12	<24	<10	<17	<11	<10	<11	<32	<14
05/25/04		<11	<11	<25	<12	<30	<11	<19	<12	<11	<13	<39	<14
06/29/04	1826 ± 195	<11	<12	<26	<13	<24	<14	<21	<13	<12	<15	<38	<15
07/27/04		<12	<11	<29	<14	<25	<13	<23	<15	<12	<16	<45	<15
08/31/04		<14	<11	<27	<13	<30	<11	<22	<12	<11	<14	<46	<12
09/28/04	1558 ± 187	<10	<12	<27	<13	<30	<12	<22	<13	<10	<14	<42	<10
10/26/04		<14	<12	<25	<15	<29	<14	<20	<14	<12	<15	<44	<13
11/30/04		<10	<10	<23	<14	<30	<11	<20	<11	<11	<13	<36	<13
12/27/04	1294 ± 186	<12	<12	<24	<14	<30	<12	<24	<12	<11	<15	<44	<12
Release Limit	**30,000**	**1,000**	**1,000**	**400**	**300**	**300**	**400**	**400**	**20**	**30**	**50**	**200**	**200**

pCi/l = picoCuries per liter
< = Less than the indicated reporting limit
ODCM = Offsite Dose Calculation Manual
NE = Not Established
AWQS = Aquifer water quality standard

TABLE 2B-9. INORGANIC RESULTS FOR THE WATER STORAGE RESERVOIR

ANALYTE	UNITS	6/16/04	10/18/04	AWQS
Field pH*	SU	NA	NA	NE
Field Temperature	°C	NA	NA	NE
Field Conductivity	umhos/cm	NA	NA	NE
Antimony (dissolved)	mg/L	--	<0.050	0.006
Arsenic (dissolved)	mg/L	--	<0.050	0.05
Beryllium (dissolved)	mg/L	--	<0.0040	0.004
Boron (dissolved)	mg/L	0.4	<0.50	NE
Cadmium (dissolved)	mg/L	--	<0.0050	0.005
Chromium (dissolved)	mg/L	--	<0.010	0.1
Total Alkalinity (as CaCO3)	mg/L	30.0	31.00	NE
Chloride	mg/L	310**	360.00	NE
Fluoride	mg/L	<10**	0.62	4
pH*	SU	9.6	9.22	NE
Potassium (dissolved)	mg/L	20.9	20.00	NE
Lead (dissolved)	mg/L	--	<0.0010	0.05
Nickel (dissolved)	mg/L	--	<0.050	0.1
Nitrate/Nitrite (as Nitrogen)	mg/L	7.5	7.40	10
Selenium (dissolved)	mg/L	--	<0.0020	0.05
Sulfate	mg/L	230**	260.00	NE
Thallium (dissolved)	mg/L	--	<0.0010	0.002
Total dissolved solids	mg/L	1280.0	1100.00	NE
Total Trihalomethanes	mg/L	--	0.02	0.1
Calcium (dissolved)	mg/L	--	36.00	NE
Magnesium (dissolved)	mg/L	--	6.30	NE
Sodium (dissolved)	mg/L	--	310.00	NE
Cation Anion Balance		--	-1.30	NE

*Alert Level for pH is 4-11.
**Missed parameter holding time.
AWQS = Aquifer water quality standards
SU = Standard Units
NA = Not applicable
NE = Not established
°C = Degrees Celsius
umhos/cm = micromhos per centimeter
mg/L = milligrams per liter
< = Less than the indicated reporting limit.
-- = Not analyzed

TABLE 2B-10. OPERATIONAL (ODCM) RADIONUCLIDES RESULTS FOR THE WATER STORAGE RESERVOIR

DATE	Tritium pCi/l	Mn-54 pCi/l	Co-58 pCi/l	Fe-59 pCi/l	Co-60 pCi/l	Zn-65 pCi/l	Nb-95 pCi/l	Zr-95 pCi/l	I-131 pCi/l	Cs-134 pCi/l	Cs-137 pCi/l	Ba-140 pCi/l	La-140 pCi/l
01/27/04		<12	<15	<27	<14	<28	<14	<22	<13	<11	<12	<42	<14
02/24/04		<11	<10	<20	<11	<21	<11	<17	<12	<10	<11	<36	<15
03/29/04	<280	<7	<7	<14	<8	<18	<7	<12	<8	<7	<8	<27	<8
04/27/04		<11	<11	<23	<13	<25	<14	<18	<15	<12	<12	<44	<11
05/25/04		<15	<15	<21	<14	<29	<15	<22	<14	<12	<15	<51	<13
06/29/04	<267	<12	<11	<27	<13	<27	<13	<21	<12	<11	<13	<40	<15
07/27/04		<13	<14	<24	<15	<25	<13	<27	15 ± 8	<10	<13	<47	<14
08/31/04		<12	<11	<28	<15	<27	<11	<16	<11	<10	<11	<34	<10
09/28/04	<275	<10	<12	<28	<15	<18	<11	<18	9 ± 9	<10	<11	<37	<12
10/26/04		<13	<11	<25	<12	<23	<12	<22	<12	<11	<11	<41	<15
11/30/04		<11	<11	<25	<13	<29	<12	<20	<12	<10	<12	<43	<12
12/27/04	<279	<13	<12	<26	<14	<24	<14	<20	<13	<11	<12	<42	<15
Release Limit	**30,000**	**1,000**	**1000**	**400**	**300**	**300**	**400**	**400**	**20**	**30**	**50**	**200**	**200**

pCi/l = picoCuries per liter
< = Less than the indicated reporting limit
NE - Not Established
ODCM = Offsite Dose Calculation Manual
AWQS = Aquifer water quality standard

2. IMPOUNDMENT MONITORING

C. SUMMARY OF MAINTENANCE AND REPAIR ACTIVITIES

TABLE 2C-1. SUMMARY OF MAINTENANCE AND REPAIR ACTIVITIES

FACILITY	CONDITION IDENTIFIED	DATE	ACTIONS TAKEN	PROCEDURES/ MATERIALS USED	DOCUMENTATION
RESERVOIR	21 tears discovered on liner above water as a result of a visual inspection with water level at 88.3%	10/13/04	Performed 21 repairs	Hypalon patches, sealed to the existing liner with liquid boot, were used to cover the tears	WO 2732357
	19 tears discovered on liner above water as a result of a visual inspection with water level at 77.83%	10/15/2004	Performed 19 repairs	Hypalon patches, sealed to the existing liner with liquid boot, were used to cover the tears	WO 2732357
	39 tears discovered on liner above water as a result of a visual inspection.	10/20/2004	Performed 39 repairs	Hypalon patches, sealed to the existing liner with liquid boot, were used to cover the tears	WO 2732357
	Applied Diving identified underwater tear at toe between 58+00 & 59+00 mark	11/16/2004	Applied Diving made underwater repair	Placed hypalon patch over tear with bentonite sealer between patch and old liner. Placed sand bags above patch material, bentonite, and old liner	WO 2740781
	Applied Diving identified underwater tear at toe at 65+00 mark	11/17/2004	Applied Diving made underwater repair	Placed hypalon patch over tear with bentonite sealer between patch and old liner. Placed sand bags above patch material, bentonite, and old liner	WO 2740781
	Applied Diving identified underwater tear at toe at 25+00 mark	11/18/2004	Applied Diving made underwater repair	Placed hypalon patch over tear with bentonite sealer between patch and old liner. Placed sand bags above patch material, bentonite, and old liner	WO 2740781
	PM for flow meter at 91st Ave. (AWZINFE0013)	4/1/2004	PM to calibrate flow transmitter loop. Meter verified operational daily.		PM 2661578
	PM for flow meter at 91st Ave. (AWZINFE0013)	10/5/2004	PM to calibrate flow transmitter loop. Meter verified operational daily.		PM 2718278
	PM for flow meter at Tolleson (AWZINFQIT0113)	3/16/2004	PM to calibrate flow transmitter loop. Meter verified operational daily.		PM 2657021
	Flow Meter for Tolleson Siphon (AWZINFE0114)		Meter verified operational daily.		
	Flow Meter at Goodyear WWTP (AWZONFE0041)		Meter verified operational monthly during data collection.		
	Flow Meter at PVNGS STP (AJSTNFE0023)		Meter verified operational daily.		
EVAPORATION POND #1	Flow meter was not functional at SW leak collection sump when sump pumping was initated and a portable pump was being used to pump sumps instead of installed pumps.	8/31/2004	Flow meter replaced. Notified ADEQ of intention to continue using portable pumps. Meters verified operational weekly during sump pumping.	New flowmeter.	Work Order 2734939
	Tears on welds of ladder on North Slope	8/9/2004	Made 3 repairs to tears on welds utilizing extrusion welds performed with an extrusion gun.	Work perfomed by GSE. Extrusion welds performed by extrusion gun and HDPE bead material.	WO 2686776
	Repair dikes	9/21/2004	Repaired dikes to Evaporation Pond #1	Work performed by WRF Facilites Maint. Work performed under spec 13-CM-300	WO 2734135
	U1 Blowdown "A" flow meter (1JCWNFE0312)		Meter verified operational daily when in service.		
	U1 Blowdown "B" flow meter (1JCWNFE0027)		Meter verified operational daily when in service.		
	U2 Blowdown "A" flow meter (2JCWNFE0312)	3/4/2004	PM for callibration. Meter verified operational daily when in service.		PM 3603605 and PM 2603605
	U2 Blowdown "B" flow meter (2JCWNFE0027)		Meter verified operational daily when in service.		
	U3 Blowdown "A" flow meter (3JCWNFE0312)		Meter verified operational daily when in service.		
	U3 Blowdown "B" flow meter (3JCWNFE0027)	11/16/2004	PM for callibration. Meter verified operational daily when in service.		PM 2652809

TABLE 2C-1. SUMMARY OF MAINTENANCE AND REPAIR ACTIVITIES

FACILITY	CONDITION IDENTIFIED	DATE	ACTIONS TAKEN	PROCEDURES/ MATERIALS USED	DOCUMENTATION
EVAPORATION POND #2	Inspected Evaporation Pond #2 and discovered 546 tears	4/10/2004	Repaired 546 tears by utilizing extrusion welds only, or applying a patch secured by extrusion welds	Work perfomed by GSE. Extrusion welds performed by extrusion gun and HDPE bead material. Patches were HDPE.	WO 2696773 (ATTACHMENTS 1 & 2)
	Repair dikes	9/21/2004	Repaired dikes to Evaporation Pond #2	Work performed by WRF Facilites Maint. Work performed under spec 13-CM-300	WO 2734135
RETENTION BASINS	APP requires flow meters for Retention Basins	Sept. 2004	Installed 2 new flow meters at Retention Basins. Meters verified operational weekly as a minimum during data collection.	Mag flow meters installed on discharge of both pumps.	WDP-OW-683

2. IMPOUNDMENT MONITORING

D. SUMMARY OF THE RESULTS OF ALL LINER LEAKAGE

TABLE 2D-1. LINER LEAKAGE SUMMARY TABLE

EVAPORATION POND 1 LINER LEAKAGE ALERT LEVEL: 50,000 GPD

EVAP POND 1 PRIMARY LINER - SW SUMP				EVAP POND 1 PRIMARY LINER - SE SUMP			
METER READ DATE	METER READ AFTER PUMPING	GALLONS PUMPED	CALCULATED LEAKAGE RATE GPD	METER READ DATE	METER READ AFTER PUMPING	GALLONS PUMPED	CALCULATED LEAKAGE RATE GPD
01/09/04	6,268			12/30/03	113,240		
09/01/04		432	Flow meter not working.	01/09/04	113,738	498	50
10/20/04	83	83	1.69	01/20/04	114,875	1,137	103
10/26/04	87	4	0.67	01/27/04	115,754	879	126
11/02/04	93	6	0.86	02/03/04	116,486	732	105
11/09/04	111	18	2.57	02/10/04	117,202	716	102
11/16/04	122	11	1.57	02/19/04	117,899	697	77
11/22/04	124	2	0.33	02/24/04	118,575	676	135
12/01/04	132	8	0.89	03/02/04	119,068	493	70
12/08/04	136	4	0.57	03/09/04	119,607	539	77
12/20/04	151	15	1.25	03/16/04	120,124	517	74
12/28/04	156	5	0.63	03/23/04	120,517	393	56
2004 Total Gallons:		**588**		04/07/04	121,649	1,132	75
				04/16/04	122,269	620	69
				04/29/04	122,873	604	46
				05/11/04	123,143	270	23
				05/25/04	123,770	627	45
				06/02/04	124,094	324	41
				06/22/04	124,695	601	30
				07/08/04	125,239	544	34
				08/03/04	125,752	513	20
				08/31/04	126,330	578	21
				10/05/04	126,855	525	15
				10/20/04	127,017	162	11
				10/26/04	127,084	67	11
				11/02/04	127,139	55	8
				11/09/04	127,217	78	11
				11/16/04	127,286	69	10
				11/22/04	127,355	69	12
				12/01/04	127,483	128	14
				12/08/04	127,580	97	14
				12/14/04	127,669	89	15
				12/20/04	127,758	89	15
				12/28/04	127,848	90	11
				2004 Total Gallons:		**14,608**	

gpd = gallons per day

TABLE 2D-1. LINER LEAKAGE SUMMARY TABLE

EVAPORATION POND 2 LINER LEAKAGE ALERT LEVEL: 44,000 GPD			RETENTION BASINS LINER LEAKAGE ALERT LEVEL: 242 GPD	WATER STORAGE RESERVOIR LINER LEAKAGE ALERT LEVEL: NONE
EVAP POND2 - SW SUMP	EVAP POND 2 - SE SUMP	EVAP POND 2 - NE SUMP	RETENTION BASINS SUMP	NO COLLECTION SUMP
CALCULATED LEAKAGE RATE GPD	CALCULATED LEAKAGE RATE GPD	CALCULATED LEAKAGE RATE GPD	CALCULATED LEAKAGE RATE GPD	CALCULATED LEAKAGE RATE GPD
No Leakage Observed in 2004	No Leakage Observed in 2004	No Leakage Observed in 2004	No Leakage Observed in 2004	Leakage Detected in 2004 but Unable to Quantify

gpd = gallons per day

2. IMPOUNDMENT MONITORING

E. SUMMARY TABLES OF ALL BASIN, IMPOUNDMENT, AND RESERVOIR DATA WHICH ALLOWS DATA TO BE READILY COMPARED TO LEAKAGE AND DISCHARGE QUALITY ALERT LEVELS AND PREVIOUS DATA

TABLE 2E-1. SUMMARY OF FLOW, LEAKAGE, AND WATER QUALITY DATA - EVAPORATION PONDS

PARAMETER	UNITS	Alert Level	AWQS	2004			
Location				EP 1		EP 2	
Flow 2004	gallons			22,241,700*		696,764,423*	
Average Flow 2004	gpd			60,936		1,908,944	
Leakage 2004	gallons			15,196		None observed	
Leakage 2004	gpd	50,000 (EP1)/ 44,000 (EP2)		42		None observed	
WATER QUALITY							
Sample Date				**6/16/04**	**11/2/04**	**6/16/04**	**11/2/04**
Field pH	SU	4-11	NE	NA	NA	NA	NA
Field Temperature	°C		NE	NA	NA	NA	NA
Field Conductivity	umhos/cm		NE	NA	NA	NA	NA
Antimony (dissolved)	mg/L		0.006	--	0.086	--	0.049
Arsenic (dissolved)	mg/L		0.05	--	0.12	--	<0.150
Beryllium (dissolved)	mg/L		0.004	--	0.0066	--	0.0048
Boron (dissolved)	mg/L		NE	56.8	66	32.0	37.0
Cadmium (dissolved)	mg/L		0.005	--	<0.025	--	<0.050
Chromium (dissolved)	mg/L		0.1	--	0.019	--	0.029
Total Alkalinity (as CaCO3)	mg/L		NE	832	700	149	210
Chloride	mg/L		NE	93,000	74,000	51,000**	41000
Fluoride	mg/L		4	<500	7.2	<500**	2.7
Ph	SU	4-11	NE	8.7	8.4	8.7	8.8
Potassium (dissolved)	mg/L		NE	3320	3700	1580	1800
Lead (dissolved)	mg/L		0.05	--	0.015	--	<0.100
Nickel (dissolved)	mg/L		0.1	--	0.72	--	0.380
Nitrate/Nitrite (as Nitrogen)	mg/L		10	706	1,100	326	440
Selenium (dissolved)	mg/L		0.05	--	0.082	--	0.041
Sulfate	mg/L		NE	39,000	19,000	21,000**	22000
Thallium (dissolved)	mg/L		0.002	--	<0.100	--	<0.100
TDS	mg/L		NE	164,000	270,000	92000	200000
Total Trihalomethanes	mg/L		0.1	--	0.0029	--	0.0115
Calcium (dissolved)	mg/L		NE	--	780	--	660
Magnesium (dissolved)	mg/L		NE	--	320	--	270
Sodium (dissolved)	mg/L		NE	--	44,000	--	32000
Cation Anion Balance			NE	--	-10.8	--	-5
Radionuclides	pCi/l		Various	ND	ND	ND	ND

* Flows from retention basin prior to September 2004 are estimated.
**Missed parameter holding time.
AWQS = Aquifer Water Quality Standard
SU = Standard Unit
NA = Not applicable
NE = Not established
°C = Degrees Celsius
umhos/cm = micromhos per centimeter
mg/L = milligrams per liter
< = Less than the indicated reporting limit.
EP1 = Evaporation Pond #1
EP2 = Evaporation Pond #2
ND = Not Detected

TABLE 2E-2. SUMMARY OF FLOW, LEAKAGE, AND WATER QUALITY DATA -

PARAMETER	UNITS	ALERT LEVEL	AWQS	2004							
Flow 2004	gallons			15,324,772*							
Average Flow 2004	gpd			41,986							
Leakage 2004	gallons			None observed							
Leakage 2004	gpd	242		None observed							
WATER QUALITY											
				EAST RETENTION BASIN				**WEST RETENTION BASIN**			
				03/31/04	**06/23/04**	**09/22/04**	**10/26/04**	**3/31/04**	**6/23/04**	**9/22/04**	**10/26/04**
Antimony (Dissolved)	mg/L		0.006	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Arsenic (Dissolved)	mg/L		0.05	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
Barium (Dissolved)	mg/L		2	<0.010	<0.010	<0.010	0.029	<0.010	0.015	<0.010	<0.010
Beryllium (Dissolved)	mg/L		0.004	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Boron (Dissolved)	mg/L		NE	1.400	0.990	2.300	0.610	1.9	2.8	2.5	1.7
Cadmium (Dissolved)	mg/L		0.005	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium (Dissolved)	mg/L		0.01	<0.010	<0.010	<0.010	0.230	<0.010	<0.010	<0.010	<0.010
Potassium (Dissolved)	mg/L		NE	0.970	17.000	6.300	<3.000	<3.000	44	1.4	0.42
Nickel (Dissolved)	mg/L		0.1	<0.040	<0.040	<0.040	0.200	<0.040	<0.040	<0.040	<0.040
Lead (Dissolved)	mg/L		0.05	<0.0050	<0.0020	<0.0010	0.057	<0.0050	<0.0020	<0.0010	<0.0050
Selenium (Dissolved)	mg/L		0.05	0.032	0.0058	<0.0050	<0.025	0.043	0.0057	0.0078	<0.025
Thallium (Dissolved)	mg/L		0.002	<0.0050	<0.0020	<0.0010	<0.0050	<0.0050	<0.0020	<0.0010	<0.0050
Mercury (Dissolved)	mg/L		0.002	<0.00020	<0.00020	<0.00020	0.0027	<0.00020	<0.00020	<0.00020	<0.00020
Chloride	mg/L		NE	66	370	200	380	120	820	110	81
Fluoride	mg/L		4.0	<10	<5.0	<5.0	17	<10	<5.0	9.6	6.3
Sulfate	mg/L		NE	9300	5500	10000	9800	9,400	5100	13,000	7,000
Nitrate/Nitrite (as N)	mg/L		10	0.85	4.0	2.4	0.68	0.77	14	0.4	0.13
Specific Conductance	umhos/cm		NE	20000	14000	54000	16000	18,000	14,000	59,000	13,000
Organics	mg/L		Various	See Table 2B-1				See Table 2B-3			
Radionuclides	pCi/l		Various	See Table 2B-2				See Table 2B-4			

*Flow estimated prior to September 2004
AWQS = Aquifer Water Quality Standard
gpd = gallons per day
NE = Not established
mg/L = milligrams per liter
umhos/cm = micromhos per centimeter
pCi/L = picoCuries per Liter
< = Less than the indicated reporting limit.

TABLE 2E-3. SUMMARY OF FLOW, LEAKAGE, AND WATER QUALITY DATA - WATER STORAGE RESERVOIR

PARAMETER	UNITS	Alert Level	AWQS	2004	
Flow 2004	gallons			21,592,229,766	
Average Flow 2004	gpd			59,156,794	
Leakage 2004	gallons			Not quantified	
Leakage 2004	gpd	NE		Not quantified	
WATER QUALITY					
Sample Date				**6/16/04**	**10/18/04**
Field pH	SU	4-11	NE	NA	NA
Field Temperature	°C		NE	NA	NA
Field Conductivity	umhos/cm		NE	NA	NA
Antimony (dissolved)	mg/L		0.006	--	<0.050
Arsenic (dissolved)	mg/L		0.05	--	<0.050
Beryllium (dissolved)	mg/L		0.004	--	<0.0040
Boron (dissolved)	mg/L		NE	0.4	<0.50
Cadmium (dissolved)	mg/L		0.005	--	<0.0050
Chromium (dissolved)	mg/L		0.1	--	<0.010
Total Alkalinity (as CaCO3)	mg/L		NE	30.0	31.00
Chloride	mg/L		NE	310*	360.00
Fluoride	mg/L		4	<10*	0.62
pH	SU	4-11	NE	9.6	9.22
Potassium (dissolved)	mg/L		NE	20.9	20.00
Lead (dissolved)	mg/L		0.05	--	<0.0010
Nickel (dissolved)	mg/L		0.1	--	<0.050
Nitrate/Nitrite (as Nitrogen)	mg/L		10	7.5	7.40
Selenium (dissolved)	mg/L		0.05	--	<0.0020
Sulfate	mg/L		NE	230*	260.00
Thallium (dissolved)	mg/L		0.002	--	<0.0010
TDS	mg/L		NE	1280.0	1100.00
Total Trihalomethanes	mg/L		0.1	--	0.02
Calcium (dissolved)	mg/L		NE	--	36.00
Magnesium (dissolved)	mg/L		NE	--	6.30
Sodium (dissolved)	mg/L		NE	--	310.00
Cation Anion Balance			NE	--	-1.30
Radionuclides	pCi/l		Various	ND	ND

*Missed parameter holding time.
AWQS = Aquifer Water Quality Standard
gpd = gallons per day
SU = Standard Unit
NA = Not applicable
ND = Not Detected
NE = Not established
°C = Degrees Celsius
umhos/cm = micromhos per centimeter
mg/L = milligrams per liter
< = Less than the indicated reporting limit.

3. SLUDGE MONITORING

A. SLUDGE LANDFILL MONITORING ANALYTICAL RESULTS

TABLE 3A-1. RESULTS FOR SAMPLES COLLECTED AT SLUDGE LANDFILL

ANALYTE	UNITS	ALERT LEVEL	1/28/04	11/19/04
pH	SU	<2, >12.5	9.68	10.6
TCLP Arsenic	mg/L	5	<0.25	<0.25
TCLP Barium	mg/L	100	<1.0	<1.0
TCLP Cadmium	mg/L	1	<0.025	<0.025
TCLP Chromium (Toral)	mg/L	5	<0.050	<0.050
TCLP Lead	mg/L	5	<0.25	<0.25
TCLP Mercury	mg/L	0.2	<0.0020	<0.0020
TCLP Selenium	mg/L	1	<0.25	<0.25
TCLP Silver	mg/L	5	<0.025	<0.025

SU = Standard unit
mg/L = milligrams per liter
< = Less than indicated reporting limit

3. SLUDGE MONITORING

B. COOLING TOWER SLUDGE ANALYTICAL RESULTS

TABLE 3B-1. RESULTS FOR SLUDGE MONITORING SAMPLES COLLECTED AT THE COOLING TOWER

ANALYTE	UNITS	ALERT LEVEL	U1R10-T1 2/13/2004	U2R11-CW 5/27/2004	U1R11-T1 7/8/2004	U1R11-T2 7/8/2004	U1R11-T3 7/8/2004	U1R11-Canal 7/8/2004	U1R11-UPD 7/8/2004
pH	SU	<2, >12.5	7.8	7.8	8.7	8.5	9.1	8.4	8.4
TCLP Arsenic	mg/L	5	<0.08	<0.04	0.05	0.29	0.18	0.05	<0.04
TCLP Barium	mg/L	100	0.095	0.209	0.125	0.186	0.288	0.134	0.185
TCLP Cadmium	mg/L	1	<0.01	<0.005	<0.005	0.258	0.029	0.015	<0.005
TCLP Chromium (Total)	mg/L	5	<0.02	0.02	0.11	0.08	0.19	0.06	0.03
TCLP Lead	mg/L	5	<0.08	<0.04	<0.04	<0.04	0.12	0.52	<0.04
TCLP Mercury	mg/L	0.2	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
TCLP Selenium	mg/L	1	<0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
TCLP Silver	mg/L	5	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

SU = Standard unit
mg/L = milligrams per liter
< = Less than indicated reporting limit

3. SLUDGE MONITORING

C. SUMMARY OF ANY EXCEEDANCES OF PERMIT LIMITS FOR SLUDGE QUALITY

3C. SUMMARY OF ANY EXCEEDANCE OF PERMIT LIMITS FOR SLUDGE QUALITY

NO EXCEEDANCES WERE OBSERVED DURING 2004

3. SLUDGE MONITORING

D. DESCRIPTION OF ANY VIOLATIONS OF THE ARRA SPECIAL LICENSE FOR SLUDGE RADIOISOTOPE LIMITS.

3D. DESCRIPTION OF ANY VIOLATIONS OF THE ARRA SPECIAL LICENSE FOR SLUDGE RADIOISOTOPE LIMITS

NO EXCEEDANCES WERE OBSERVED DURING 2004

4. COMPLIANCE STATUS

A. VOLUME OF ALL NON-STORM WATER RELEASES TO THE UNLINED DITCHES OR SEDIMENTATION BASINS

TABLE 4A-1. VOLUME OF NON-STORM WATER RELEASES TO UNLINED DITCHES OR SEDIMENTATION BASINS

EVENT DATE	EVENT SOURCE	AFFECTED FACILITY	ESTIMATED GALLONS RELEASED
02/11/04	WRF Pipeline Rupture Disc Failure	Sedimentation Basin 2	53,000
04/02/04	Manhole & Evap Cooler Release	Sedimentation Basin 2	1,500
11/07/04	Unit 1 Yard Sump Overflow	Sedimentation Basin 2	500
11/07/04	Unit 3 Secondary Closed Loop Cooling Water Release	Sedimentation Basin 2	100
11/12/04	Unit 3 Temporary Cooling Tower Cooling Water Release	Sedimentation Basin 2	<500

4. COMPLIANCE STATUS

B. SOURCE AND CHARACTERIZATION OF RELEASES TO BASINS

TABLE 4B-1. ANALYTICAL RESULTS FOR SAMPLES COLLECTED FROM RELEASES TO BASINS

PARAMETER	UNITS	WRSSP RUPTURE DISC FAILURE 2/11/04	MANHOLE & EVAP COOLER RELEASE 4/2/04	UNIT 3 TEMPORARY COOLING TOWER RELEASE 11/16/04	AL	AWQS
Estimted volume	gallons	53,000	1500	<500	**NE**	**NE**
Field pH	SU	6.23	7.93	NA	**<6 or >9**	**NE**
Lab pH	SU	7.5	8.30	7.91	**<6 or >9**	**NE**
Total Alk. (as CaCO3)	mg/L	210	92.00	51	**NE**	**NE**
Potassium (dissolved)	mg/L	19	12.00	3.2	**700**	**NE**
Arsenic (dissolved)	mg/L	<0.050	0.01	<0.050	**0.05**	**0.05**
Boron (dissolved)	mg/L	0.58	0.18	<0.50	**NE**	**NE**
Cadmium (dissolved)	mg/L	<0.0050	<0.0030	<0.0050	**0.005**	**0.005**
Chromium (dissolved)	mg/L	<0.010	<0.010	<0.010	**0.1**	**0.1**
Chromium (total)	mg/L	<0.010	0.05	<0.010	**0.1**	**0.1**
Calcium (dissolved)	mg/L	77	44.00	16	**NE**	**NE**
Chloride	mg/L	280	61.00	43	**NE**	**NE**
Fluoride	mg/L	1.4	<0.50	0.5	**4**	**4**
Lead	mg/L	<0.050	0.01	<0.0010	**0.05**	**0.05**
Nickel	mg/L	<0.050	0.02	<0.050	**0.1**	**0.1**
Nitrate/Nitrite (as N)	mg/L	4.3	3.50	2.1	**10**	**10**
Magnesium (dissolved)	mg/L	34	20.00	1.6	**NE**	**NE**
Selenium (dissolved)	mg/L	<0.050	<0.0030	<0.0020	**0.05**	**0.05**
Sodium (dissolved)	mg/L	240	72.00	49	**NE**	**NE**
Specific Cond.	umhos/cm	1600	500.00	360	**NE**	**NE**
Sulfate	mg/L	200	50.00	46	**NE**	**NE**
TDS	mg/L	1000	270.00	220	**NE**	**NE**
Tritium	pCi/l	=268 (±160)	=276 (±165)	=3000	**LLD 3000**	**20,000**
Cobalt-60	pCi/l	=10.44	=8.97	=121	**LLD 121**	**200**
Cesium-137	pCi/l	=13.56	=10.53	=145	**LLD 145**	**110**
Iodine-131	pCi/l	**45.48 (±13.04)**	=10.25	=15	**LLD 15**	**100**

AL = Alert Level
AWQS = Aquifer water quality standard
LLD = lower limit detection
mg/L = milligrams per liter
pCi/L = picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
NE = Not established
WRSSP = Water Reclamation Supply System Pipeline
< = Less than the indicated reporting limit

4. COMPLIANCE STATUS

C. CONTINGENCY PLAN ACTIONS TAKEN FOR RELEASES

TABLE 4C-1. SOURCE OF RELEASES AND CONTINGENCY PLAN ACTIONS TAKEN

EVENT DATE	EVENT SOURCE	AFFECTED FACILITY	CONTINGENCY PLAN ACTIONS
02/11/04	WRF Pipeline Rupture Disc Failure	Sedimentation Basin 2	The Water Reclamation Facility (WRF) initiated immediate shutdown of the Hassayampa Pump Station. WRF quickly closed the isolation valve for the rupture disc. WRF quickly installed a temporary dirt dam down stream in the unlined dirt ditch to contain the concrete dam overflow. A water sample was collected shortly after release and analyzed for all the parameters listed in Table 13 of the permit. Within five (5) business days, contained water behind both the concrete and dirt dams was removed. No discretionary wells were sampled, as there are none in the vicinity of the release containment area. It would not be possible to impact any of the discretionary wells due to the volume of un-recovered water and the distance of the containment area from the wells. PVNGS has identified a design modification that installs new piping from the end of the 24-inch diameter rupture disc to the head works of the WRF. This modification will allow ruptured disc releases to be returned and maintained in the WRF water treatment process systems.
04/02/04	Manhole & Evap Cooler Release	Sedimentation Basin 2	Release occurred during a storm event. The water had been contained in the storm water collection system behind a dirt dam. The water was to be placed in the Retention Basins or process water system. The rain water washed the dam away before the water could be pumped out. A water sample was collected from Sedimentaion Basin 2 shortly after release and analyzed for all the parameters listed in Table 13 of the permit. When plant process water is now contained in the storm water collection system, a Work Order is issued so the clean up can be prioritized and scheduled through Palo Verde's work management system. In addition, Palo Verde's administrative procedures to prevent plant process water from being placed in the storm water system have been reinforced and are being upgraded. Under the previous Groundwater Quality Protection Permit, releases of evaporative cooler bleed off were allowed to be released to the sedimentation basins. Palo Verde has stopped this practice throughout the Station.
11/07/04	Unit 1 Yard Sump Overflow	Sedimentation Basin 2	The release occurred during a storm event so the release could not be contained in the storm water collection system. The release occurred in about a 12 minute period and there was no time to eliminate or reduce process flows to the sump or collect a sample of the release. The Sedimentation Basin was not sampled because of the low volume and good quality of the release and the overwhelming dilution with precipitation in the basin. PVNGS Engineering considered several design modification options that would effectively prevent recurrence of the Yard Sump discharging into the Sedimentation Basins. The modification selected involves rerouting the Turbine Building roof drains, which collect rain water, and directing those flows into the site storm water drainage system instead of the Yard Sumps. A modification will be installed to reroute the roof drains in all three Units.
11/07/04	Unit 3 Secondary Closed Loop Cooling Water Release	Sedimentation Basin 2	The release occurred during a storm event so the release could not be contained in the storm water collection system. No mitigating action was taken and no Sedimentation Basin sample was collected because of the low volume and good quality of the release and the overwhelming dilution with precipitation in the basin. However, typical water chemistry values for the secondary closed loop cooling system were included in APS letter number 291-03176-DEB/FDD dated November 16, 2004. Units 1 and 2 secondary closed loop cooling water sytems have swagelock plug valves installed downstream of the instrument vent valves that were found open and caused the release of water. Unit 3 did not. In order to prevent future occurrences, swagelock plug valves were installed in Unit 3 under work order #2761613.
11/12/04	Unit 3 Temporary Cooling Tower Cooling Water Release	Sedimentation Basin 2	The release occurred during a storm event so the release could not be contained in the storm water collection system. The cooling water recirculation pump seal drain hose blockage was removed so the seal water would properly drain to a sump. This immediately stopped the spillage of water to the ground. A water sample was collected from Sedimentaion Basin 2 shortly after release and analyzed for all the parameters listed in Table 13 of the permit. The cause for the discharge was the failure of the cooling water recirculation pump seal and blockage of the pump seal drain hose. The pump was rebuilt with new seals. Prior to use in the outages the pumps are tested to demonstrate their performance. To prevent future events Palo Verde will continue to test and rebuild, as necessary, these pumps prior to use.

4. COMPLIANCE STATUS

D. VIOLATIONS OF THIS PERMIT

TABLE 4D-1. PERMIT VIOLATIONS SUMMARY

DATE OF VIOLATION	PERMIT VIOLATION	ADDITIONAL INFORMATION/COMMENTS
02/11/04	WRSS pipeline rupture disc failure and overtopping of storm water dam.	133,000 gallons released. 100,000 gallons overtopped dam. 53,000 gallons unrecovered. CRDR 2682733 written. Written notifications to ADEQ: APS Letters 291-03039-DEB/FDD, 291-03051-DEB/FDD, 291-03068-DEB/FDD and 291-03087-DEB/FDD.
04/20/04	Failure to submit 5-day notifcation of performance standard exceedance noted on 04/10/04 for Evaporation Pond 2.	Did not submit 5-day notification of performance standard exceedance. Became aware while preparing AMCR on 05/06/05. On 04/10/04, GSE Lining Technology Inc. inspected and repaired 546 tears. The repairs were performed by extrusion welds. Work covered under Work Order 2696773.
04/21/04	Failure to submit 5-day notifcation of performance standard exceedance noted on 04/13/04 for Evaporation Pond 2.	Did not submit 5-day notification of performance standard exceedance. Became aware while preparing AMCR on 05/06/05. On 04/13/04, Leak Location Services performed leak detection on side slopes below water level. They found 10 possible locations for leaks. Work covered under Work Order 2696773.
May 204	Missed initial contingency water level measurement on Well PV-14H and all applicable wells in June.	Extended the monthly contingency water level measurements an extra month through September for all applicable wells and took an additional water level measurement in Well PV-14H in November. Reference APS Letter 291-03128-DEB/FDD dated July 30, 2004.
07/16/04	Failure to submit 5-day notifcation of performance standard exceedance noted on 07/08/04 for Evaporation Pond 1.	Did not submit 5-day notification of performance standard exceedance. Became aware while preparing AMCR on 05/06/05. On 07/08/04, GSE Lining Technology Inc. inspected and repaired 6 tears. The repairs were performed by extrusion welds. Work covered under Work Order 2696776.
08/31/04	Missed performance standards on Evaporation Pond 1 SW sump totalizer and sump pumps.	Became aware of that flow meter was not functional when sump pumping was initated and a portable pump was being used to pump sumps instead of installed pumps. Generated CRDR 2736094 for pumps and CRDR 2736104 for the flow meter. The meter was replaced under Work Order 2734939. Generated RCTS 2736373 for pumps and RCTS 2736384 for the flow meter. Written notifications to ADEQ: APS Letters 291-03145-DEB and 291-03179-DEB/FDD.
Unknown	Reservoir liner failure.	September 22, 2004: Letter to Karen Smith, ADEQ, from Scott Davis and Bob Lotts, APS. October 12, 2004: Water Reclamation Facility (WRF) began inspection of the Water Storage Reservoir liner. Found 21 tears/sparations in the liner above water. October 18, 2004: Collected contingency and annual sample from Reservoir. October 20, 2004: Reached 50% level in Reservoir. 42 tears/separations found 39 repaired. 5 day notification call to Robert Casey and confirming letter - 291-03157-DEB/FDD. WRF discovered large tear below the water surface. October 26, 2004: WRF completed liner inspection. October 27, 2004: Generated CRDR 2748549. November 4, 2004: 30 day submittal of analytical results per Section 2.6.3.1.D. APS Letter 291-03166-DEB/FDD. November 8, 2004: APS signed Consent Order P-153-04. APS Letter 291-03173-DMS/DEB/FDD. November 12, 2004: Consent Order Docket No. P-153-04 issued to PVNGS. November 30, 2004: Ed Fox and Bob Lotts, APS, met with ADEQ to discuss proposed options. Meeting met Consent Order 5 day reporting requirement.
12/17/04	Missed 30 Day Report for Sedimentation Basin 2 analytical report.	Sampled Sedimentation Basin 2 after release of Tmod cooling water on November 16, 2004. Became aware of missed submittal time frame. Non-compliance letter submtted on January 21, 2005. APS Letter 291-03199-DEB/SRR.

4. COMPLIANCE STATUS

E. IDENTIFICATION OF ALERT LEVELS, AQLS, AQUIFER WATER QUALITY STANDARDS, OR DISCHARGE LIMITATIONS THAT HAVE BEEN EXCEEDED DURING THE REPORTING PERIOD AND A DISCUSSION OF THE TREND IN CONCENTRATIONS COMPARED TO THE PREVIOUS REPORTING PERIODS AND ACTIONS TAKEN TO CORRECT THE EXCEEDED LEVELS.

TABLE 4E-1. PERMIT EXCEEDANCES SUMMARY

DATE OF EXCEEDANCE	PERMIT EXCEEDANCES	ADDITIONAL INFORMATION/COMMENTS	CORRECTIVE ACTIONS
02/13/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 14 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
04/06/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 19 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
04/07/04	Performance standard exceedance - Sludge Landfill - ponding of rainfall.	Condition observed during inspection. WRF Work Order 2695514 was written to correct the problem. No reporting requirements other than Annual Monitoring Compliance Report.	Regraded area to correct problem. Continue to monitor on a monthly basis.
04/10/04	Performance standard exceedance - Evaporation Pond 2 - primary liner tears.	GSE Lining Technology Inc. inspected and repaired 546 above water tears. The repairs were performed by extrusion welds. Work covered under Work Order 2696773.	Repaird tears in the upper liner. Continue monthly facility observations and in-depth inspections on an annual basis or more frequently if appropriate. We will continue to use monthly facility observations and weekly monitoring of collection sump volumes to determine if more frequent in-depth inspections are appropriate.
04/13/04	Performance standard exceedance - Evaporation Pond 2 - possible primary liner tears.	Leak Location Services performed leak detection on side slopes below water level. They found 10 possible locations for leaks. Work covered under Work Order 2696773.	Continue monthly facility observations and in-depth inspections on an annual basis or more frequently if appropriate. We will continue to use monthly facility observations and weekly monitoring of collection sump volumes to determine if more frequent in-depth inspections are appropriate.
05/19/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 20 mg/l.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
06/03/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 17 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
07/08/04	Performance standard exceedance - Evaporation Pond 1 - primary liner tears.	GSE Lining Technology Inc. inspected and repaired 6 above water tears. The repairs were performed by extrusion welds. Work covered under Work Order 2696776.	Repaird tears in the upper liner. Continue monthly facility observations and in-depth inspections on an annual basis or more frequently if appropriate. We will continue to use monthly facility observations and weekly monitoring of collection sump volumes to determine if more frequent in-depth inspections are appropriate.
07/27/04	Well PV-206A Chloride Indicator Alert Level of 6,500 mg/L.	Concentration measured at 6,700 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
08/13/04	Performance standard exceednace - Evaporation Ponds sump pumps.	Became aware that a portable pump was being used to pump sumps instead of installed pumps.	Discussed condition with ADEQ and made commitment to maintain portable sump pumps.
09/08/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 16 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
09/08/04	Well PV-206A Chloride Indicator Alert Level of 6,500 mg/L.	Concentration measured at 7,000 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
10/20/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 15 mg/l.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
10/20/04	Well PV-206A Chloride Indicator Alert Level of 6,500 mg/L.	Concentration measured at 6,800 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.

TABLE 4E-1. PERMIT EXCEEDANCES SUMMARY

DATE OF EXCEEDANCE	PERMIT EXCEEDANCES	ADDITIONAL INFORMATION/COMMENTS	CORRECTIVE ACTIONS
11/17/04	Well PV-206A Potassium Indicator Alert Level of 9.7 mg/L.	Concentration measured at 18 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
11/17/04	Well PV-206A Chloride Indicator Alert Level of 6,500 mg/L.	Concentration measured at 7,400 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
12/03/04	Performance standard exceedance - Retention Basins - Spalling of gunnite at joints.	Mr.Dan Blackson, APS, notified Mr. Robert Casey, ADEQ, by telephone on December 9, 2004. Written notifications to ADEQ: APS Letters 291-03185-DEB, 291-03191-DEB, 291-03198-DMS/SAB/DEB, 291-03216-DEB/SRR, 291-03230-DEB and 291-03239-DEB. Both Retention Basins were repaired and back in service on 03/26/05. Work performed under Work Order 2757072.	Took basins out of service, one basin at a time, and made repairs. Continue to monitor on a monthly basis with new understanding of appropriate joint sealing criteria.
12/03/04	Well PV-206A Chloride Indicator Alert Level of 6,500 mg/L.	Concentration measured at 7,200 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.
12/03/04	Well PV-206A Chloride Indicator Alert Level of 6,500 mg/L.	Concentration measured at 7,500 mg/L.	The investigation required by Permit Section 2.6.2.3.A.3 is in progress with Consultant assistance.

mg/L = milligrams per liter
Note: This is the initial Annual Monitoring Compliance Report. Therefore, no discussion of the trend in concentrations compared to the previous reporting periods is provided.

APPENDIX A

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

PALO VERDE

NUCLEAR GENERATING STATION

ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT 2004

(Reference: RCTSAI 1643, Legacy Item No. 036843.01)

Prepared by:_____

Reviewed by:_____

Approved by:_____

TABLE OF CONTENTS

1. INTRODUCTION 2

2. DESCRIPTION OF THE MONITORING PROGRAM 3

2.1. 2004 PVNGS RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM 3
2.2. RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM CHANGES FOR 2004 3
2.3. REMP DEVIATIONS/ABNORMAL EVENTS SUMMARY 4

3. SAMPLE COLLECTION PROGRAM 10

3.1. WATER 10
3.2. VEGETATION 10
3.3. MILK 10
3.4. AIR 10
3.5. SLUDGE AND SEDIMENT 11

4. ANALYTICAL PROCEDURES 11

4.1. AIR PARTICULATE 11
4.2. AIRBORNE RADIOIODINE 11
4.3. MILK 11
4.4. VEGETATION 12
4.5. SLUDGE/SEDIMENT 12
4.6. WATER 12
4.7. SOIL 13

5. NUCLEAR INSTRUMENTATION 13

5.1. GAMMA SPECTROMETER 13
5.2. LIQUID SCINTILLATION SPECTROMETER 13
5.3. GAS FLOW PROPORTIONAL COUNTER 13

6. ISOTOPIC DETECTION LIMITS AND REPORTING CRITERIA 14

6.1. LOWER LIMITS OF DETECTION 14
6.2. DATA REPORTING CRITERIA 14
6.3. LLD AND REPORTING CRITERIA OVERVIEW 15

7. INTERLABORATORY COMPARISON PROGRAM 20

7.1. QUALITY CONTROL PROGRAM 20
7.2. INTERCOMPARISON RESULTS 20

8. DATA INTERPRETATIONS AND CONCLUSIONS 24

8.1. AIR PARTICULATES 24
8.2. AIRBORNE RADIOIODINE 25
8.3. VEGETATION 25
8.4. MILK 25
8.5. DRINKING WATER 25
8.6. GROUNDWATER 25

TABLE OF CONTENTS

8.7. SURFACE WATER 25
8.8. SLUDGE AND SEDIMENT 26
8.9. DATA TRENDS 26

9. THERMOLUMINESCENT DOSIMETER (TLD) RESULTS AND DATA 46

10. LAND USE CENSUS 52

10.1. INTRODUCTION 52
10.2. CENSUS RESULTS 52

11. SUMMARY AND CONCLUSIONS 54

12. REFERENCES 59

LIST OF TABLES

TABLE 2.1 SAMPLE COLLECTION LOCATIONS 5

TABLE 2.2 SAMPLE COLLECTION SCHEDULE 6

TABLE 2.3 SUMMARY OF REMP DEVIATIONS/ABNORMAL EVENTS 7

TABLE 6.1 ODCM REQUIRED LOWER LIMITS OF DETECTION (*A PRIORI*) 17

TABLE 6.2 ODCM REQUIRED REPORTING LEVELS 18

TABLE 6.3 TYPICAL MDA VALUES 19

TABLE 7.1 INTERLABORATORY COMPARISON RESULTS 21

TABLE 8.1 PARTICULATE GROSS BETA IN AIR 1ST - 2ND QUARTER 27

TABLE 8.2 PARTICULATE GROSS BETA IN AIR 3RD - 4TH QUARTER 28

TABLE 8.3 GAMMA IN AIR FILTER COMPOSITES 29

TABLE 8.4 RADIOIODINE IN AIR 1ST - 2ND QUARTER 30

TABLE 8.5 RADIOIODINE IN AIR 3RD - 4TH QUARTER 31

TABLE 8.6 VEGETATION 32

TABLE 8.7 MILK 33

TABLE 8.8 DRINKING WATER 34

TABLE 8.9 GROUNDWATER 36

TABLE 8.10 SURFACE WATER 37

TABLE 8.11 SLUDGE/SEDIMENT 40

TABLE 9.1 TLD SITE LOCATIONS 47

TABLE 9.2 2004 ENVIRONMENTAL TLD RESULTS 49

TABLE 10.1 2004 LAND USE CENSUS 53

TABLE 11.1 ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY 55

LIST OF FIGURES

FIGURE 2.1 REMP SAMPLE SITES - MAP (0-10 miles) 8
FIGURE 2.2 REMP SAMPLE SITES - MAP (0-35 miles) 9
FIGURE 8.1 HISTORICAL GROSS BETA IN AIR (WEEKLY SYSTEM AVERAGES) 42
FIGURE 8.2 HISTORICAL GROSS BETA IN AIR (ANNUAL SITE TO SITE COMPARISONS) COMPARED TO PRE-OP 43
FIGURE 8.3 GROSS BETA IN DRINKING WATER 44
FIGURE 8.4 EVAPORATION POND TRITIUM ACTIVITY 45
FIGURE 9.1 NETWORK ENVIRONMENTAL TLD EXPOSURE RATES 50
FIGURE 9.2 ENVIRONMENTAL TLD COMPARISON - PRE-OPERATIONAL VS 2004 51

ABSTRACT

The Radiological Environmental Monitoring Program (REMP) is an ongoing program conducted by Arizona Public Service Company (APS) for the Palo Verde Nuclear Generating Station (PVNGS). Various types of environmental samples are collected near PVNGS and analyzed for plant related radionuclide concentrations.

During 2004, the following categories of samples were collected by APS:

- Broad leaf vegetation
- Groundwater
- Drinking water
- Surface water
- Airborne particulate and radioiodine
- Goat milk
- Sludge and sediment

Thermoluminescent dosimeters (TLDs) were used to measure environmental gamma radiation. The Environmental TLD program is also conducted by APS.

The Arizona Radiation Regulatory Agency (ARRA) performs radiochemistry analyses on various duplicate samples provided to them by APS. Samples analyzed by ARRA include onsite samples from the Reservoir, two (2) Evaporation Ponds, and two (2) deep wells. Offsite samples analyzed by ARRA include two (2) local resident wells. ARRA also performs air sampling at seven (7) offsite locations identical to APS and maintains approximately fifty (50) environmental TLD monitoring locations, eighteen (18) of which are duplicates of APS locations.

A comparison of pre-operational and operational data indicates no changes to environmental radiation levels. There were no measurable radiological impacts on the environment due to PVNGS operations in 2004.

(NOTE: Reference to APS throughout this report refers to PVNGS personnel)

OPERATIONAL RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

1. Introduction

This report presents the results of the operational radiological environmental monitoring program conducted by Arizona Public Service Company (APS). The Radiological Environmental Monitoring Program (REMP) was established for the Palo Verde Nuclear Generating Station (PVNGS) by APS in 1979. The REMP is performed in accordance with the federal requirements to provide a complete environmental monitoring program for nuclear reactors, and with concern for maintaining the quality of the local environment. The program complies with the requirements of 10 CFR50, Appendix I, PVNGS Technical Specifications, and with the guidance provided by the US Nuclear Regulatory Commission (USNRC) in their Radiological Assessment Branch Technical Position on Environmental Monitoring, Revision 1, November 1979.

This report contains the measurements and findings for 2004. All references are specifically identified in Section 12.

The objectives of the REMP are as follows: 1) to determine baseline radiation levels in the environs prior to plant operation and to compare the findings with measurements obtained during reactor operations; 2) to monitor potential critical pathways of radio-effluent to the public; and 3) to determine radiological impacts on the environment caused by the operation of PVNGS.

Results from the REMP help to evaluate sources of elevated levels of radioactivity in the environment (e.g., atmospheric nuclear detonations or abnormal plant releases).

Results of the PVNGS pre-operational environmental monitoring program are presented in Reference 1.

The initial criticality of Unit 1 occurred May 25, 1985. Initial criticality for Units 2 and 3 were April 18, 1986, and October 25, 1987, respectively. PVNGS operational findings (historical) are presented in Reference 2.

2. Description of the Monitoring Program

APS and vendor organizations performed the pre-operational radiological environmental monitoring program, which began in 1979. APS and vendors continued the program into the operational phase.

2.1. 2004 PVNGS Radiological Environmental Monitoring Program

The assessment program consists of routine measurements of background gamma radiation and of radionuclide concentrations in media such as air, groundwater, drinking water, surface water, vegetation, milk, sludge, and sediment.

Samples were collected by APS at the monitoring sites shown in Figures 2.1 and 2.2. The specific sample types, sampling locations, and sampling frequencies, as set forth in the PVNGS Offsite Dose Calculation Manual (ODCM), Reference 4, are presented in Tables 2.1, 2.2 and 9.1. Additional onsite sampling (outside the scope of the ODCM) is performed to supplement the REMP. All results are included in this report. Sample analyses were performed by APS at the PVNGS Central Chemistry Laboratory.

Background gamma radiation measurements were performed by APS using TLDs at forty-nine (49) locations near PVNGS.

In addition to monitoring environmental media, a land use census is performed annually to identify the nearest milk animals, residents, and gardens. This information is used to evaluate the potential dose to members of the public for those exposure pathways that are indicated.

2.2. Radiological Environmental Monitoring Program Changes for 2004

- One (1) new garden replaced an existing garden location due to dose calculation results.
- One (1) new milk animal (goats) location was added to the REMP.
- One (1) TLD, site #41, was placed at a new school.

Refer to Table 2.1 for a description of all current sample locations (except TLDs).

2.3. REMP Deviations/Abnormal Events Summary

During calendar year 2004, there were three (3) deviations/abnormal events with regard to the monitoring program. Refer to Table 2.3 for more detail and any corrective actions taken.

- Air sample site #4 for the week of 2-3-04 through 2-10-04 was invalidated due to an anomalous result.
- Air sample site #29 was out of service from 10-19-04 through 10-26-04.
- The WRF Influent I-131 concentration exceeded 100 pCi/liter on three (3) occasions.

Table 2.1 SAMPLE COLLECTION LOCATIONS

SAMPLE SITE #	*SAMPLE TYPE*	*LOCATION (a)*	*LOCATION DESCRIPTION*
4	air	E16	APS Office
6A*	air	SSE13	Old US 80
14A	air	NNE2	371st Ave. and Buckeye-Salome Rd.
15	air	NE2	NE Site Boundary
17A	air	E3	351st Ave.
21	air	S3	S Site Boundary
29	air	W1	W Site Boundary
35	air	NNW8	Tonopah
40	air	N2	Transmission Rd
46	drinking water	NW9	McArthur residence
47	vegetation	ESE4	McCoy residence
48	drinking water	SW1	Berryman residence
49	drinking water	N2	Chowanec residence
51	milk	NE4	Painter residence-goats
52	vegetation	NNE2 (b)	Branch residence
53*	milk	ENE24	Barber residence-goats
54	milk	NNE2 (b)	Branch residence-goats
55	drinking water (supplemental)	SW3	Gavette residence
57	groundwater	ONSITE	Well 27ddc
58	groundwater	ONSITE	Well 34abb
59	surface water	ONSITE	Evaporation Pond #1
60	surface water	ONSITE	Reservoir
62*	vegetation	ENE26	Duncan Family Farms
63	surface water	ONSITE	Evaporation Pond #2

NOTES:

* Designates a control site

(a) Distances and direction are from the center-line of Unit 2 containment and rounded to the nearest mile

(b) Denotes a change in location or a new sample location

Air sample sites designated with the letter 'A' are sites that have the same site number as a TLD location, but are not in the same location (e.g. site #**6** TLD location is different from site #**6A** air sample location; site #**4** TLD location is the same as site #**4** air sample location)

Table 2.2 SAMPLE COLLECTION SCHEDULE

SAMPLE SITE #	*AIR PARTICULATE*	*MILK*	*AIRBORNE RADIOIODINE*	*VEGETATION*	*GROUND WATER*	*DRINKING WATER*	*SURFACE WATER*
4	W		W				
6A	W		W				
14A	W		W				
15	W		W				
17A	W		W				
21	W		W				
29	W		W				
35	W		W				
40	W		W				
46						W	
47				M/AA			
48						W	
49						W	
51		M/AA					
52				M/AA			
53		M/AA					
54		M/AA					
55						W	
57					Q		
58					Q		
59							W
60							W
62				M/AA			
63							W

W = WEEKLY M/AA = MONTHLY AS AVAILABLE Q = QUARTERLY

TABLE 2.3 SUMMARIES OF REMP DEVIATIONS/ABNORMAL EVENTS

Deviation/Abnormal Event	Actions taken
1. Air sample site #4 for the week of 2-3-04 through 2-10-04 was invalidated due to an anomalous result.	1. The problem was attributed to intermittent power losses due to construction activities in the area. Subsequent sample results were considered acceptable, therefore no further actions were required.
2. Air sample site #29 was out of service from 10-19-04 through 10-26-04.	2. This was a planned event and due to construction activities related to plant security upgrades. To prevent excess dust loading due to changes in plant entrance roadways, the air sample station was moved two (2) poles south of its previous location. GPS readings indicate that the sample station is still in the west sector. No further action is required.
3. The WRF Influent I-131 concentration exceeded 100 pCi/liter on three (3) occasions.	3. Phoenix sewage effluent is the supply for this water and is know to contain radiopharmaceutical I-131. The Arizona Radiation Regulatory Agency is notified when this source of water exceeds an I-131 concentration of 100 pCi/liter. This was considered an abnormal event since it was the first year this threshold was known to have been exceeded. This is considered a courtesy notification (not regulatory) and no further action is required.

FIGURE 2.1
REMP SAMPLE SITES

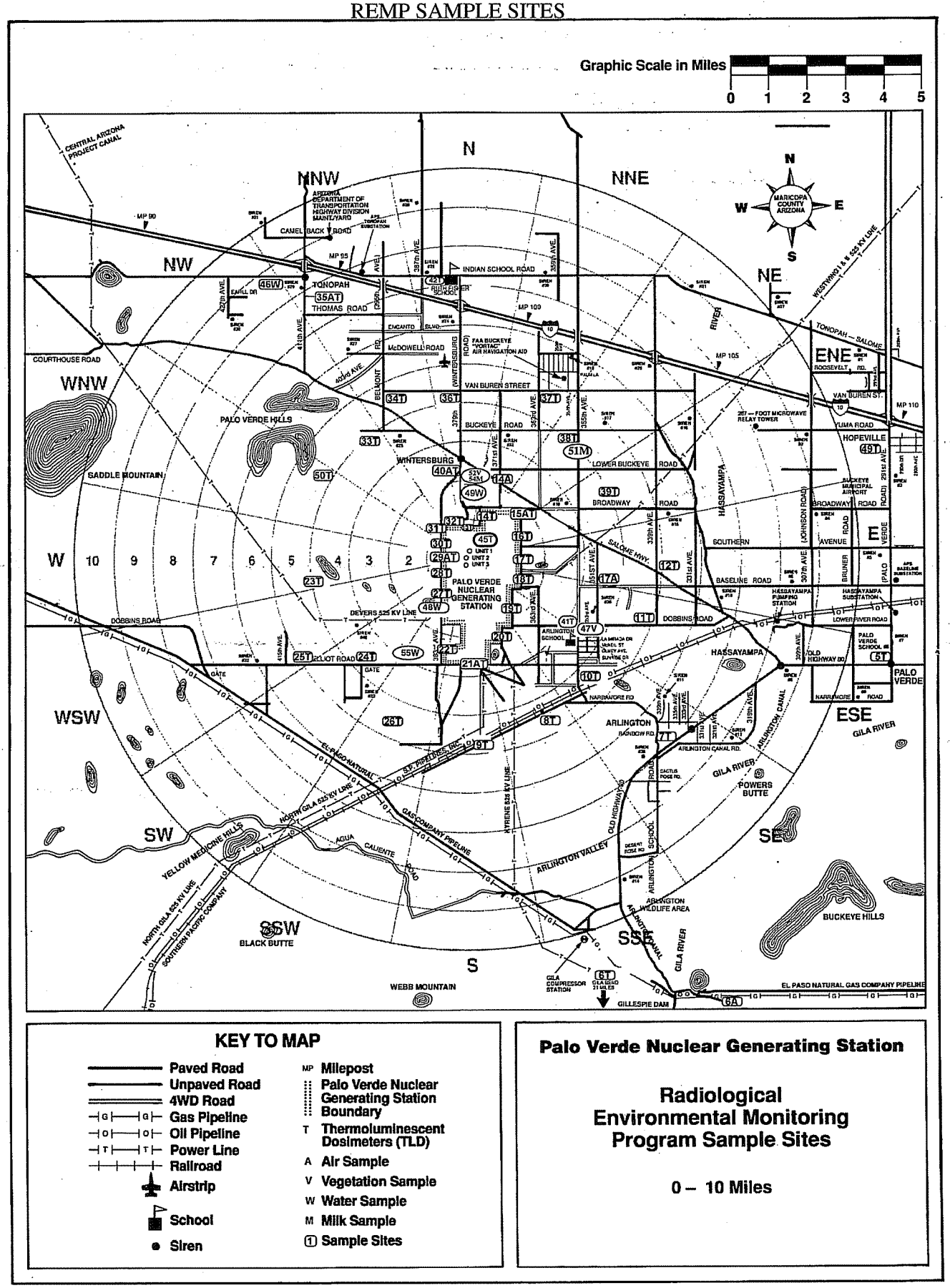
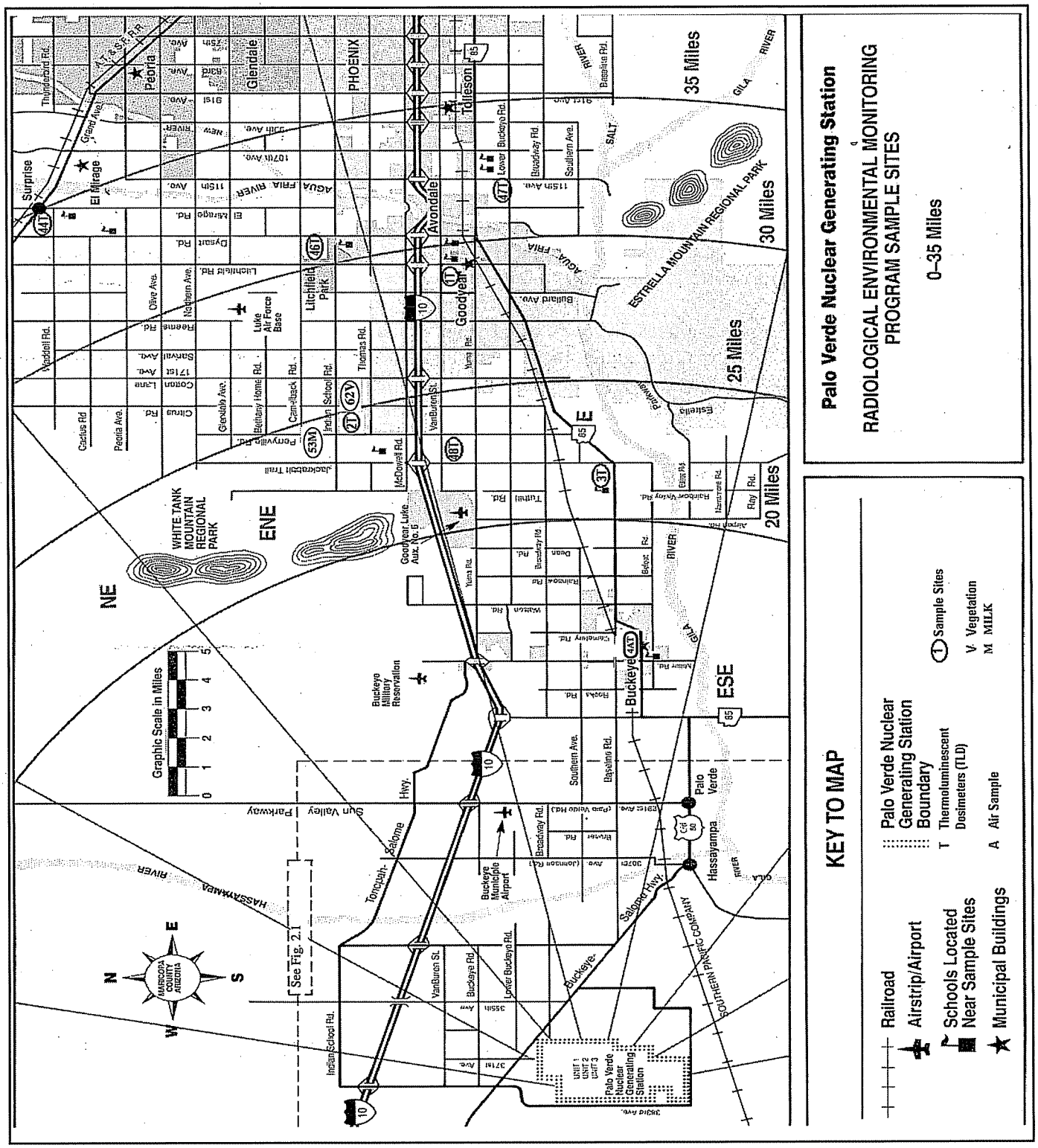


FIGURE 2.2
REMP SAMPLE SITES



3. Sample Collection Program

APS personnel using PVNGS procedures collected all samples.

3.1. Water

Weekly samples were collected from the Reservoir, Evaporation Pond #1, Evaporation Pond #2, and four (4) residence wells. Samples were collected in one-gallon containers and 500 ml glass bottles. One liter from each weekly one-gallon sample was added to a monthly composite, which is preserved with nitric acid (HNO_3). The composite samples were then analyzed for gamma emitting radionuclides. Residence wells were also analyzed for gross beta activity. Weekly grab samples in glass bottles were composited quarterly and analyzed for tritium.

Quarterly grab samples were collected from onsite wells 34abb and 27ddc. Samples were collected in one-gallon containers and 500 ml glass bottles. Samples were analyzed for gamma emitting radionuclides and tritium.

Treated sewage effluent from the City of Phoenix was sampled as a weekly composite at the onsite Water Reclamation Facility (WRF), and analyzed for gamma emitting radionuclides. A monthly composite was analyzed for tritium.

3.2. Vegetation

Vegetation samples were collected monthly, as available, and were analyzed for gamma emitting radionuclides.

3.3. Milk

Goat milk samples were collected monthly, as available, and were analyzed for gamma emitting radionuclides, including low level I-131.

3.4. Air

Air particulate filters and charcoal cartridges were collected at nine (9) sites on a weekly basis. Particulate filters were analyzed for gross beta. Charcoal cartridges were analyzed for I-131. Particulate filters were composited quarterly, by location, and analyzed for gamma emitting radionuclides.

3.5. Sludge and Sediment

Sludge samples were obtained weekly from the WRF waste centrifuge (whenever the plant was operational) and analyzed for gamma emitting radionuclides. Samples were collected using 1000 ml plastic bottles.

Scale was removed from cooling tower louvers and circulating water/plant cooling water piping and analyzed for gamma emitting radionuclides.

Bottom sediment/sludge samples were obtained from Evaporation Pond #1 and #2 and analyzed for gamma emitting radionuclides.

4. Analytical Procedures

The procedures described in this report are those used by APS to routinely analyze samples.

4.1. Air Particulate

4.1.1. Gross Beta

A glass fiber filter sample is placed in a stainless steel planchet and counted for gross beta activity utilizing a low background gas flow proportional counter.

4.1.2. Gamma Spectroscopy

The glass fiber filters are counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for specific radionuclides.

4.2. Airborne Radioiodine

The charcoal cartridge is counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for I-131.

4.3. Milk

4.3.1. Gamma Spectroscopy

The sample is placed in a plastic marinelli beaker, weighed, and counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for specific radionuclides.

4.4. Vegetation

4.4.1. Gamma Spectroscopy

The sample is pureed in a food processor, placed in a one liter plastic marinelli beaker, weighed, and counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for specific radionuclides.

4.5. Sludge/Sediment

4.5.1. Gamma Spectroscopy

The wet/dry sample is placed in a one-liter plastic marinelli beaker, weighed, and counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for specific radionuclides.

4.6. Water

4.6.1. Gamma Spectroscopy

The sample is placed in a one-liter plastic marinelli beaker, weighed, and counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for specific radionuclides.

4.6.2. Tritium

The sample is evaluated to determine the appropriate method of preparation prior to counting. If the sample contains suspended solids or is turbid, it may be filtered, distilled, and/or de-ionized, as appropriate. Eight (8) milliliters of sample are mixed with fifteen (15) milliliters of liquid scintillation cocktail. The mixture is dark adapted and counted for tritium activity using a liquid scintillation counting system.

4.6.3. Gross Beta

A 200-250 milliliter sample is placed in a beaker. Five (5) milliliters of concentrated nitric (HNO_3) acid is added and the sample is evaporated down to about twenty (20) milliliters. The remaining sample is transferred to a stainless steel planchet. The sample is heated to dryness and counted for gross beta in a gas flow proportional counter.

4.7. Soil

4.7.1. Gamma Spectroscopy

The samples are sieved, placed in a one-liter plastic marinelli beaker, and weighed. The samples are then counted on a multichannel analyzer equipped with an HPGe detector. The resulting spectrum is analyzed by a computer for specific radionuclides.

5. Nuclear Instrumentation

5.1. Gamma Spectrometer

The Canberra Gamma Spectrometer consists of a Canberra System equipped with HPGe detectors having resolutions of 1.73 keV and 1.88 keV (as determined by full width half max with an energy of 0.5 keV per channel) and respective efficiencies of 21.5% and 38.4% (as determined by the manufacturer with Co-60). The Canberra System is used for all gamma counting. The system uses Canberra developed software to search, identify, and quantify the peaks of interest.

5.2. Liquid Scintillation Spectrometer

A Beckman LS-6500 Liquid Scintillation Counter is used for tritium determinations. The system background averages approximately 15-17 cpm with a counting efficiency of approximately 40% using a quenched standard.

5.3. Gas Flow Proportional Counter

The Tennelec S5E is a low background gas flow proportional counter for gross beta analysis. The system contains an automatic sample changer capable of counting 50 samples in succession. Average beta background count rate is about 1-2 cpm with a beta efficiency of approximately 30% for Cs-137.

6. Isotopic Detection Limits and Reporting Criteria

6.1. Lower Limits of Detection

The lower limits of detection (LLD) and the method for calculation are specified in the PVNGS ODCM, Reference 4. The ODCM required *a priori* LLDs are presented in Table 6.1. For reference, *a priori* LLDs are indicated at the top of data tables for samples having required LLD values.

6.2. Data Reporting Criteria

All results that are greater than the Minimum Detectable Activity (MDA) (a posteriori LLD) are reported as positive activity with its associated 2σ counting error. All results that are less than the MDA are reported as less than values at the associated MDA. For example, if the MDA is 12 pCi/liter, the value is reported as <12.

Typical MDA values are presented in Table 6.3.

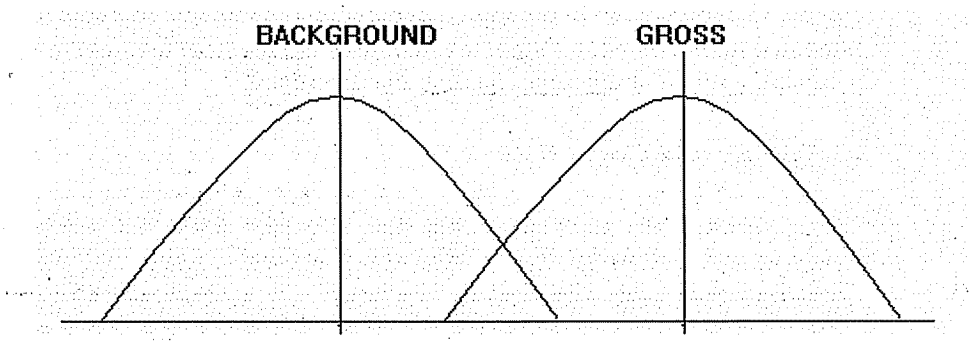
Occasionally, the PVNGS ODCM *a priori* LLDs may not be achieved as a result of:

- Background fluctuations
- Unavoidably small sample sizes
- The presence of interfering radionuclides
- Self absorption corrections
- Decay corrections for short half-life radionuclides
- Other uncontrollable circumstances

In these instances, the contributing factors will be noted in the table where the data are presented. A summary of deviations/abnormal events is presented in Table 2.3 and includes a description of any sample results that did not meet *a priori* LLD requirements.

6.3. LLD and Reporting Criteria Overview

Making a reasonable estimate of the limits of detection for a counting procedure or a radiochemical method is usually complicated by the presence of significant background. It must be considered that the background or blank is not a fixed value but that a series of replicates would be normally distributed. The desired net activity is the difference between the gross and background activity distributions. The interpretation of this difference becomes a problem if the two distributions intersect as indicated in the diagram.



If a sufficient number of replicate analyses are run, it is expected that the results would fall in a normal Gaussian distribution. Standard statistics allow an estimate of the probability of any particular deviation from the mean value. It is common practice to report the mean ± one or two standard deviations as the result. In routine analysis, such replication is not carried out, and it is not possible to report a Gaussian standard deviation. With counting procedures, however, it is possible to estimate a Poisson standard deviation directly from the count. Data are commonly reported as the measured value ± one or two Poisson standard deviations. The reported values are then considered to give some indication of the range in which the true value might be expected to occur.

A LLD is the smallest amount of sample activity that will yield a net count for which there is confidence at a predetermined level that activity is present. LLDs are calculated values for individual radionuclides based on a number of different factors including sample size, counting efficiency and background count rate of the instrument, the background and sample counting time, the decay time, and the chemical recovery of the analytical procedures. A minimum detectable activity value (MDA) is the smallest amount of activity that can be detected in an actual sample and uses the values obtained from the instrument and outcome of the analytical process. Therefore, the MDA values may differ from the calculated LLD values if the sample size and chemical recovery, decay values, or the instrument efficiency, background, or count time differed from those used in the LLD calculation.

The factors governing the calculation of the LLD and MDA values are discussed below:

1. Sample Size

2. Counting Efficiency

The fundamental quantity in the measurement of a radioactive substance is the number of disintegrations per unit time. As with most physical measurements in analytical chemistry, an absolute measurement of the disintegration rate is seldom possible, rather it is necessary to compare the sample with one or more standards. The standards determine the counter efficiency that may then be used to convert sample counts per minute (cpm) to disintegrations per minute (dpm).

3. Background Count Rate

Any counter will show a certain counting rate without a sample in position. This background counting rate comes from several sources: 1) natural environmental radiation from the surrounding materials, 2) cosmic radiation, and 3) the natural radioactivity in the counter material itself. The background counting rate will depend on the amounts of these types of radiation and the sensitivity of the counter to the radiation.

4. Background and Sample Counting Time

The amount of time devoted to the counting of the background depends on the level of activity being measured. In general, with low level samples, this time should be about equal to that devoted to counting a sample.

5. Time Interval between Sample Collection and Counting

Decay measurements are useful in identifying certain short-lived nuclides. The disintegration constant is one of the basic characteristics of a specific radionuclide and is readily determined, if the half-life is sufficiently short. To ensure the required LLDs are achieved, appropriate decay correction values are used to account for radioactive decay during transit time and sample processing.

Table 6.1 ODCM REQUIRED LOWER LIMITS OF DETECTION (*a priori*)

ANALYSIS/ NUCLIDE	WATER (pCi/liter)	AIRBORNE PARTICULATE or GAS (pCi/m^3)	MILK (pCi/liter)	VEGETATION (pCi/kg, wet)
Gross Beta	4	0.01		
H-3	2000*			
Mn-54	15			
Fe-59	30			
Co-58, 60	15			
Zn-65	30			
Zr-95	30			
Nb-95	15			
I-131	1**	0.07	1	60
Cs-134	15	0.05	15	60
Cs-137	18	0.06	18	80
Ba-140	60		60	
La-140	15		15	

NOTES:

* If no drinking water pathway exists, a value of 3000 pCi/liter may be used.
** If no drinking water pathway exists, a value of 15 pCi/liter may be used.

This list does not mean that only these nuclides are to be detected and reported. Other peaks that are measurable and identifiable, together with the above nuclides, shall also be identified and reported.

Table 6.2 ODCM REQUIRED REPORTING LEVELS

ANALYSIS/ NUCLIDE	WATER (pCi/liter)	AIRBORNE PARTICULATE or GAS (pCi/m^3)	MILK (pCi/liter)	VEGETATION (pCi/kg, wet)
H-3	20,000*			
Mn-54	1,000			
Fe-59	400			
Co-58	1,000			
Co-60	300			
Zn-65	300			
Zr/Nb-95	400			
I-131	2**	0.9	3	100
Cs-134	30	10	60	1,000
Cs-137	50	20	70	2,000
Ba/La-140	200		300	

NOTES:

* For drinking water samples. This is a 40CFR141 value. If no drinking water pathway exists, a value of 30,000 pCi/liter may be used.

** If no drinking water pathway exists, a reporting level of 20 pCi/liter may be used.

The values in this table are (calendar) quarterly average values, as stated in the ODCM.

Table 6.3 TYPICAL MDA VALUES

ANALYSIS/ NUCLIDE	WATER (pCi/liter)	MILK (pCi/liter)	AIRBORNE PARTICULATE or GAS (pCi/m^3)	VEGETATION (pCi/kg, wet)
Gross Beta	3		0.003	
H-3	280			
Mn-54	12			
Fe-59	21			
Co-58	11			
Co-60	13			
Zn-65	26			
Zr-95	19			
Nb-95	11			
I-131	10 [a]	1	0.05 [b]	50
Cs-134	10	1	0.02 [b]	50
Cs-137	12	1	0.02 [b]	60
Ba-140	38	3		
La-140	13	1		

NOTES:

a - low level I-131 is not required since there is no drinking water pathway
b - Based on 433 m^3 volume

7. Interlaboratory Comparison Program

7.1. Quality Control Program

APS maintains an extensive QA/QC Program to provide assurance that samples are collected, handled, tracked, and analyzed to specified requirements. This program includes appropriate elements of USNRC Regulatory Guide 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment, Rev. 1. Included in the program are procedures for sample collection, preparation and tracking, sample analysis, equipment calibration and checks, and ongoing participation in an interlaboratory comparison program. Duplicate/replicate samples are analyzed to verify analytical precision and sample methodology. Comprehensive data reviews are performed including trending of data where appropriate.

During 2004, APS analyzed the following sample types under the interlaboratory comparison program;

- Beta/Gamma/ in Air Filter
- I-131 in Air
- Beta in Water
- Gamma in Water
- Tritium in Water

7.2. Intercomparison Results

APS participates in a crosscheck program using vendor supplied blind radionuclide samples. Results for the interlaboratory comparison program are presented in Table 7.1.

All crosscheck results reported in 2004 were within the established acceptance criteria.

TABLE 7.1 INTERLABORATORY COMPARISON RESULTS

Sample Type	Analysis Type	Nuclide	PVNGS Value	Certified Value [1]	PT Acceptance Limits [2]	Accept/Reject
Water (ERA RAD-55)	Iodine	I-131	27.7	28.2	23.0 - 33.4	Accept
	Tritium	H-3	12927	14300	11800 - 16800	Accept

Sample Type	Analysis Type	Nuclide	PVNGS Value	Certified Value [1]	PT Acceptance Limits [2]	Accept/Reject
Water (ERA RAD-57)	Tritium	H-3	27000	30900	25600 - 36200	Accept
	Mixed Gamma	I-131	26	25.1	19.9 - 30.3	Accept
		Co-60	43.3	41.6	32.9 - 50.3	Accept
		Zn-65	80.1	75.2	62.2 - 88.2	Accept
		Ba-133	100	101	83.5 - 118	Accept
		Cs-134	47.9	50.5	41.8 - 59.2	Accept
		Cs-137	88.5	82.5	73.8 - 91.2	Accept

1 The certified values are verified to meet criteria as established by NIST NVLAP in Handbooks 150 and 150-19 and the USEPA in National Standards for Water Proficiency Testing Studies Criteria Document (December 30, 1998).

2 "Acceptance limits" have been calculated per the requirements of the USEPA in National Standards for Water Proficiency Testing Studies Criteria Document (December 30, 1998). The "PT limits" are calculated at the 3 standard deviation limit.

TABLE 7.1 INTERLABORATORY COMPARISON RESULTS

Sample Type	Analysis Type	Nuclide	Known Value	PVNGS Value	1 sigma Error	Resolution *	Ratio	Accept/Reject
Water	Mixed Gamma	I-131	70.8	73	7	10	1.03	Accept
	E4236-111	Ce-141	250	254	13	20	1.02	Accept
		Cr-51	223	199	29	7	0.89	Accept
		Cs-134	96.4	79	6	13	0.82	Accept
		Cs-137	215	217	13	17	1.01	Accept
		Co-58	94.6	96	7	14	1.01	Accept
		Mn-54	181	175	10	18	0.96	Accept
		Fe-59	91.6	107	11	10	1.17	Accept
		Zn-65	178	186	15	12	1.04	Accept
		Co-60	125	124	8	16	0.99	Accept
	Tritium	H-3	12000	10200	293	35	0.85	Accept
	E4239-111							
	Gross Beta		225	283	31	9	1.26	Accept
	E4235-111							
Air	Gross Beta		195	215	2.3	93	1.1	Accept
	E4237-111							
	Iodine Cart	I-131	77.2	81	4.7	17	1.05	Accept
	E4234-111							
	Mixed Gamma	Ce-141	180	202	10	20	1.13	Accept
	E3992-111	Cr-51	161	177	13	14	1.1	Accept
		Cs-134	69.3	87	4	22	1.26	Accept
		Cs-137	154	177	10	18	1.15	Accept
		Co-58	68	76	5	15	1.12	Accept
		Mn-54	130	156	10	16	1.2	Accept
		Fe-59	65.7	85	6	14	1.29	Accept
		Zn-65	128	160	10	16	1.25	Accept
		Co-60	90	100	6	17	1.11	Accept

TABLE 7.1 INTERLABORATORY COMPARISON RESULTS

Sample Type	Analysis Type	Nuclide	Known Value	PVNGS Value	1 sigma Error	Resolution *	Ratio	Accept/Reject
Water	Mixed Gamma	I-131	91.5	83	9	9	0.91	Accept
	E4439-111	Ce-141	149	149	9	17	1.0	Accept
		Cr-51	365	378	34	11	1.04	Accept
		Cs-134	164	143	9	16	0.87	Accept
		Cs-137	121	128	8	16	1.06	Accept
		Co-58	141	133	8	17	0.95	Accept
		Mn-54	131	136	8	17	1.04	Accept
		Fe-59	117	130	11	12	1.11	Accept
		Zn-65	189	192	13	15	1.02	Accept
		Co-60	168	169	9	19	1.0	Accept
	Tritium	H-3	8060	7090	256	28	0.88	Accept
	E4443-111							
	Gross Beta		195	242	3	81	1.24	Accept
	E4438-111							
Air	Gross Beta		200	249	1.8	138	1.24	Accept
	E3440-111							
	Iodine Cart	I-131	85	86	5.5	16	1.01	Accept
	E4441-111							
	Mixed Gamma	Ce-141	78	85	4	21	1.09	Accept
	E4442-111	Cr-51	184	198	14	14	1.08	Accept
		Cs-134	82.3	70	4	18	0.85	Accept
		Cs-137	61.1	69	4	17	1.13	Accept
		Co-58	70.8	78	5	16	1.10	Accept
		Mn-54	65.8	78	5	16	1.19	Accept
		Fe-59	58.8	75	6	13	1.28	Accept
		Zn-65	94.9	112	7	16	1.18	Accept
		Co-60	84.7	93	5	19	1.10	Accept

* calculated from PVNGS value/1 sigma error value

Acceptance Criteria [1]

Resolution	Ratio
<4	
4-7	0.5-2.0
8-15	0.6-1.66
16-50	0.75-1.33
51-200	0.80-1.25
>200	0.85-1.18

[1] From NRC Inspection Manual, Inspection Procedure 84750, "Radioactive Waste Treatment, And Effluent And Environmental Monitoring"

8. Data Interpretations and Conclusions

Associated with the analytical process are potential random and systematic errors. Systematic errors can be caused by instrument malfunctions, incomplete precipitation, back scattering, and self-absorption. Random errors are beyond the control of the analyst.

Efforts are made to minimize both systematic and random errors in the data reported. Systematic errors are minimized by performing reviews throughout the analysis. For example, instruments are checked routinely with radioactive sources, and recovery and self-absorption factors based on individual sample analyses are incorporated into the calculation equations where necessary. Random errors are reduced by comparing all data to historical data for the same site and performing comparisons between analytical results when available. In addition, when data do not appear to match historical results, analyses may be rerun on a separate aliquot of the sample to verify the presence of the activity. The acceptance of data is dependent upon the results of quality control samples and is part of the data review process for all analytical results.

The "plus or minus value" reported with each analytical result represents the counting error associated with the result and gives the 95% confidence (2σ) interval around the data.

Most samples contain radioactivity associated with natural background/cosmic radioactivity (e.g. K-40, Th-234, and Be-7). Gross beta results for drinking water and air are due to natural background. Gamma emitting radionuclides, which can be attributed to natural background sources, are not indicated in this report.

Results and interpretation of the data for all of the samples analyzed during 2004 are presented in the following sections. Assessment of pre-operational and operational data revealed no changes to environmental radiation levels. There were no measurable radiological impacts on the environment due to PVNGS operations in 2004.

8.1. Air Particulates

Weekly gross beta results, in quarterly format, are presented in Tables 8.1 and 8.2. Historical trend graphs are depicted in Figures 8.1 and 8.2. Gross beta activity ranged from 0.012 to 0.080 pCi/m^3. The associated counting error ranged from 0.001 to 0.004 pCi/m^3. Mean quarterly activity is calculated using weekly activity over a thirteen (13) week period. Also presented in the tables are the weekly mean values of all the sites as well as the percent relative standard deviation (RSD %) for the data. The findings are consistent with pre-operational baseline and previous operational results. Figure 8.2 shows the results of the gross beta in air from the pre-operational phase compared to the 1994-2004 gross beta in air results. As can be seen, the indicator sites trend consistently with the control site. The results are summarized in Table 11.1.

Table 8.3 displays the results of gamma spectroscopy on the quarterly composites. No Cs-134 or Cs-137 was observed.

8.2. Airborne Radioiodine

Tables 8.4 and 8.5 present the quarterly radioiodine results. No airborne radioiodine was observed in any of the samples.

8.3. Vegetation

Table 8.6 presents gamma isotopic data for the vegetation samples. No gamma emitting radionuclides were observed in any of the samples.

8.4. Milk

Table 8.7 presents gamma isotopic data for the goat milk samples. No gamma emitting radionuclides were observed in any of the samples.

8.5. Drinking Water

Samples were analyzed for gross beta, tritium, and gamma emitting radionuclides. Results of these analyses are presented in Table 8.8. No tritium or gamma emitting radionuclides were detected in any samples. Gross beta activity ranged from less than detectable to a high of 5.1 pCi/liter (McArthur residence, September composite).

8.6. Groundwater

Groundwater samples were analyzed for tritium and gamma emitting radionuclides. Results obtained from the analysis of the samples are presented in Table 8.9.

No tritium or gamma emitting radionuclides were observed in any of the samples.

8.7. Surface Water

Surface water samples from the Reservoir and Evaporation Ponds were analyzed for tritium and gamma emitting radionuclides. The Reservoir contains processed sewage water from the City of Phoenix and is approximately 80 acres in size. The two Evaporation Ponds receive mostly circulating water from main turbine condenser cooling and are about 250 acres each. Results are presented in Table 8.10. I-131 was observed in Evaporation Pond # 1 in one (1) monthly composite sample (21 pCi/liter) and two (2) of the Reservoir monthly composite samples (9 and 15 pCi/liter). I-131 is a result of radiopharmaceutical I-131 in the Phoenix sewage effluent.

Tritium was routinely observed in Evaporation Ponds 1 and 2. The highest concentration in Evaporation Pond #1 was 1266 pCi/liter and the highest concentration in Evaporation Pond #2 was 1826 pCi/liter. Tritium was not identified in the Reservoir. The tritium identified in the Evaporation Ponds has been attributed to plant gaseous effluent releases and secondary plant liquid releases.

WRF influent (Phoenix sewage effluent) samples collected by the WRF were analyzed for gamma emitting radionuclides and tritium. The results, presented in Table 8.10, demonstrate that I-131 was observed routinely. The highest I-131 concentration was 193 pCi/liter (week of December 7th). The results indicate an increase in radiopharmaceutical I-131 usage in the Phoenix area. The Arizona Radiation Regulatory Agency was contacted each week that this concentration exceeded 100 pCi/liter (three times in 2004). None of the samples analyzed indicated the presence of tritium.

Table 8.10 also presents gamma spectroscopy and tritium measurements of samples collected from Sedimentation Basin #2. This basin collects rain waters from site runoff and was dry for most of the year. Tritium was detected in six (6) samples ranging from 278 to 482 pCi/liter. The tritium in this basin has been attributed to plant gaseous effluent releases and secondary plant liquid releases.

8.8. Sludge and Sediment

8.8.1. WRF Centrifuge waste sludge

Sludge samples were obtained from the WRF centrifuge and analyzed by gamma spectroscopy. I-131 in the WRF waste centrifuge sludge is consistent with historical values and, as previously discussed, is due to radiopharmaceuticals in the WRF influent. I-131 was present in all fifty (50) samples ranging from 203 to 1431 pCi/kg.

In-111 was also identified in the sludge in eight (8) samples. The highest concentration was 53 pCi/liter. It was previously established that In-111 is in use in the Phoenix area as a radiopharmaceutical. Results for WRF centrifuge waste sludge can be found in Table 8.11.

8.8.2. Evaporation Ponds #1 and #2 sediment

A set of nine (9) Evaporation Pond sediment samples indicated low levels of I-131 and Cs-137 in Evaporation Ponds 1 and 2. The concentrations were consistent with historical values. Sample results can be found in Table 8.11.

8.8.3. Cooling Tower sludge

Sludge originating from the Unit cooling towers and/or circulating water canals was not disposed of in the WRF sludge landfill during 2004. However, scale removed from cooling tower louvers and circulating water/plant cooling water piping was disposed of in the landfill. Sample results of the scale can be found in Table 8.11.

8.9. Data Trends

Figures 8.1-8.4 present data in graphical format. Historical data are displayed for comparison where practical.

TABLE 8.1 PARTICULATE GROSS BETA IN AIR 1st - 2nd QUARTER

ODCM required samples denoted by *

units are pCi/m^3

1st Quarter

Week #	START DATE	STOP DATE	Site 4	Site 6A* (control)	Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*	Mean	RSD (%)
1	29-Dec-03	6-Jan-04	0.027	0.027	0.023	0.025	0.027	0.024	0.027	0.021	0.024	0.025	8.7
2	6-Jan-04	13-Jan-04	0.054	0.053	0.048	0.048	0.049	0.051	0.051	0.044	0.053	0.050	6.3
3	13-Jan-04	20-Jan-04	0.075	0.079	0.075	0.074	0.080	0.074	0.078	0.068	0.073	0.075	4.8
4	20-Jan-04	27-Jan-04	0.036	0.037	0.036	0.042	0.036	0.037	0.040	0.037	0.040	0.038	5.8
5	27-Jan-04	3-Feb-04	0.031	0.032	0.029	0.032	0.032	0.031	0.031	0.025	0.027	0.030	8.3
6	3-Feb-04	10-Feb-04	Invalid [a]	0.020	0.017	0.018	0.019	0.018	0.019	0.017	0.018	0.018	5.7
7	10-Feb-04	17-Feb-04	0.042	0.036	0.037	0.038	0.037	0.031	0.036	0.027	0.029	0.035	13.8
8	17-Feb-04	24-Feb-04	0.023	0.021	0.020	0.020	0.019	0.019	0.021	0.018	0.020	0.020	7.2
9	24-Feb-04	1-Mar-04	0.012	0.013	0.014	0.014	0.015	0.013	0.014	0.012	0.013	0.013	7.5
10	1-Mar-04	9-Mar-04	0.021	0.021	0.022	0.023	0.019	0.018	0.021	0.021	0.021	0.021	7.1
11	9-Mar-04	16-Mar-04	0.041	0.040	0.040	0.042	0.039	0.037	0.037	0.032	0.032	0.038	9.7
12	16-Mar-04	23-Mar-04	0.036	0.036	0.034	0.035	0.037	0.029	0.037	0.029	0.032	0.034	9.4
13	23-Mar-04	29-Mar-04	0.032	0.029	0.029	0.033	0.028	0.029	0.030	0.029	0.027	0.030	6.4
	Mean		0.036	0.034	0.033	0.034	0.034	0.032	0.034	0.029	0.031	0.033	5.9

2nd Quarter

Week #	START DATE	STOP DATE	Site 4	Site 6A* (control)	Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*	Mean	RSD (%)
14	29-Mar-04	6-Apr-04	0.023	0.021	0.023	0.025	0.020	0.019	0.024	0.023	0.023	0.022	8.7
15	6-Apr-04	13-Apr-04	0.030	0.028	0.026	0.030	0.030	0.027	0.029	0.025	0.025	0.028	7.6
16	13-Apr-04	20-Apr-04	0.031	0.030	0.030	0.033	0.031	0.031	0.032	0.029	0.030	0.031	3.9
17	20-Apr-04	27-Apr-04	0.029	0.027	0.030	0.032	0.025	0.026	0.025	0.023	0.024	0.027	11.2
18	27-Apr-04	4-May-04	0.030	0.034	0.033	0.039	0.030	0.031	0.033	0.033	0.033	0.033	8.2
19	4-May-04	11-May-04	0.040	0.041	0.039	0.041	0.039	0.040	0.038	0.038	0.035	0.039	4.8
20	11-May-04	18-May-04	0.032	0.030	0.032	0.032	0.034	0.028	0.029	0.031	0.033	0.031	6.2
21	18-May-04	25-May-04	0.029	0.031	0.028	0.031	0.031	0.029	0.027	0.027	0.026	0.029	6.7
22	25-May-04	1-Jun-04	0.030	0.029	0.029	0.032	0.031	0.029	0.029	0.029	0.031	0.030	3.9
23	1-Jun-04	7-Jun-04	0.036	0.032	0.034	0.038	0.035	0.031	0.036	0.034	0.030	0.034	7.6
24	7-Jun-04	15-Jun-04	0.030	0.028	0.030	0.026	0.028	0.025	0.028	0.029	0.030	0.028	6.3
25	15-Jun-04	22-Jun-04	0.030	0.027	0.026	0.035	0.030	0.028	0.025	0.029	0.024	0.028	11.7
26	22-Jun-04	29-Jun-04	0.024	0.029	0.030	0.033	0.028	0.023	0.028	0.030	0.027	0.028	11.0
	Mean		0.030	0.030	0.030	0.033	0.030	0.028	0.029	0.029	0.029	0.030	4.5

[a] Sample result invalidated due to anomalous result of 0.032 (contributing factor was ETM problems due to power outages)

TABLE 8.2 PARTICULATE GROSS BETA IN AIR 3rd - 4th QUARTER

ODCM required samples denoted by *

units are pCi/m^3

3rd Quarter

Week #	START DATE	STOP DATE	Site 4	(control) Site 6A*	Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*	Mean	RSD (%)
27	29-Jun-04	6-Jul-04	0.030	0.026	0.030	0.032	0.028	0.027	0.026	0.026	0.022	0.027	10.8
28	6-Jul-04	13-Jul-04	0.026	0.027	0.028	0.032	0.029	0.032	0.030	0.032	0.030	0.030	7.6
29	13-Jul-04	20-Jul-04	0.028	0.022	0.027	0.029	0.025	0.024	0.024	0.024	0.024	0.025	9.0
30	20-Jul-04	27-Jul-04	0.027	0.027	0.029	0.030	0.027	0.029	0.028	0.028	0.027	0.028	4.0
31	27-Jul-04	3-Aug-04	0.037	0.030	0.032	0.037	0.034	0.036	0.038	0.030	0.030	0.034	9.9
32	3-Aug-04	10-Aug-04	0.034	0.033	0.036	0.037	0.032	0.033	0.033	0.036	0.033	0.034	5.2
33	10-Aug-04	17-Aug-04	0.032	0.026	0.029	0.032	0.031	0.027	0.033	0.031	0.026	0.030	9.2
34	17-Aug-04	24-Aug-04	0.032	0.035	0.031	0.029	0.031	0.029	0.030	0.032	0.030	0.031	6.0
35	24-Aug-04	31-Aug-04	0.030	0.025	0.028	0.028	0.028	0.025	0.028	0.027	0.024	0.027	7.2
36	31-Aug-04	7-Sep-04	0.035	0.034	0.036	0.036	0.032	0.024	0.035	0.035	0.034	0.033	11.2
37	7-Sep-04	14-Sep-04	0.044	0.044	0.039	0.049	0.043	0.041	0.043	0.044	0.038	0.043	7.6
38	14-Sep-04	21-Sep-04	0.033	0.028	0.031	0.034	0.031	0.029	0.031	0.031	0.028	0.031	6.7
39	21-Sep-04	28-Sep-04	0.031	0.032	0.032	0.032	0.029	0.028	0.031	0.028	0.027	0.030	6.7
	Mean		0.032	0.030	0.031	0.034	0.031	0.030	0.032	0.031	0.029	0.031	4.8

4th Quarter

Week #	START DATE	STOP DATE	Site 4	(control) Site 6A*	Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*	Mean	RSD (%)
40	28-Sep-04	5-Oct-04	0.034	0.034	0.034	0.036	0.033	0.032	0.036	0.034	0.034	0.034	3.7
41	5-Oct-04	12-Oct-04	0.048	0.049	0.040	0.048	0.048	0.043	0.040	0.045	0.040	0.045	8.7
42	12-Oct-04	19-Oct-04	0.038	0.039	0.035	0.038	0.039	0.034	0.037	0.039	0.036	0.037	5.0
43	19-Oct-04	26-Oct-04	0.021	0.024	0.024	0.024	0.023	0.019	OOS [a]	0.021	0.021	0.022	8.5
44	26-Oct-04	2-Nov-04	0.018	0.020	0.018	0.021	0.019	0.016	0.020	0.018	0.018	0.019	8.0
45	2-Nov-04	8-Nov-04	0.031	0.041	0.033	0.037	0.040	0.033	0.041	0.033	0.033	0.036	11.2
46	8-Nov-04	16-Nov-04	0.023	0.024	0.024	0.025	0.024	0.024	0.023	0.025	0.021	0.024	5.2
47	16-Nov-04	22-Nov-04	0.046	0.046	0.040	0.048	0.047	0.041	0.043	0.042	0.040	0.044	7.2
48	22-Nov-04	30-Nov-04	0.038	0.040	0.038	0.034	0.040	0.037	0.038	0.042	0.039	0.038	5.8
49	30-Nov-04	7-Dec-04	0.043	0.041	0.037	0.041	0.038	0.040	0.042	0.039	0.041	0.040	4.8
50	7-Dec-04	14-Dec-04	0.029	0.032	0.028	0.030	0.023	0.029	0.029	0.025	0.026	0.028	9.9
51	14-Dec-04	20-Dec-04	0.036	0.039	0.037	0.036	0.036	0.035	0.040	0.038	0.032	0.037	6.4
52	20-Dec-04	27-Dec-04	0.038	0.045	0.036	0.038	0.031	0.041	0.035	0.034	0.035	0.037	11.1
	Mean		0.034	0.036	0.033	0.035	0.034	0.033	0.035	0.033	0.032	0.034	4.3
	Annual Average		***0.033***	***0.033***	***0.032***	***0.034***	***0.032***	***0.031***	***0.033***	***0.031***	***0.030***	***0.032***	***3.9***

[a] Out of service due to road construction activities for plant security upgrades (planned)

TABLE 8.3 GAMMA IN AIR FILTER COMPOSITES

ODCM required samples denoted by *
units are pCi/m^3

QUARTER ENDPOINT	NUCLIDE	Site 4	(control) Site 6A*	Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*
29-Mar-04	Cs-134	<0.0043	<0.0035	<0.0035	<0.0034	<0.0027	<0.0034	<0.0028	<0.0033	<0.0029
	Cs-137	<0.0034	<0.0030	<0.0042	<0.0036	<0.0017	<0.0030	<0.0021	<0.0028	<0.0024
29-Jun-04	Cs-134	<0.0044	<0.0013	<0.0044	<0.0035	<0.0021	<0.0043	<0.0013	<0.0036	<0.0034
	Cs-137	<0.0042	<0.0035	<0.0043	<0.0029	<0.0031	<0.0031	<0.0044	<0.0010	<0.0031
28-Sep-04	Cs-134	<0.0023	<0.0034	<0.0044	<0.0020	<0.0030	<0.0024	<0.0034	<0.0025	<0.0040
	Cs-137	<0.0026	<0.0029	<0.0047	<0.0026	<0.0029	<0.0031	<0.0011	<0.0035	<0.0036
27-Dec-04	Cs-134	<0.0024	<0.0038	<0.0024	<0.0022	<0.0034	<0.0023	<0.0052	<0.0022	<0.0020
	Cs-137	<0.0025	<0.0042	<0.0036	<0.0023	<0.0011	<0.0025	<0.0031	<0.0025	<0.0021

Quarterly sample results include all samples except those determined to be invalid.

TABLE 8.4 RADIOIODINE IN AIR 1st - 2nd QUARTER

ODCM required samples denoted by *
units are pCi/m^3

1st Quarter

Week #	START DATE	STOP DATE	Site 4	(control) Site 6A*	required LLD <0.070 Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*
1	29-Dec-03	6-Jan-04	<0.043	<0.031	<0.037	<0.022	<0.067	<0.030	<0.029	<0.043	<0.026
2	6-Jan-04	13-Jan-04	<0.035	<0.056	<0.057	<0.040	<0.061	<0.035	<0.034	<0.040	<0.050
3	13-Jan-04	20-Jan-04	<0.034	<0.030	<0.056	<0.039	<0.012	<0.041	<0.033	<0.029	<0.033
4	20-Jan-04	27-Jan-04	<0.028	<0.053	<0.067	<0.033	<0.032	<0.042	<0.035	<0.041	<0.032
5	27-Jan-04	3-Feb-04	<0.030	<0.042	<0.050	<0.038	<0.034	<0.024	<0.035	<0.026	<0.032
6	3-Feb-04	10-Feb-04	Invalid [a]	<0.041	<0.059	<0.034	<0.032	<0.027	<0.047	<0.032	<0.048
7	10-Feb-04	17-Feb-04	<0.037	<0.033	<0.044	<0.042	<0.055	<0.033	<0.049	<0.031	<0.043
8	17-Feb-04	24-Feb-04	<0.036	<0.040	<0.047	<0.034	<0.012	<0.022	<0.040	<0.032	<0.029
9	24-Feb-04	1-Mar-04	<0.063	<0.057	<0.049	<0.059	<0.057	<0.057	<0.050	<0.065	<0.064
10	1-Mar-04	9-Mar-04	<0.061	<0.031	<0.030	<0.030	<0.043	<0.025	<0.044	<0.025	<0.043
11	9-Mar-04	16-Mar-04	<0.035	<0.042	<0.039	<0.043	<0.049	<0.032	<0.041	<0.025	<0.048
12	16-Mar-04	23-Mar-04	<0.035	<0.050	<0.052	<0.036	<0.051	<0.035	<0.050	<0.028	<0.037
13	23-Mar-04	29-Mar-04	<0.037	<0.056	<0.059	<0.045	<0.049	<0.042	<0.038	<0.042	<0.037

2nd Quarter

Week #	START DATE	STOP DATE	Site 4	(control) Site 6A*	Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*
14	29-Mar-04	6-Apr-04	<0.029	<0.047	<0.047	<0.030	<0.043	<0.017	<0.037	<0.024	<0.044
15	6-Apr-04	13-Apr-04	<0.031	<0.048	<0.034	<0.032	<0.033	<0.034	<0.054	<0.034	<0.033
16	13-Apr-04	20-Apr-04	<0.035	<0.062	<0.060	<0.034	<0.052	<0.031	<0.059	<0.028	<0.013
17	20-Apr-04	27-Apr-04	<0.034	<0.032	<0.043	<0.033	<0.035	<0.024	<0.040	<0.030	<0.037
18	27-Apr-04	4-May-04	<0.039	<0.042	<0.052	<0.040	<0.050	<0.031	<0.034	<0.043	<0.036
19	4-May-04	11-May-04	<0.039	<0.042	<0.013	<0.023	<0.037	<0.065	<0.042	<0.031	<0.036
20	11-May-04	18-May-04	<0.035	<0.031	<0.052	<0.045	<0.018	<0.034	<0.041	<0.034	<0.060
21	18-May-04	25-May-04	<0.035	<0.034	<0.061	<0.041	<0.042	<0.031	<0.049	<0.031	<0.026
22	25-May-04	1-Jun-04	<0.036	<0.061	<0.036	<0.039	<0.044	<0.048	<0.037	<0.038	<0.030
23	1-Jun-04	7-Jun-04	<0.039	<0.048	<0.058	<0.039	<0.058	<0.045	<0.050	<0.040	<0.050
24	7-Jun-04	15-Jun-04	<0.033	<0.057	<0.051	<0.033	<0.061	<0.032	<0.039	<0.041	<0.030
25	15-Jun-04	22-Jun-04	<0.039	<0.057	<0.068	<0.027	<0.033	<0.036	<0.049	<0.032	<0.022
26	22-Jun-04	29-Jun-04	<0.029	<0.055	<0.038	<0.044	<0.054	<0.041	<0.037	<0.039	<0.037

[a] Sample result invalidated due to anomalous gross beta result (contributing factor was ETM problems due to power outages)

TABLE 8.5 RADIOIODINE IN AIR 3rd - 4th QUARTER

ODCM required samples denoted by *
units are pCi/m^3

3rd Quarter

Week #	START DATE	STOP DATE	Site 4	(control) Site 6A*	required LLD <0.070 Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*
27	29-Jun-04	6-Jul-04	<0.033	<0.038	<0.037	<0.039	<0.060	<0.042	<0.014	<0.041	<0.054
28	6-Jul-04	13-Jul-04	<0.029	<0.027	<0.049	<0.049	<0.029	<0.034	<0.035	<0.056	<0.030
29	13-Jul-04	20-Jul-04	<0.034	<0.053	<0.053	<0.037	<0.051	<0.013	<0.035	<0.045	<0.037
30	20-Jul-04	27-Jul-04	<0.042	<0.045	<0.044	<0.068	<0.041	<0.046	<0.040	<0.045	<0.031
31	27-Jul-04	3-Aug-04	<0.013	<0.032	<0.058	<0.032	<0.049	<0.032	<0.053	<0.036	<0.038
32	3-Aug-04	10-Aug-04	<0.044	<0.049	<0.054	<0.050	<0.043	<0.034	<0.050	<0.036	<0.034
33	10-Aug-04	17-Aug-04	<0.046	<0.062	<0.035	<0.035	<0.049	<0.037	<0.068	<0.033	<0.044
34	17-Aug-04	24-Aug-04	<0.054	<0.038	<0.035	<0.036	<0.064	<0.033	<0.031	<0.042	<0.032
35	24-Aug-04	31-Aug-04	<0.030	<0.041	<0.039	<0.040	<0.037	<0.032	<0.035	<0.035	<0.040
36	31-Aug-04	7-Sep-04	<0.037	<0.060	<0.067	<0.047	<0.064	<0.042	<0.062	<0.043	<0.061
37	7-Sep-04	14-Sep-04	<0.032	<0.060	<0.061	<0.032	<0.060	<0.040	<0.046	<0.040	<0.038
38	14-Sep-04	21-Sep-04	<0.032	<0.035	<0.064	<0.027	<0.058	<0.035	<0.035	<0.063	<0.058
39	21-Sep-04	28-Sep-04	<0.041	<0.043	<0.036	<0.058	<0.038	<0.060	<0.040	<0.051	<0.039

4th Quarter

Week #	START DATE	STOP DATE	Site 4	(control) Site 6A*	required LLD <0.070 Site 14A*	Site 15*	Site 17A	Site 21	Site 29*	Site 35	Site 40*
40	28-Sep-04	5-Oct-04	<0.035	<0.043	<0.035	<0.032	<0.053	<0.053	<0.039	<0.052	<0.038
41	5-Oct-04	12-Oct-04	<0.053	<0.055	<0.043	<0.055	<0.036	<0.042	<0.033	<0.013	<0.024
42	12-Oct-04	19-Oct-04	<0.044	<0.064	<0.045	<0.044	<0.045	<0.058	<0.015	<0.035	<0.059
43	19-Oct-04	26-Oct-04	<0.033	<0.012	<0.042	<0.056	<0.031	<0.049	OOS [a]	<0.030	<0.031
44	26-Oct-04	2-Nov-04	<0.034	<0.033	<0.033	<0.030	<0.058	<0.029	<0.059	<0.034	<0.041
45	2-Nov-04	8-Nov-04	<0.064	<0.058	<0.053	<0.015	<0.017	<0.053	<0.042	<0.042	<0.063
46	8-Nov-04	16-Nov-04	<0.028	<0.044	<0.049	<0.032	<0.044	<0.032	<0.030	<0.032	<0.036
47	16-Nov-04	22-Nov-04	<0.044	<0.029	<0.053	<0.046	<0.033	<0.045	<0.042	<0.045	<0.038
48	22-Nov-04	30-Nov-04	<0.029	<0.037	<0.030	<0.030	<0.040	<0.037	<0.032	<0.031	<0.034
49	30-Nov-04	7-Dec-04	<0.042	<0.042	<0.013	<0.013	<0.045	<0.045	<0.059	<0.059	<0.036
50	7-Dec-04	14-Dec-04	<0.033	<0.070	<0.046	<0.033	<0.036	<0.036	<0.060	<0.033	<0.053
51	14-Dec-04	20-Dec-04	<0.045	<0.047	<0.036	<0.040	<0.040	<0.050	<0.042	<0.049	<0.038
52	20-Dec-04	27-Dec-04	<0.061	<0.064	<0.033	<0.048	<0.041	<0.040	<0.057	<0.048	<0.033

[a] Out of service due to road construction activities for plant security upgrades (planned)

TABLE 8.6 VEGETATION

ODCM required samples denoted by *
units are pCi/kg, wet

LOCATION	TYPE	DATE COLLECTED	<60 I-131	<60 Cs-134	<80 Cs-137
BRANCH RESIDENCE (Site #52)*	Turnip Greens	10-Jun-04	<49	<45	<63
	Collard greens	23-Jul-04	<49	<58	<42
DUNCAN FAMILY FARMS (Site #62)*	Green cabbage	16-Jan-04	<40	<55	<63
	Red cabbage	16-Jan-04	<39	<58	<50
	Lettuce	16-Jan-04	<54	<53	<61
	Green cabbage	13-Feb-04	<49	<56	<23
	Red cabbage	13-Feb-04	<35	<56	<63
	Lettuce	13-Feb-04	<37	<44	<55
	Green cabbage	10-Mar-04	<42	<35	<69
	Red cabbage	10-Mar-04	<41	<29	<42
	Lettuce	10-Mar-04	<46	<43	<55
	Green cabbage	15-Apr-04	<43	<58	<69
	Red cabbage	15-Apr-04	<46	<38	<57
	Savoy cabbage	15-Apr-04	<57	<41	<49
	Savoy cabbage	13-May-04	<59	<49	<76
	Red cabbage	13-May-04	<58	<38	<70
	Green cabbage	13-May-04	<44	<58	<55
	Green cabbage	22-Oct-04	<44	<58	<66
	Green cabbage	19-Nov-04	<39	<43	<36
	Red cabbage	19-Nov-04	<43	<52	<52
	Savoy cabbage	17-Dec-04	<39	<56	<48
	Red cabbage	17-Dec-04	<45	<60	<74
	Green cabbage	17-Dec-04	<55	<41	<79
MCCOY RESIDENCE (Site #47)*	NO SAMPLES AVAILABLE				

TABLE 8.7 MILK

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	DATE COLLECTED	<1	<15	<18	<60	<15
		I-131	**Cs-134**	**Cs-137**	**Ba-140**	**La-140**
PAINTER GOATS (Site #51)*	22-Apr-04	<1	<2	<1	<3	<1
	18-May-04	<1	<1	<1	<3	<1
	17-Jun-04	<1	<1	<1	<3	<1
	23-Jul-04	<1	<1	<1	<3	<1
	20-Aug-04	<1	<1	<1	<3	<1
	23-Sep-04	<1	<1	<1	<3	<1
	22-Oct-04	<1	<1	<1	<3	<1
	10-Nov-04	<1	<1	<1	<3	<1
BARBER GOATS (Site #53)*	22-Apr-04	<1	<1	<1	<4	<1
	18-May-04	<1	<1	<1	<4	<1
	11-Jun-04	<1	<1	<1	<3	<1
	16-Jul-04	<1	<1	<1	<3	<1
	13-Aug-04	<1	<1	<1	<3	<1
	17-Sep-04	<1	<1	<1	<3	<1
	15-Oct-04	<1	<1	<1	<3	<1
	10-Nov-04	<1	<1	<1	<3	<1
	17-Dec-04	<1	<1	<1	<3	<1
BRANCH GOATS (Site #54)	NO SAMPLES AVAILABLE					

Notes:
Branch goats added to monitoring program in May.

TABLE 8.8 DRINKING WATER

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	MONTH ENDPOINT	<15 Mn-54	<15 Co-58	<30 Fe-59	<15 Co-60	<30 Zn-65	<15 Nb-95	<30 Zr-95	<15 I-131	<15 Cs-134	<18 Cs-137	<60 Ba-140	<15 La-140	<2000 QTRLY H-3	<4.0 Gross Beta
BERRYMAN RESIDENCE (SITE #48)*	27-Jan-04	<11	<10	<21	<12	<30	<11	<20	<11	<13	<13	<41	<11		<3.1
	24-Feb-04	<9	<9	<18	<10	<22	<10	<17	<9	<8	<9	<30	<14		<3.3
	29-Mar-04	<14	<14	<27	<15	<27	<10	<23	<12	<12	<13	<50	<12	<275	<3.2
	27-Apr-04	<9	<10	<17	<14	<24	<10	<18	<10	<11	<13	<33	<14		3.2 ± 1.8
	25-May-04	<12	<11	<22	<14	<28	<15	<19	<12	<11	<13	<37	<14		<3.2
	29-Jun-04	<12	<11	<23	<11	<30	<13	<23	<11	<11	<13	<41	<14	<265	<3.0
	27-Jul-04	<13	<14	<29	<14	<29	<15	<22	<13	<13	<15	<38	<15		<3.1
	31-Aug-04	<11	<11	<20	<12	<27	<13	<18	<10	<10	<10	<31	<9		<3.2
	28-Sep-04	<13	<12	<23	<13	<30	<14	<19	<11	<11	<13	<44	<14	<271	4.7 ± 1.8
	26-Oct-04	<10	<10	<20	<11	<22	<9	<16	<8	<8	<10	<32	<10		3.1 ± 1.7
	30-Nov-04	<13	<10	<21	<9	<19	<11	<21	<11	<10	<11	<43	<13		4.8 ± 1.7
	27-Dec-04	<13	<12	<26	<13	<30	<11	<18	<10	<10	<12	<38	<12	<276	<3.0
GAVETTE RESIDENCE (SITE #55)	27-Jan-04	<12	<11	<26	<15	<27	<10	<22	<11	<9	<9	<37	<11		4.1 ± 1.6
	24-Feb-04	<14	<12	<25	<15	<29	<15	<21	<12	<12	<13	<43	<13		<2.4
	29-Mar-04	<11	<10	<16	<12	<17	<11	<17	<10	<10	<11	<31	<15	<272	3.0 ± 1.7
	27-Apr-04	<14	<14	<27	<14	<30	<15	<25	<12	<12	<12	<49	<14		2.9 ± 1.5
	25-May-04	<12	<12	<23	<13	<29	<14	<19	<11	<10	<13	<39	<15		<2.7
	29-Jun-04	<9	<8	<23	<9	<21	<11	<17	<9	<8	<9	<33	<15	<263	3.8 ± 1.6
	27-Jul-04	<13	<12	<29	<15	<26	<12	<21	<12	<12	<13	<43	<13		<2.4
	31-Aug-04	<15	<15	<23	<14	<25	<13	<26	<12	<13	<14	<48	<14		3.6 ± 1.7
	28-Sep-04	<14	<11	<23	<12	<30	<13	<19	<12	<11	<12	<38	<12	<272	4.9 ± 1.5
	26-Oct-04	<15	<13	<26	<15	<27	<13	<24	<13	<12	<13	<44	<14		5.0 ± 1.5
	30-Nov-04	<13	<12	<23	<12	<29	<12	<20	<12	<11	<12	<38	<11		4.5 ± 1.5
	27-Dec-04	<13	<13	<27	<14	<30	<14	<24	<11	<12	<13	<48	<14	<279	3.3 ± 2.5

TABLE 8.8 DRINKING WATER

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	MONTH ENDPOINT	<15 Mn-54	<15 Co-58	<30 Fe-59	<15 Co-60	<30 Zn-65	<15 Nb-95	<30 Zr-95	<15 I-131	<15 Cs-134	<18 Cs-137	<60 Ba-140	<15 La-140	<2000 QTRLY H-3	<4.0 Gross Beta
McARTHUR RESIDENCE (SITE #46)*	27-Jan-04	<13	<12	<23	<12	<24	<13	<18	<11	<11	<14	<36	<15		2.7 ± 1.5
	24-Feb-04	<13	<12	<30	<15	<28	<13	<23	<13	<10	<14	<46	<13		<2.5
	29-Mar-04	<11	<12	<24	<13	<30	<14	<20	<12	<11	<13	<41	<14	<275	<2.5
	27-Apr-04	<13	<11	<21	<7	<21	<12	<16	<9	<9	<9	<32	<15		3.3 ± 1.4
	25-May-04	<12	<12	<24	<15	<26	<13	<18	<10	<10	<11	<41	<12		<2.6
	29-Jun-04	<13	<14	<25	<14	<30	<14	<18	<11	<12	<14	<44	<14	<265	<2.3
	27-Jul-04	<10	<10	<16	<8	<18	<9	<14	<8	<8	<10	<29	<15		<2.4
	31-Aug-04	<14	<15	<27	<13	<29	<14	<26	<13	<13	<14	<44	<10		<2.4
	28-Sep-04	<11	<10	<27	<14	<25	<12	<18	<10	<11	<12	<33	<9	<262	5.1 ± 1.4
	26-Oct-04	<13	<13	<26	<13	<28	<15	<23	<13	<13	<13	<42	<13		3.3 ± 1.4
	30-Nov-04	<10	<9	<17	<8	<22	<9	<12	<7	<10	<8	<32	<15		4.1 ± 1.4
	27-Dec-04	<10	<9	<20	<11	<23	<9	<19	<8	<7	<12	<32	<13	<278	2.5 ± 1.5
CHOWANEC RESIDENCE (SITE #49) *	27-Jan-04	<12	<10	<21	<15	<26	<12	<22	<10	<11	<12	<39	<11		<2.3
	24-Feb-04	<13	<12	<27	<15	<29	<12	<21	<13	<12	<11	<43	<15		<2.6
	29-Mar-04	<12	<10	<19	<12	<30	<13	<22	<10	<11	<12	<46	<14	<271	<2.4
	27-Apr-04	<14	<12	<25	<14	<29	<15	<20	<12	<11	<12	<43	<12		<2.1
	25-May-04	<10	<10	<20	<12	<30	<11	<16	<10	<10	<11	<36	<15		<2.6
	29-Jun-04	<14	<12	<29	<14	<28	<14	<26	<13	<10	<15	<39	<15	<260	<2.3
	27-Jul-04	<12	<12	<20	<13	<30	<13	<23	<13	<11	<13	<40	<14		<2.4
	31-Aug-04	<12	<13	<22	<14	<29	<15	<21	<11	<11	<11	<44	<14		<2.4
	28-Sep-04	<13	<11	<27	<11	<30	<12	<22	<11	<10	<13	<40	<9	<274	<1.9
	26-Oct-04	<10	<13	<26	<12	<28	<14	<17	<11	<9	<12	<39	<13		<2.0
	30-Nov-04	<11	<13	<27	<14	<30	<14	<18	<11	<10	<13	<39	<11		<1.9
	27-Dec-04	<12	<14	<29	<14	<30	<12	<21	<12	<12	<12	<41	<11	<280	<2.3

TABLE 8.9 GROUNDWATER

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	DATE COLLECTED	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140	H-3
		<15	<15	<30	<15	<30	<15	<30	<15	<15	<18	<60	<15	<2000
WELL 27ddc (Site #57)*	27-Jan-04	<9	<11	<23	<14	<23	<13	<15	<10	<9	<10	<36	<15	<273
	27-Apr-04	<11	<10	<21	<13	<24	<12	<17	<10	<10	<11	<32	<15	<278
	27-Jul-04	<9	<10	<21	<9	<20	<12	<16	<9	<9	<10	<31	<13	<268
	26-Oct-04	<11	<11	<21	<11	<26	<14	<19	<11	<11	<11	<42	<15	<273
WELL 34abb (Site #58)*	27-Jan-04	<12	<12	<24	<13	<26	<12	<19	<12	<10	<12	<43	<15	<273
	27-Apr-04	<11	<10	<19	<10	<21	<11	<18	<11	<10	<11	<37	<15	<276
	27-Jul-04	<13	<13	<23	<15	<28	<15	<21	<13	<12	<15	<43	<14	<271
	26-Oct-04	<13	<12	<21	<13	<24	<15	<21	<12	<12	<13	<42	<14	<272

TABLE 8.10 SURFACE WATER

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	MONTH ENDPOINT	<15 Mn-54	<15 Co-58	<30 Fe-59	<15 Co-60	<30 Zn-65	<15 Nb-95	<30 Zr-95	<15 I-131	<15 Cs-134	<18 Cs-137	<60 Ba-140	<15 La-140	<3000 H-3
RESERVOIR (Site #60) *	27-Jan-04	<12	<15	<27	<14	<28	<14	<22	<13	<11	<12	<42	<14	
	24-Feb-04	<11	<10	<20	<11	<21	<11	<17	<12	<10	<11	<36	<15	
	29-Mar-04	<7	<7	<14	<8	<18	<7	<12	<8	<7	<8	<27	<8	<280
	27-Apr-04	<11	<11	<23	<13	<25	<14	<18	<15	<12	<12	<44	<11	
	25-May-04	<15	<15	<21	<14	<29	<15	<22	<14	<12	<15	<51	<13	
	29-Jun-04	<12	<11	<27	<13	<27	<13	<21	<12	<11	<13	<40	<15	<267
	27-Jul-04	<13	<14	<24	<15	<25	<13	<27	15 ± 8	<10	<13	<47	<14	
	31-Aug-04	<12	<11	<28	<15	<27	<11	<16	<11	<10	<11	<34	<10	
	28-Sep-04	<10	<12	<28	<15	<18	<11	<18	9 ± 9	<10	<11	<37	<12	<275
	26-Oct-04	<13	<11	<25	<12	<23	<12	<22	<12	<11	<11	<41	<15	
	30-Nov-04	<11	<11	<25	<13	<29	<12	<20	<12	<10	<12	<43	<12	
	27-Dec-04	<13	<12	<26	<14	<24	<14	<20	<13	<11	<12	<42	<15	<279
EVAP POND 1 (Site #59) *	27-Jan-04	<15	<11	<26	<14	<25	<15	<19	<12	<12	<14	<44	<13	
	24-Feb-04	<11	<12	<24	<10	<30	<11	<19	<9	<11	<11	<33	<12	
	29-Mar-04	<13	<12	<23	<13	<29	<10	<20	<10	<10	<10	<34	<9	954 ± 181
	27-Apr-04	<12	<11	<22	<15	<27	<12	<21	<12	<11	<12	<37	<13	
	25-May-04	<9	<10	<26	<13	<30	<10	<14	<10	<8	<11	<32	<15	
	29-Jun-04	<10	<8	<24	<15	<27	<10	<19	<8	<10	<12	<31	<7	1266 ± 184
	27-Jul-04	<11	<13	<25	<13	<30	<12	<22	<10	<11	<12	<38	<12	
	31-Aug-04	<11	<10	<23	<13	<30	<12	<20	21 ± 12 [a]	<9	<12	<39	<12	
	28-Sep-04	<12	<13	<30	<13	<30	<13	<25	<12	<10	<13	<40	<10	864 ± 176
	26-Oct-04	<11	<10	<23	<13	<30	<12	<17	<9	<9	<11	<34	<12	
	30-Nov-04	<13	<13	<27	<14	<30	<14	<20	<12	<10	<11	<42	<10	
	27-Dec-04	<11	<9	<26	<13	<25	<9	<15	<11	<9	<10	<32	<15	867 ± 178
EVAP POND 2 (Site #63) *	27-Jan-04	<10	<10	<23	<11	<26	<10	<20	<12	<10	<14	<37	<14	
	24-Feb-04	<12	<11	<28	<15	<30	<11	<21	<12	<10	<14	<42	<14	
	29-Mar-04	<12	<14	<26	<13	<25	<11	<22	<15	<11	<14	<42	<15	1284 ± 184
	27-Apr-04	<10	<11	<24	<12	<24	<10	<17	<11	<10	<11	<32	<14	
	25-May-04	<11	<11	<25	<12	<30	<11	<19	<12	<11	<13	<39	<14	
	29-Jun-04	<11	<12	<26	<13	<24	<14	<21	<13	<12	<15	<38	<15	1826 ± 195
	27-Jul-04	<12	<11	<29	<14	<25	<13	<23	<15	<12	<16	<45	<15	
	31-Aug-04	<14	<11	<27	<13	<30	<11	<22	<12	<11	<14	<46	<12	
	28-Sep-04	<10	<12	<27	<13	<30	<12	<22	<13	<10	<14	<42	<10	1558 ± 187
	26-Oct-04	<14	<12	<25	<15	<29	<14	<20	<14	<12	<15	<44	<13	
	30-Nov-04	<10	<10	<23	<14	<30	<11	<20	<11	<11	<13	<36	<13	
	27-Dec-04	<12	<12	<24	<14	<30	<12	<24	<12	<11	<15	<44	<12	1294 ± 186

[a] Sample recount result was 18 ± 7 pCi/liter

TABLE 8.10 SURFACE WATER

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	DATE COLLECTED	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140	H-3
WRF INFLUENT	6-Jan-04	<10	<9	<17	<13	<24	<10	<14	11 ± 8	<10	<12	<30	<15	
	13-Jan-04	<11	<9	<30	<13	<29	<11	<19	23 ± 12	<10	<13	<37	<12	
	20-Jan-04	<11	<11	<21	<13	<19	<12	<17	20 ± 10	<10	<9	<31	<14	
	27-Jan-04	<9	<9	<18	<15	<24	<10	<18	35 ± 10	<10	<11	<33	<14	<282
	3-Feb-04	<10	<11	<20	<8	<25	<10	<14	14 ± 8	<9	<9	<28	<15	
	10-Feb-04	<9	<10	<25	<13	<30	<8	<23	46 ± 12	<8	<11	<36	<13	
	17-Feb-04	<13	<11	<26	<15	<23	<13	<21	41 ± 12	<8	<13	<34	<8	
	24-Feb-04	<15	<13	<24	<15	<24	<14	<20	72 ± 15	<12	<15	<48	<12	<288
	1-Mar-04	<10	<10	<19	<11	<24	<10	<14	57 ± 13	<7	<11	<32	<13	
	9-Mar-04	<9	<10	<18	<10	<18	<10	<17	135 ± 19	<8	<9	<28	<15	
	16-Mar-04	<9	<9	<11	<10	<21	<9	<15	47 ± 10	<7	<8	<28	<12	
	23-Mar-04	<12	<11	<25	<14	<28	<15	<22	43 ± 13	<9	<14	<41	<11	
	30-Mar-04	<11	<10	<20	<9	<20	<10	<20	63 ± 12	<9	<10	<36	<14	<283
	6-Apr-04	<12	<15	<30	<10	<29	<14	<22	36 ± 13	<12	<14	<46	<13	
	27-Apr-04	<10	<9	<23	<14	<19	<11	<15	71 ± 13	<9	<12	<34	<13	<284
	4-May-04	<11	<11	<20	<14	<23	<10	<21	15 ± 9	<9	<13	<31	<15	
	11-May-04	<9	<11	<25	<13	<30	<13	<20	23 ± 9	<11	<12	<31	<15	
	17-May-04	<12	<10	<22	<14	<24	<12	<22	<15	<11	<14	<46	<15	
	25-May-04	<9	<10	<23	<8	<20	<9	<17	27 ± 11	<10	<12	<37	<15	<277
	1-Jun-04	<13	<11	<18	<14	<28	<11	<18	24 ± 13	<11	<13	<35	<13	
	8-Jun-04	<12	<11	<25	<15	<27	<14	<20	14 ± 11	<11	<11	<42	<12	
	15-Jun-04	<12	<13	<24	<11	<30	<9	<16	24 ± 8	<12	<14	<32	<12	
	22-Jun-04	<11	<11	<25	<13	<29	<11	<19	20 ± 11	<11	<12	<34	<15	
	29-Jun-04	<9	<12	<22	<11	<20	<11	<15	18 ± 8	<9	<9	<30	<14	<279
	6-Jul-04	<11	<12	<26	<15	<28	<12	<24	27 ± 10	<12	<10	<40	<13	
	13-Jul-04	<9	<9	<19	<11	<23	<8	<18	21 ± 8	<8	<10	<32	<13	
	20-Jul-04	<9	<9	<20	<10	<25	<9	<14	69 ± 12	<8	<7	<29	<13	
	27-Jul-04	<7	<10	<23	<12	<25	<10	<17	29 ± 9	<9	<10	<32	<15	<279
	3-Aug-04	<12	<11	<21	<14	<26	<10	<19	26 ± 9	<9	<12	<28	<15	
	10-Aug-04	<12	<13	<28	<12	<27	<12	<25	18 ± 10	<12	<14	<43	<15	

TABLE 8.10 SURFACE WATER

ODCM required samples denoted by *
units are pCi/liter

SAMPLE LOCATION	DATE COLLECTED	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140	H-3
WRF INFLUENT (continued)	17-Aug-04	<13	<14	<27	<15	<30	<14	<22	24 ± 10	<11	<13	<40	<12	
	24-Aug-04	<9	<11	<24	<13	<29	<10	<17	14 ± 9	<10	<10	<36	<15	
	31-Aug-04	<11	<13	<28	<15	<28	<12	<24	18 ± 14	<11	<14	<44	<15	<276
	7-Sep-04	<11	<10	<23	<13	<30	<11	<19	41 ± 11	<11	<12	<31	<12	
	14-Sep-04	<13	<12	<24	<12	<28	<11	<19	16 ± 11	<11	<11	<42	<15	
	21-Sep-04	<12	<12	<25	<13	<30	<13	<22	32 ± 13	<12	<15	<43	<14	
	28-Sep-04	<14	<13	<29	<14	<29	<14	<21	37 ± 13	<13	<12	<40	<11	<280
	5-Oct-04	<12	<11	<24	<12	<26	<15	<20	15 ± 9	<10	<14	<41	<12	
	12-Oct-04	<14	<12	<27	<15	<23	<13	<21	27 ± 14	<13	<13	<44	<12	
	22-Oct-04	<10	<11	<23	<11	<24	<10	<21	61 ± 15	<10	<11	<46	<12	
	26-Oct-04	<12	<13	<24	<15	<27	<14	<21	52 ± 13	<12	<14	<42	<12	<281
	2-Nov-04	<14	<14	<25	<15	<28	<15	<24	19 ± 12	<10	<12	<37	<15	
	8-Nov-04	<11	<10	<21	<11	<30	<13	<19	21 ± 11	<11	<12	<41	<12	
	16-Nov-04	<12	<12	<26	<15	<30	<14	<22	<15	<11	<14	<41	<13	
	22-Nov-04	<11	<12	<23	<14	<30	<13	<23	34 ± 18	<11	<13	<46	<12	
	30-Nov-04	<12	<11	<29	<12	<25	<13	<24	<13	<11	<12	<31	<13	<277
	7-Dec-04	<14	<14	<25	<14	<27	<15	<25	193 ± 29	<11	<13	<42	<15	
	14-Dec-04	<12	<10	<24	<13	<28	<13	<19	55 ± 14	<12	<13	<37	<13	
	20-Dec-04	<13	<12	<24	<14	<27	<15	<23	105 ± 18	<11	<13	<43	<15	
	27-Dec-04	<13	<12	<23	<11	<25	<15	<22	12 ± 9	<11	<12	<42	<12	
SEDIMENT. BASIN #2	24-Feb-04	<12	<13	<28	<14	<29	<13	<23	<11	<11	<13	<44	<13	<294
	9-Mar-04	<12	<12	<24	<15	<27	<12	<21	<12	<11	<12	<44	<11	384 ± 173
	6-Apr-04	<10	<7	<17	<7	<21	<9	<15	<8	<8	<8	<29	<11	<286
	13-Apr-04	<8	<9	<17	<10	<21	<8	<17	<8	<8	<9	<31	<15	<283
	2-Nov-04	<15	<13	<22	<13	<29	<14	<27	<12	<14	<14	<45	<9	333 ± 180
	8-Nov-04	<13	<15	<27	<13	<30	<14	<25	<11	<11	<14	<45	<12	482 ± 172
	16-Nov-04	<12	<12	<23	<15	<24	<10	<21	<8	<10	<11	<36	<13	<273
	22-Nov-04	<11	<10	<22	<10	<20	<9	<17	<9	<8	<11	<30	<15	<264
	30-Nov-04	<14	<11	<29	<10	<29	<13	<21	<12	<12	<12	<45	<13	278 ± 167
	7-Dec-04	<13	<10	<21	<12	<26	<12	<19	<9	<9	<13	<34	<15	<288
	14-Dec-04	<13	<12	<24	<13	<25	<14	<21	<11	<13	<15	<35	<15	331 ± 174
	20-Dec-04	<13	<12	<24	<13	<30	<13	<22	<11	<12	<13	<38	<11	423 ± 174
	27-Dec-04	<10	<10	<26	<13	<22	<12	<14	<9	<9	<13	<31	<11	<294

TABLE 8.11 SLUDGE/SEDIMENT

ODCM required samples denoted by *
units are pCi/kg, wet

SAMPLE LOCATION	DATE COLLECTED	I-131	Cs-134	Cs-137	In-111
WRF CENTRIFUGE WASTE SLUDGE	6-Jan-04	849 ± 116	<24	<25	
	13-Jan-04	417 ± 71	<23	<30	
	20-Jan-04	396 ± 72	<31	<32	
	27-Jan-04	330 ± 62	<24	<29	
	3-Feb-04	452 ± 75	<21	<35	
	10-Feb-04	402 ± 69	<25	<22	
	17-Feb-04	203 ± 44	<24	<41	
	24-Feb-04	278 ± 56	<39	<33	
	1-Mar-04	571 ± 87	<12	<30	
	9-Mar-04	643 ± 91	<28	<32	
	16-Mar-04	356 ± 68	<39	<45	
	23-Mar-04	791 ± 101	<20	<29	
	30-Mar-04	575 ± 89	<24	<37	
	6-Apr-04	787 ± 111	<30	<37	
	20-Apr-04	743 ± 104	<34	<39	
	27-Apr-04	466 ± 78	<32	<30	
	4-May-04	525 ± 74	<23	<24	32 ± 31
	11-May-04	215 ± 33	<12	<12	13 ± 8
	17-May-04	286 ± 55	<29	<26	
	25-May-04	493 ± 71	<16	<29	
	1-Jun-04	760 ± 106	<57	<34	50 ± 25
	8-Jun-04	720 ± 102	<27	<20	
	15-Jun-04	1116 ± 137	<27	<26	
	22-Jun-04	432 ± 74	<9	<32	
	29-Jun-04	680 ± 87	<19	<23	
	6-Jul-04	444 ± 73	<20	<12	
	13-Jul-04	806 ± 110	<26	<26	39 ± 19
	20-Jul-04	955 ± 125	<26	<20	
	29-Jul-04	1431 ± 162	<25	<28	
	3-Aug-04	1288 ± 149	<23	<26	
	10-Aug-04	1013 ± 131	<29	<30	
	17-Aug-04	951 ± 113	<21	<22	
	24-Aug-04	590 ± 79	<20	<13	
	31-Aug-04	943 ± 125	<31	<27	51 ± 26
	7-Sep-04	1093 ± 141	<19	<7	
	14-Sep-04	1146 ± 146	<6	<28	
	21-Sep-04	880 ± 118	<23	<37	
	28-Sep-04	773 ± 105	<30	<7	
	5-Oct-04	897 ± 108	<19	<24	
	12-Oct-04	1007 ± 130	<23	<25	53 ± 27
	26-Oct-04	296 ± 52	<22	<23	
	2-Nov-04	1006 ± 120	<14	<28	37 ± 25
	8-Nov-04	629 ± 94	<24	<8	41 ± 24
	16-Nov-04	316 ± 55	<21	<27	
	22-Nov-04	499 ± 76	<25	<31	
	30-Nov-04	413 ± 63	<24	<24	
	7-Dec-04	376 ± 66	<27	<21	
	14-Dec-04	473 ± 68	<25	<22	
	20-Dec-04	1050 ± 128	<29	<22	
	27-Dec-04	1014 ± 123	<24	<24	51 ± 23

TABLE 8.11 SLUDGE/SEDIMENT

ODCM required samples denoted by *
Units are pCi/kg, wet

SAMPLE LOCATION	DATE COLLECTED	I-131	Cs-134	Cs-137
(N)	18-Nov-04	13 ± 7	<7	<11
(E)	18-Nov-04	7 ± 7	<9	<11
EVAP POND 1 (S)	18-Nov-04	12 ± 8	<9	<11
(W)	18-Nov-04		<8	<11
(C)	No sediment obtainable			
(N)	18-Nov-04		<10	14 ± 7
(E)	18-Nov-04		<10	18 ± 9
EVAP POND 2 (S)	18-Nov-04		<13	15 ± 11
(W)	18-Nov-04		<9	12 ± 11
(C)	18-Nov-04		<12	18 ± 10

COOLING TOWER LOUVER/PIPING SCALE

UNIT CYCLE	APPROXIMATE VOLUME (yd^3)	ISOTOPE	ACTIVITY RANGE (pCi/liter)	SAMPLE TYPE	FRACTION OF SAMPLES ABOVE MDA
1R10	70	n/a	<MDA	CW/PW piping scale	none
1R11	8.5	n/a	<MDA	CW/PW piping scale	none
2R11	6	Co-60 Cs-137	3.41E-07 to 8.17E-07 <MDA to 5.62E-08	CW/PW piping scale	8 of 8 3 of 8
2R11	150	Co-60	<MDA to 1.07E-06	Cooling tower louver scale	25 of 32
3R10	30	n/a	<MDA	Cooling tower louver scale	none

FIGURE 8.1 HISTORICAL GROSS BETA IN AIR (WEEKLY SYSTEM AVERAGES)

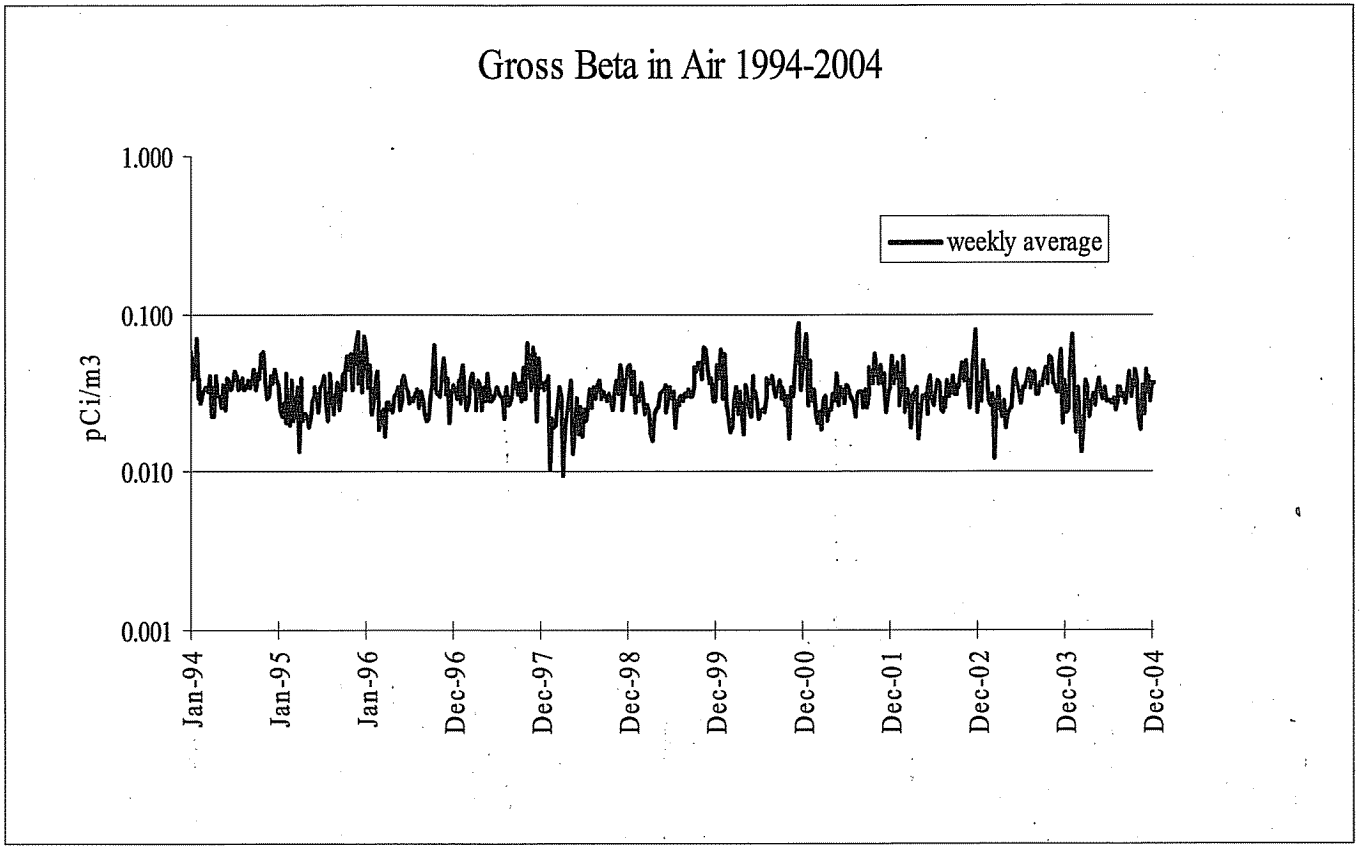


FIGURE 8.2 HISTORICAL GROSS BETA IN AIR (ANNUAL SITE TO SITE COMPARISONS) COMPARED TO PRE-OP

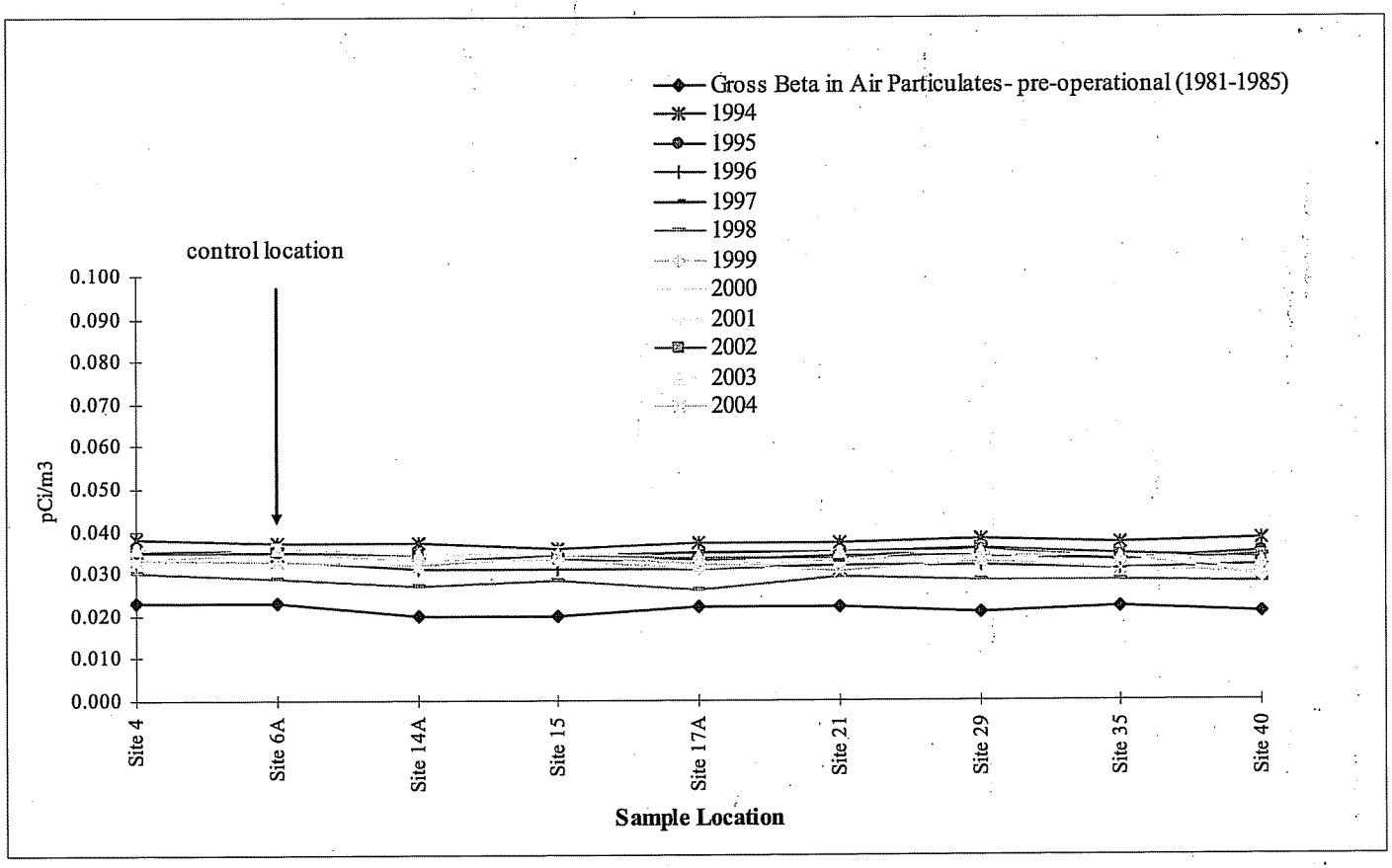
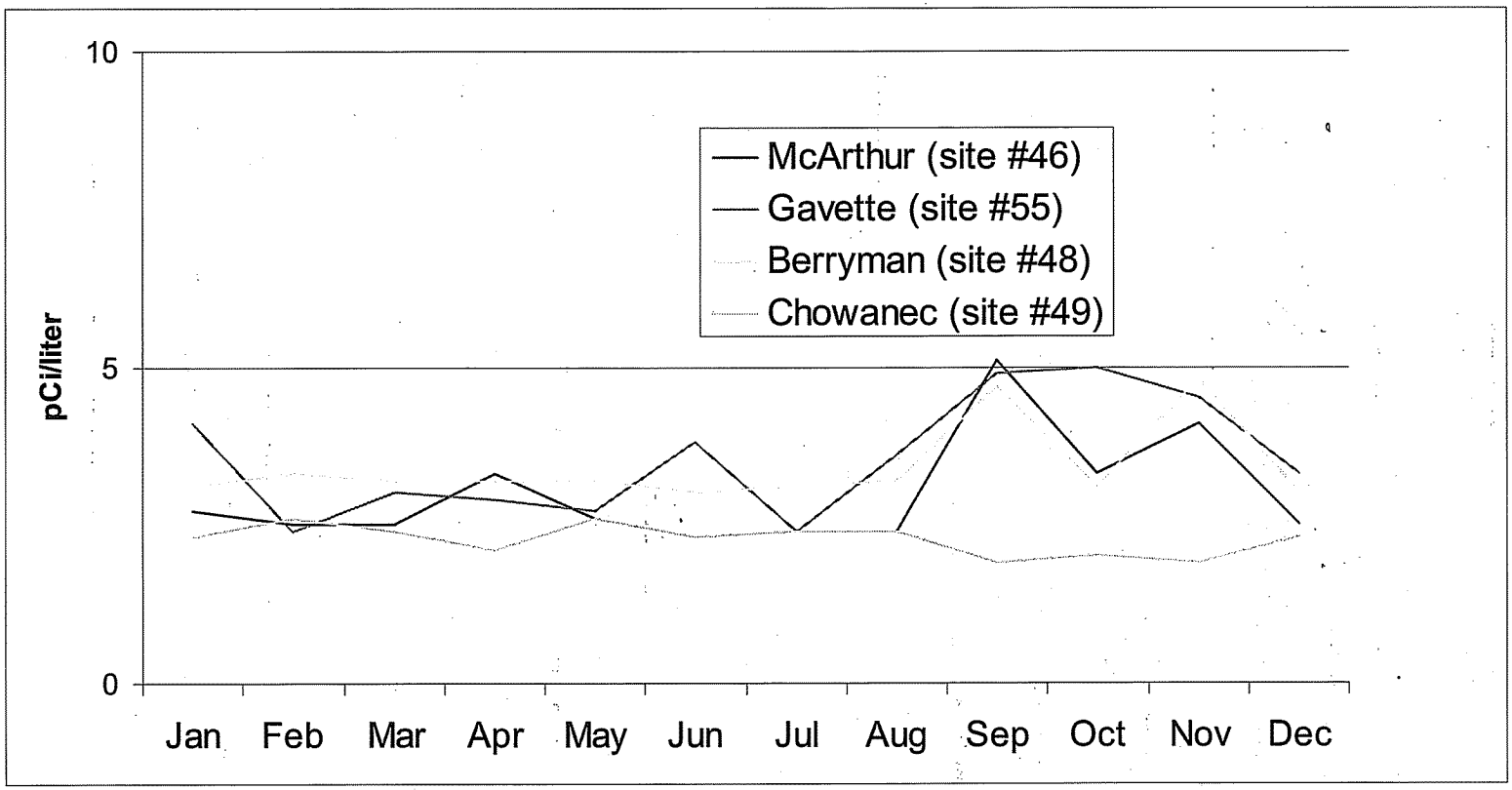
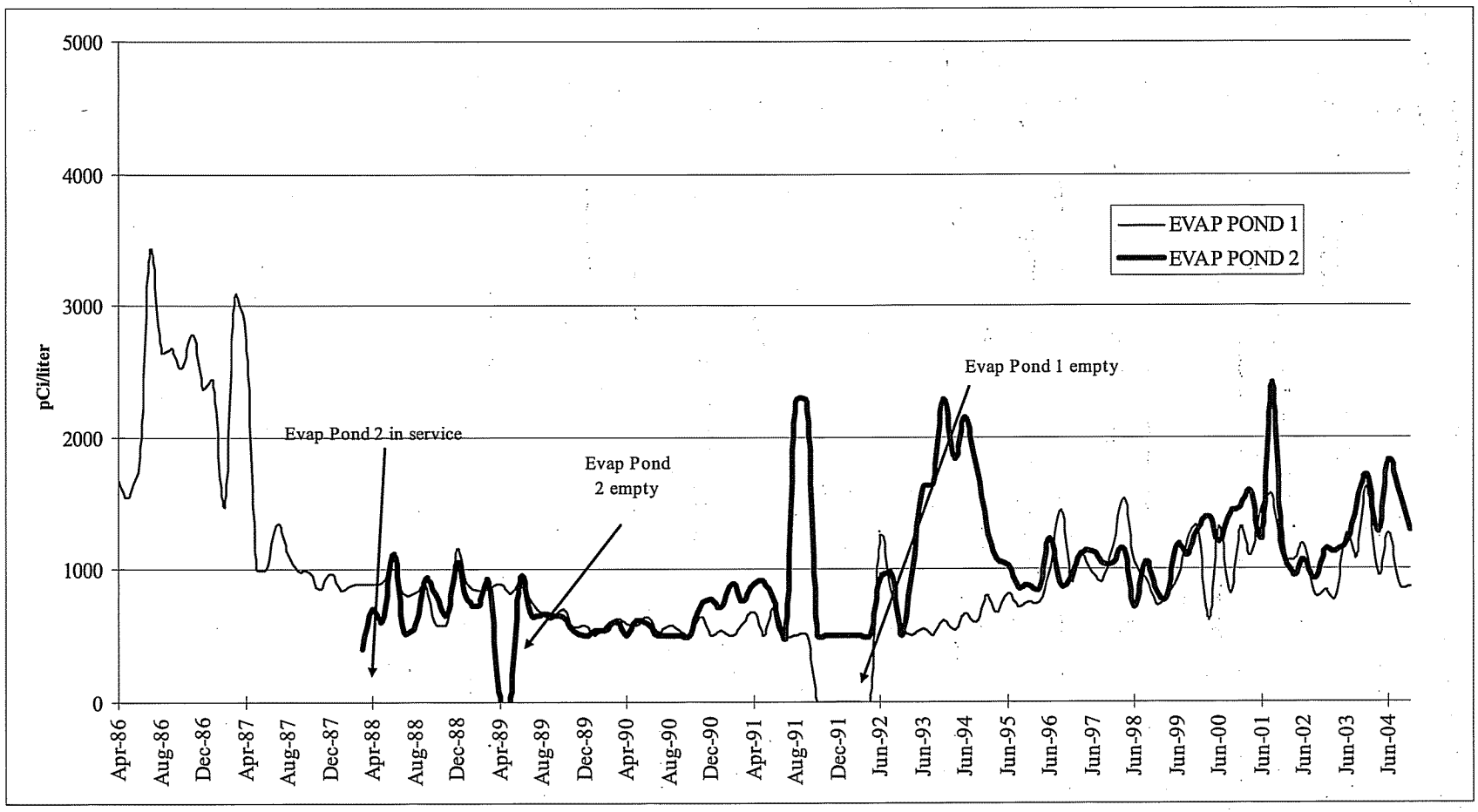


FIGURE 8.3 GROSS BETA IN DRINKING WATER



NOTES: MDA values plotted as activity (e.g. <2.3 is plotted as 2.3)

FIGURE 8.4 EVAPORATION POND TRITIUM ACTIVITY



9. Thermoluminescent Dosimeter (TLD) Results and Data

The environmental TLD used at PVNGS is the Panasonic Model 812 Dosimeter. The Model 812 is a multi-element dosimeter combining two elements of lithium borate and two elements of calcium sulfate under various filters.

TLDs were placed in forty-nine locations from one to thirty-five miles from the PVNGS. TLD locations are shown in Figures 2.1 and 2.2 and are described in Table 9.1. TLD results for 2004 are presented in Table 9.2. Historical environmental gamma radiation results for 1985 through 2004 are presented in graphical form on Figure 9.1 (excluding transit control TLD #45).

Figure 9.2 depicts the environmental TLD results from 2004 as compared to the pre-operational TLD results (excluding sites #41, #43, and #46-50 as they were either deleted or had no pre-op TLD at these locations for comparison). The site to site comparisons indicate a direct correlation with respect to pre-operational results. It is evident that the offsite dose, as measured by TLDs, has not changed since Palo Verde became operational.

TABLE 9.1 TLD SITE LOCATIONS

(distances and directions are relative to Unit 2 in miles)

TLD SITE	LOCATION	LOCATION DESCRIPTION
1	E30	Goodyear
2	ENE24	Scott-Libby School
3	E21	Liberty School
4	E16	Buckeye
5	ESE11	Palo Verde School
6*	SSE31	APS Gila Bend substation
7	SE7	Old US 80 and Arlington School Rd
8	SSE4	Southern Pacific Pipeline Rd.
9	S5	Southern Pacific Pipeline Rd.
10	SE5	355th Ave. and Elliot Rd.
11	ESE5	339th Ave. and Dobbins Rd.
12	E5	339th Ave. and Buckeye-Salome Rd.
13	N1	N site boundary
14	NNE2	NNE site boundary
15	NE2	NE site boundary, WRF access road
16	ENE2	ENE site boundary
17	E2	E site boundary
18	ESE2	ESE site boundary
19	SE2	SE site boundary
20	SSE2	SSE site boundary
21	S3	S site boundary
22	SSW3	SSW site boundary
23	W5	N of Elliot Rd
24	SW4	N of Elliot Rd
25	WSW5	N of Elliot Rd
26	SSW4	S of Elliot Rd
27	SW1	SW site boundary
28	WSW1	WSW site boundary
29	W1	W site boundary
30	WNW1	WNW site boundary
31	NW1	NW site boundary
32	NNW1	NNW site boundary
33	NW4	S of Buckeye Rd
34	NNW5	395th Ave. and Van Buren St.
35	NNW8	Tonopah
36	N5	Wintersburg Rd. and Van Buren St.
37	NNE5	363rd Ave. and Van Buren St.
38	NE5	355th Ave. and Buckeye Rd.
39	ENE5	343rd Ave. N of Broadway Rd.
40	N3	Wintersburg
41	ESE3	Arlington School
42	N8	Ruth Fisher School

TABLE 9.1 TLD SITE LOCATIONS

(distances and directions are relative to Unit 2 in miles)

TLD SITE	LOCATION	LOCATION DESCRIPTION
44*	ENE35	El Mirage
45**	Onsite	Central Laboratory (lead pig)
46	ENE30	Litchfield Park School
47	E35	Littleton School
48	E24	Jackrabbit Trail
49	ENE11	Palo Verde Rd.
50	WNW5	S of Buckeye-Salome Rd.

* Site #6 and site #44 are the control locations.

** Site #45 is the transit control TLD (stored in lead pig).

TABLE 9.2 2004 ENVIRONMENTAL TLD RESULTS

Units are mrem/std qtr

TLD Site #	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Average
1	22.9	22.8	22.9	23.9	23.1
2	19.8	20.2	21.3	21.3	20.7
3	22.4	22.4	23.2	22.7	22.7
4	21.3	22.2	21.8	22.5	22.0
5	20.5	20.3	20.7	19.7	20.3
6 (control)	24.4	25.1	25.4	25.9	25.2
7	23.9	24.2	23.1	23.7	23.7
8	22.3	22.5	21.3	22.9	22.3
9	26.2	25.7	26.1	26.9	26.2
10	22.2	22.7	22.2	22.5	22.4
11	24.1	23.5	23.5	23.4	23.6
12	21.4	21.6	21.7	21.5	21.6
13	24.2	23.2	24.3	23.7	23.9
14	22.5	24.1	23.9	24.2	23.7
15	22.3	22.4	23.1	22.8	22.7
16	20.8	20.2	21.2	20.2	20.6
17	23.8	23.4	24.0	23.5	23.7
18	22.6	21.8	22.8	21.9	22.3
19	23.1	23.5	23.7	24.2	23.6
20	22.9	22.5	22.2	22.7	22.6
21	23.9	24.5	24.2	23.9	24.1
22	24.3	23.8	24.9	24.5	24.4
23	21.3	21.8	21.4	22.2	21.7
24	21.6	20.9	21.1	21.3	21.2
25	22.4	21.9	22.5	21.4	22.1
26	26.1	25.5	27.1	26.3	26.3
27	27.0	26.3	27.2	25.6	26.5
28	24.4	24.0	24.9	24.1	24.4
29	24.1	24.1	24.3	23.2	23.9
30	24.6	24.3	25.3	25.3	24.9
31	22.0	21.8	22.2	22.5	22.1
32	24.7	23.6	24.5	24.0	24.2
33	24.2	24.2	24.8	23.9	24.3
34	26.9	26.2	25.9	26.6	26.4
35	29.5	29.0	29.6	29.5	29.4
36	23.8	23.6	23.8	24.0	23.8
37	22.7	21.6	23.4	22.0	22.4
38	26.9	25.6	27.3	26.1	26.5
39	22.5	22.5	22.6	23.4	22.8
40	24.4	23.4	24.5	23.4	23.9
41	22.8	21.7	23.0	22.6	22.5
42	25.6	24.8	25.4	25.0	25.2
44 (control)	17.9	19.0	19.0	19.5	18.9
45 (transit control)	4.8	5.7	5.6	5.5	5.4
46	24.9	25.6	26.4	25.4	25.6
47	22.0	21.4	22.3	23.5	22.3
48	22.6	22.4	22.5	23.4	22.7
49	21.2	21.1	22.2	21.7	21.6
50	17.9	18.4	18.2	18.8	18.3

FIGURE 9.1 NETWORK ENVIRONMENTAL TLD EXPOSURE RATES

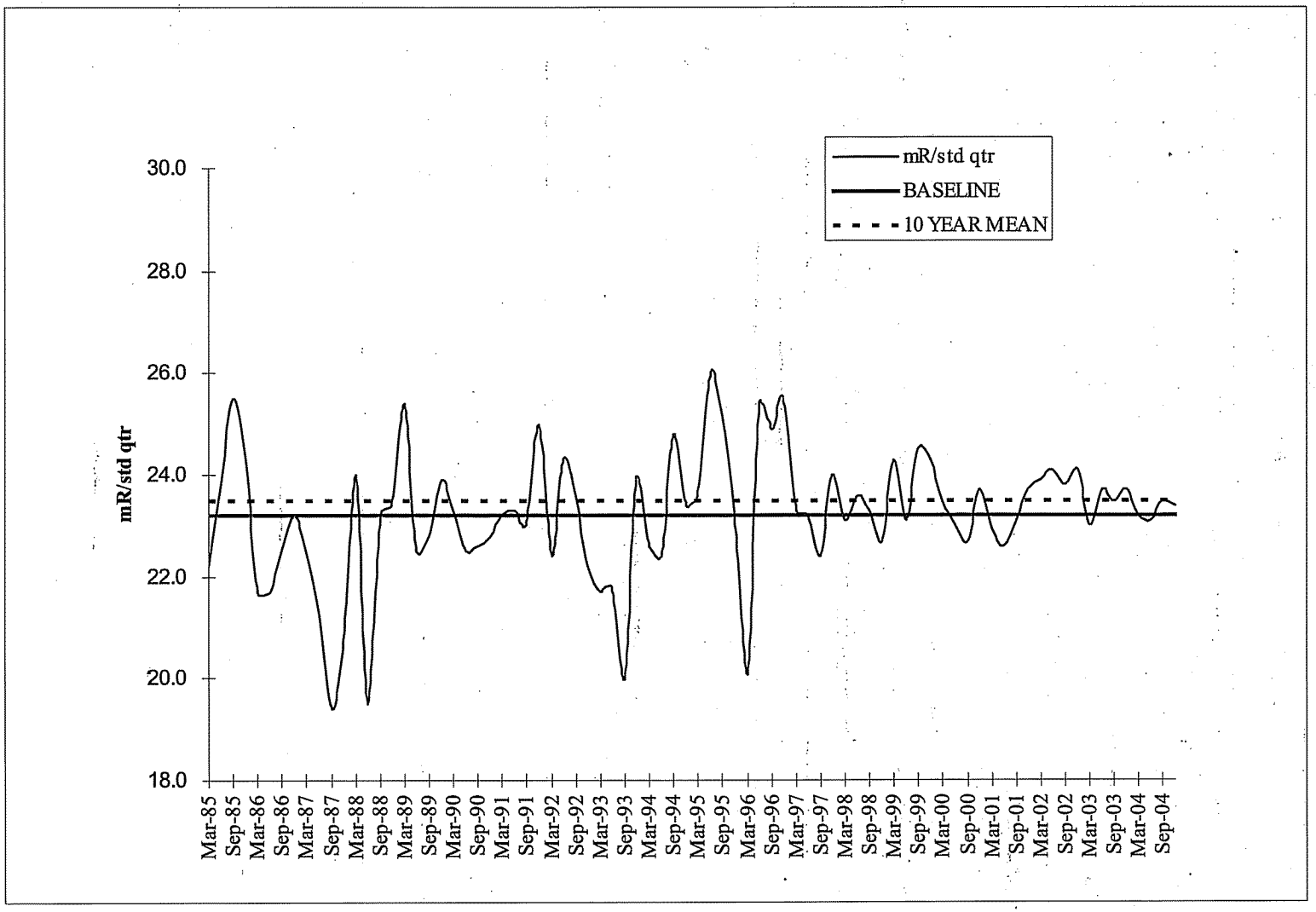
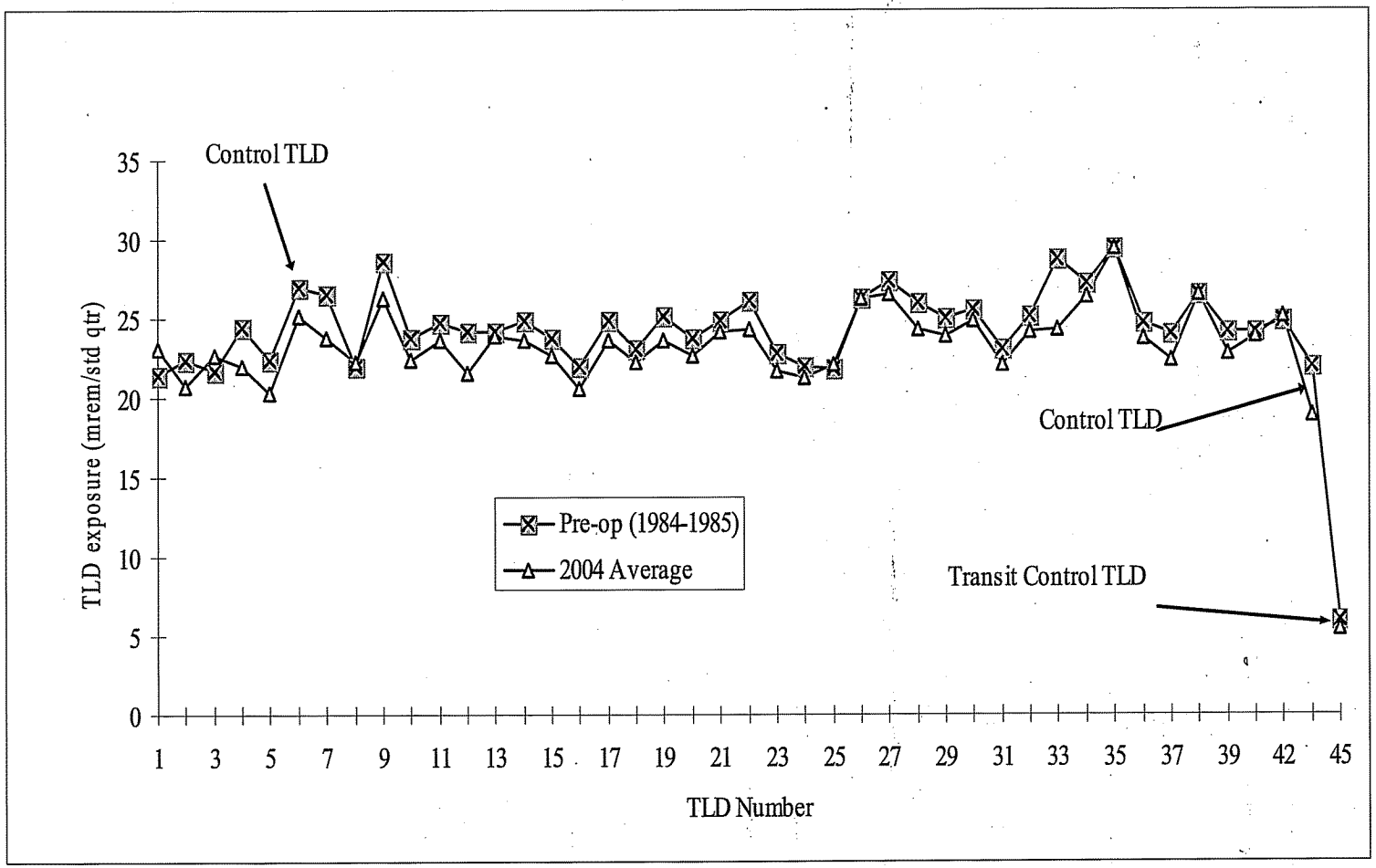


FIGURE 9.2 ENVIRONMENTAL TLD COMPARISON - PRE-OPERATIONAL VS 2004



TLD #41 monitoring location was deleted in June, 2000 due to school closing (this TLD was placed at new school in 2004)
TLD #43 monitoring location was deleted in 1994 due to school closing
TLDs #46-50 are not included since they were not included in the pre-op monitoring program

10. Land Use Census

10.1. Introduction

In accordance with the PVNGS ODCM, Section 6.2, the annual Land Use Census was performed within five miles of Unit 2 containment in May-June 2004.

Observations were made in each of the 16 meteorological sectors to determine the nearest milking animals, residences, and gardens of greater than 500 square feet. This census was completed by driving the roads and speaking with residents.

The results of the Land Use Census are presented in Table 10.1 and discussed below. The directions and distances listed are in sectors and miles from the Unit 2 containment.

10.2. Census Results

Nearest Resident

There were no changes in nearest resident status. Dose calculations indicated the highest dose to be 0.177 mrem.

Milk Animal

There was one (1) change in nearest milk animal (goat) status. Dose calculations indicated the highest dose to be 1.03 mrem. This new location was added to the REMP.

Vegetable Gardens

There were four (4) changes in nearest garden status. Dose calculations indicated the highest dose to be 0.419 mrem. One new garden location replaced an existing location.

See Table 10.1 for a summary of the specific results and Table 2.1 for current sample locations.

TABLE 10.1 2004 LAND USE CENSUS

(Distances and directions are relative to Unit 2 in miles)

SECTOR	NEAREST RESIDENT	NEAREST GARDEN	NEAREST MILK ANIMAL (COW/GOAT)	CALCULATED DOSE (mrem)	CHANGE FROM 2003
N	1.55	1.79	NONE	Resident 6.34E-02 Garden 2.88E-01	
NNE	1.52	**2.05**	**2.05**	Resident 1.21E-01 Garden 4.19E-01 Milk 1.03E+00	**Garden Milk animal**
NE	2.16	NONE	3.91	Resident 1.43E-01 Milk 6.31E-01	
ENE	2.67	**4.72**	4.84	Resident 9.50E-02 Garden 1.80E-01 Milk 2.64E-01	**Garden**
E	2.81	**NONE**	NONE	Resident 8.34E-02	**Garden**
ESE	3.17	3.85	NONE	Resident 8.39E-02 Garden 2.95E-01	
SE	4.10	NONE	NONE	Resident 8.87E-02	
SSE	NONE	NONE	NONE	NA	
S	NONE	NONE	NONE	NA	
SSW	NONE	NONE	NONE	NA	
SW	1.39	NONE	NONE	Resident 1.77E-01	
WSW	0.75	NONE	NONE	Resident 1.03E-01	
W	0.70	NONE	NONE	Resident 7.80E-02	
WNW	2.67	NONE	NONE	Resident 1.96E-02	
NW	1.12	NONE	NONE	Resident 5.92E-02	
NNW	1.30	**3.86**	NONE	Resident 5.96E-02 Garden 8.39E-02	**Garden**

COMMENTS:

Dose calculations were performed using the GASPAR code and 2003 meteorological data and source term. Dose reported for each location is the total for all three PVNGS Units and is the highest individual dose identified (organ, bone, total body, or skin).

11. Summary and Conclusions

The conclusions are based on a review of the radio assay results and background gamma radiation measurements for the 2004 calendar year. Where possible, the data were compared to pre-operational sample data.

All sample results for 2004 are presented in Tables 8.1-8.11 and do not include observations of naturally occurring radionuclides, with the exception of gross beta in air and gross beta in drinking water. Table 11.1 summarizes the ODCM required samples and is in the format required by the NRC BTP on Environmental Monitoring.

I-131 concentrations identified on occasion in the Evaporation Ponds, WRF Influent, WRF Centrifuge sludge, and Reservoir is the result of offsite sources and appears in the effluent sewage from Phoenix. The levels of I-131 detected in these locations are consistent with levels identified in previous years.

Tritium concentrations identified in surface water onsite have been attributed to PVNGS gaseous effluent releases and secondary plant releases. These concentrations are consistent with historical values.

Natural background radiation levels are consistent with measurements reported in previous Pre-operational and Operational Radiological Environmental annual reports, References 1 and 2.

There were no measurable radiological impacts on the environment due to PVNGS operations in 2004.

TABLE 11.1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY

Palo Verde Nuclear Generating Station
Maricopa County, Arizona

Docket Nos. STN 50-528/529/530
Calendar Year 2004

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD) (from Table 6.1)	All Indicator Locations Mean (f)[a] Range	Location with Highest Annual Mean: Name Distance and Direction	Location with Highest Annual Mean: Mean (f)[a] Range	Control Locations Mean (f)[a] Range	Number of Nonroutine Reported Measurements
Direct Radiation (mrem/std. qtr.)	TLD - 196	NA	23.4 (184/184) 17.9 - 29.6	Site #35 8 miles 335°	29.4 (4/4) 29.0 - 29.6	22.0 (8/8) 17.9 - 25.9	0
Air Particulates (pCi/m^3)	Gross Beta - 466	0.010	0.032 (414/414) 0.012 - 0.080	Site #15 2 miles 45°	0.034 (52/52) 0.014 - 0.074	0.033 (52/52) 0.013 - 0.079	0
	Gamma Spec. Composite- 36						
	Cs-134	0.05	<LLD	NA	<LLD	<LLD	0
	Cs-137	0.06	<LLD	NA	<LLD	<LLD	0
Air Radioiodine (pCi/m^3)	Gamma Spec. - 466 I-131	0.07	<LLD	NA	<LLD	<LLD	0
Broadleaf Vegetation (pCi/Kg-wet)	Gamma Spec. - 23						
	I-131	60	<LLD	NA	<LLD	<LLD	0
	Cs-134	60	<LLD	NA	<LLD	<LLD	0
	Cs-137	80	<LLD	NA	<LLD	<LLD	0
Groundwater (pCi/liter)	H-3 - 8	2000	<LLD	NA	<LLD	NA	0
	Gamma Spec. - 8						
	Mn-54	15	<LLD	NA	<LLD	NA	0
	Fe-59	30	<LLD	NA	<LLD	NA	0
	Co-58	15	<LLD	NA	<LLD	NA	0
	Co-60	15	<LLD	NA	<LLD	NA	0
	Zn-65	30	<LLD	NA	<LLD	NA	0
	Zr-95	30	<LLD	NA	<LLD	NA	0

TABLE 11.1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY

Palo Verde Nuclear Generating Station
Maricopa County, Arizona

Docket Nos. STN 50-528/529/530
Calendar Year 2004

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD) (from Table 6.1)	All Indicator Locations Mean (f)[a] Range	Location with Highest Annual Mean: Name Distance and Direction	Location with Highest Annual Mean: Mean (f)[a] Range	Control Locations Mean (f)[a] Range	Number of Nonroutine Reported Measurements
Groundwater (pCi/liter) -continued-	Nb-95	15	<LLD	NA	<LLD	NA	0
	I-131	15	<LLD	NA	<LLD	NA	0
	Cs-134	15	<LLD	NA	<LLD	NA	0
	Cs-137	18	<LLD	NA	<LLD	NA	0
	Ba-140	60	<LLD	NA	<LLD	NA	0
	La-140	15	<LLD	NA	<LLD	NA	0
Drinking Water (pCi/liter)	Gross Beta - 48	4.0	3.8 (19/48) 2.5 – 5.1	Site #55 3 miles 220°	4.0 (9/12) 2.9 – 5.0	NA	0
	H-3 - 16	2000	<LLD	NA	<LLD	NA	0
	Gamma Spec. - 48						
	Mn-54	15	<LLD	NA	<LLD	NA	0
	Fe-59	30	<LLD	NA	<LLD	NA	0
	Co-58	15	<LLD	NA	<LLD	NA	0
	Co-60	15	<LLD	NA	<LLD	NA	0
	Zn-65	30	<LLD	NA	<LLD	NA	0
	Zr-95	30	<LLD	NA	<LLD	NA	0
	Nb-95	15	<LLD	NA	<LLD	NA	0
	I-131	15	<LLD	NA	<LLD	NA	0
	Cs-134	15	<LLD	NA	<LLD	NA	0
	Cs-137	18	<LLD	NA	<LLD	NA	0
	Ba-140	60	<LLD	NA	<LLD	NA	0
	La-140	15	<LLD	NA	<LLD	NA	0

TABLE 11.1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY

Palo Verde Nuclear Generating Station
Maricopa County, Arizona

Docket Nos. STN 50-528/529/530
Calendar Year 2004

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD) (from Table 6.1)	All Indicator Locations Mean (f)[a] Range	Location with Highest Annual Mean: Name Distance and Direction	Location with Highest Annual Mean: Mean (f)[a] Range	Control Locations Mean (f)[a] Range	Number of Nonroutine Reported Measurements
Milk (pCi/liter)	Gamma Spec. - 17						
	I-131	1.0	<LLD	NA	<LLD	<LLD	0
	Cs-134	15	<LLD	NA	<LLD	<LLD	0
	Cs-137	18	<LLD	NA	<LLD	<LLD	0
	Ba-140	60	<LLD	NA	<LLD	<LLD	0
	La-140	15	<LLD	NA	<LLD	<LLD	0
Surface Water (pCi/liter)	Gamma Spec. - 36						
	Mn-54	15	<LLD	NA	<LLD	NA	0
	Fe-59	30	<LLD	NA	<LLD	NA	0
	Co-58	15	<LLD	NA	<LLD	NA	0
	Co-60	15	<LLD	NA	<LLD	NA	0
	Zn-65	30	<LLD	NA	<LLD	NA	0
	Zr-95	30	<LLD	NA	<LLD	NA	0
	Nb-95	15	<LLD	NA	<LLD	NA	0
	I-131	15	15 (3/36) 9 - 21	Site #59 Onsite 180°	21 (1/12) 21 - 21	NA	0
	Cs-134	15	<LLD	NA	<LLD	NA	0
	Cs-137	18	<LLD	NA	<LLD	NA	0
	Ba-140	60	<LLD	NA	<LLD	NA	0
	La-140	15	<LLD	NA	<LLD	NA	0

TABLE 11.1

ENVIRONMENTAL RADIOLOGICAL MONITORING PROGRAM ANNUAL SUMMARY

Palo Verde Nuclear Generating Station
Maricopa County, Arizona

Docket Nos. STN 50-528/529/530
Calendar Year 2004

Medium or Pathway Sampled (Unit of Measurement)	Type and Total Number of Analyses Performed	Lower Limit of Detection (LLD) (from Table 6.1)	All Indicator Locations Mean (f)[a] Range	Location with Highest Annual Mean: Name Distance and Direction	Location with Highest Annual Mean: Mean (f)[a] Range	Control Locations Mean (f)[a] Range	Number of Nonroutine Reported Measurements
Surface Water (pCi/liter) -continued-	H-3 - 12	3000	1239 (8/12) 864 - 1826	Site #63 Onsite 180°	1491 (4/4) 1284 - 1826	NA	0

(a) Mean and range based upon detectable measurements only. Fraction of detectable measurements at specified locations is indicated in parentheses. (f)

NOTE: Miscellaneous samples that are not listed on Tables 2.1 and 9.1 (not ODCM required) are not included on this table.

12. References

1. Pre-Operational Radiological Monitoring Program, Summary Report 1979-1985.
2. 1985-2003 Annual Radiological Environmental Operating Reports, Palo Verde Nuclear Generating Station.
3. Palo Verde Nuclear Generating Station Technical Specifications and the Technical Reference Manual (TRM).
4. Offsite Dose Calculation Manual, PVNGS Units 1, 2, and 3.
5. Regulatory Guide 4.8, Environmental Technical Specifications for Nuclear Power Plants.
6. NRC Radiological Assessment Branch Technical Position on Environmental Monitoring, Revision 1, November 1979.

APPENDIX B

ELECTRONIC DATA

APPENDIX C

OTHER REQUIRED INFORMATION

C1 – VERTICAL TREND ANALYSIS

C2 – ANALYTICAL DATA OUTSIDE QA/QC OR PERMIT DETECTION LIMITS

C3 – SUMMARY OF ALL WELL DATA (2004)

C4 – BASE MAPS

C1 – VERTICAL TREND ANALYSIS

APPENDIX C – VERTICAL TREND ANALYSIS

Section 2.7.5.1 A.1 of the APP also states, "Using cross sections or 3-D models, the report shall assess downward concentration trends for indicator parameters and AWQS constituents, if any, and shall consider such trends in combination with topography of the uppermost surface of the aquitard." For 2004, the only locations where vertical differences in groundwater quality were collected and therefore evaluated were PV-R2A versus PV-R2B and PV-206A versus PV-206B (Table C-1). Wells PV-R2A and PV-R2B are screened from 105 to 135 feet below ground surface (bgs) and 125 to 140 feet bgs, respectively. In the PV-R2 wells, the concentrations of indicator parameters varied and the location of the higher concentration varied throughout the year. In May 2004, higher concentrations of boron, potassium, and chloride were found in the deeper well; whereas in August 2004, the opposite was true (Figures C-1 through C-4). However, due to aquifer testing activities during mid to late August, the results from the August sample event may not directly compare to the May sample event. Based on this information, no definite statement can be made about indicator parameter trends at PV-R2A and PV-R2B. For PV-206A and PV-206B screened from 49 to 99 feet bgs and 89 to 99 feet bgs, respectively, the concentration of boron and fluoride is generally higher for the shallower well, PV-206A; the concentration of potassium is generally higher for the deeper well, while the concentrations for chloride are very similar (Figures C-5 through C-8). The depth to the top of the aquitard is approximately 30 feet at the location of PV-R2A and PV-R2B and 58 feet at PV-206A and PV-206B (Figures C-9 and C-10). An analysis of the well screen depth for all four wells identifies that they are all currently screened below the uppermost surface of the aquitard. Water levels in PV-206A and PV-206B have been below this surface since 1994. Water levels in PV-R2A and PV-R2B have always been below the surface of the aquitard. Based on this, the surface of the aquitard appears to have no impact on the quality of the water being observed in the wells.

TABLE C-1. 2004 INDICATOR PARAMETER RESULTS TO ASSESS VERTICAL CONCENTRATION TRENDS

LOCATION	SCREENED INTERVAL (feet, amsl)	SAMPLE DATE	GROUNDWATER CONCENTRATION (mg/L)				
			BORON	FLUORIDE	POTASSIUM	CHLORIDE	TDS
PV-206A	897.3 - 847.3	2/13/2004	17	5.4	14	6,300	
PV-206A	897.3 - 847.3	4/6/2004	10	5.6	19	6,100	
PV-206A	897.3 - 847.3	5/19/2004	17	4.4	20	6,100	
PV-206A	897.3 - 847.3	6/3/2004	15	5.2	17	5,700	
PV-206A	897.3 - 847.3	7/27/2004	14	4.3	8.3	6,700	
PV-206A	897.3 - 847.3	10/20/2004	13	4.2	15	6,800	
PV-206A	897.3 - 847.3	11/10/2004			11		
PV-206A	897.3 - 847.3	11/17/2004	12	4.1	18	7,400	17,000
PV-206A	897.3 - 847.3	12/3/2004	19	5	7.8	7,200	
PV-206B	857.07 - 847.07	4/6/2004	2.9	2.9	13	6,200	
PV-206B	857.07 - 847.07	5/19/2004	3.2	2.2	33	5,900	14,000
PV-206B	857.07 - 847.07	6/3/2004	3.4	2.2	24	6,600	14,000
PV-206B	857.07 - 847.07	7/27/2004	4.4	2.1	13	6,600	
PV-206B	857.07 - 847.07	9/7/2004	4.8	2.6	18	7,100	
PV-206B	857.07 - 847.07	10/20/2004	4.5	6.2	16	6,400	
PV-R2A	848.5 - 818.5	2/19/2004	3.9	9.9	8.8	1,500	
PV-R2A	848.5 - 818.5	4/23/2004	1.4	16	3.6	480	1,600
PV-R2A	848.5 - 818.5	5/27/2004	6.9	7.6	9.6	2,600	
PV-R2A	848.5 - 818.5	8/26/2004	2	14	2.6	740	2,300
PV-R2A	848.5 - 818.5	9/15/2004	5.5	9.1	6.5	2,700	
PV-R2A	848.5 - 818.5	11/4/2004	6.1	10	7.5	3,300	
PV-R2B	828.6 - 813.6	4/23/2004	4.4	10	7.5	1,700	5,100
PV-R2B	828.6 - 813.6	8/26/2004	0.89	15	1.5	560	1,600

mg/L = milligrams per liter
ft amsl = feet above mean sea level
TDS = Total dissolved solids
NA = Not available

C2 – ANALYTICAL DATA OUTSIDE QA/QC OR PERMIT DETECTION LIMITS

TABLE C-2. ANALYTICAL DATA OUTSIDE QA/QC OR PERMIT DETECTION LIMITS SUMMARY

SAMPLE DATE	SAMPLE POINT ID	PARAMETER	CONDITION	DISCUSSION
03/31/04	East RB	cis-1,2-Dichloroethylene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Styrene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	1,1,1-Trichloroethane	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	1,1,2-Trichloroethane	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	1,1-Dichloroethylene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	1,2-Dichloroethane	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	1,2-Dichloropropane	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Benzene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Carbon tetrachloride	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Methylene Chloride	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Ethylbenzene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Monochlorobenzene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	o-Dichlorobenzene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	para-Dichlorobenzene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Tetrachloroethylene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Toluene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	trans-1,2-Dichloroethylene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Trichloroethylene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Trihalomethanes	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Vinyl Chloride	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
03/31/04	East RB	Xylenes	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
06/16/04	Evap Pond 1	Chloride	Laboratory missed holding time.	Due to instrumentation problems.

TABLE C-2. ANALYTICAL DATA OUTSIDE QA/QC OR PERMIT DETECTION LIMITS SUMMARY

SAMPLE DATE	SAMPLE POINT ID	PARAMETER	CONDITION	DISCUSSION
06/16/04	Evap Pond 1	Fluoride	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Evap Pond 1	Sulfate	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Evap Pond 2	Chloride	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Evap Pond 2	Fluoride	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Evap Pond 2	Sulfate	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Reservoir	Chloride	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Reservoir	Fluoride	Laboratory missed holding time.	Due to instrumentation problems.
06/16/04	Reservoir	Sulfate	Laboratory missed holding time.	Due to instrumentation problems.
09/08/04	PV-206A	Antimony	CAL 0.006 - Analysis <0.050	Suspect matrix interference.
11/17/04	PV-206A	Antimony	CAL 0.006 - Analysis <0.050	Suspect matrix interference.
09/08/04	PV-206A	cis-1,2-Dichloroethylene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
09/08/04	PV-206A	Styrene	Sample was received at a pH of 7 - pH should have been <2.0.	Initially missed laboratory data qualifier. Would have re-sampled for re-analysis.
09/08/04	PV-206A	Benzo(a)pyrene	CAL 0.0002 - 625 Analysis <0.0100	Method 525.2 showed concentration of <0.00002. Will work with Del Mar in the future to obtain permit dectection limit.
11/17/04	PV-206A	Benzo(a)pyrene	CAL 0.0002 - 625 Analysis <0.020	Method 525.2 showed concentration of <0.00002. Will work with Del Mar in the future to obtain permit dectection limit.
09/08/04	PV-206A	Di (2-ethylhexyl) pthalate	CAL 0.006 - 625 Analysis <0.0100	Method 525.2 showed concentration of <0.00006. Will work with Del Mar in the future to obtain permit dectection limit.
11/17/04	PV-206A	Di (2-ethylhexyl) pthalate	CAL 0.006 - 625 Analysis <0.050	Method 525.2 showed concentration of <0.00006. Will work with Del Mar in the future to obtain permit dectection limit.
09/08/04	PV-206A	Hexachlorobenzene	CAL 0.001 - 625 Analysis <0.0100	Will work with Del Mar in the future to obtain permit dectection limit. Will explore Method 525.2.
11/17/04	PV-206A	Hexachlorobenzene	CAL 0.001 - 625 Analysis <0.0100	Will work with Del Mar in the future to obtain permit dectection limit. Will explore Method 525.2.
09/08/04	PV-206A	Pentachlorophenol	CAL 0.001 - 625 Analysis <0.0100	Will work with Del Mar in the future to obtain permit dectection limit. Will explore Method 525.2.
11/17/04	PV-206A	Pentachlorophenol	CAL 0.001 - 625 Analysis <0.020	Will work with Del Mar in the future to obtain permit dectection limit. Will explore Method 525.2.

CAL = Contingency alert Level
<= Less than indicated reporting limit

C3 – SUMMARY OF ALL WELL DATA (2004)

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
10bda	7/26/2004	Water Level Elevation	702.71	feet AMSL	Discretionary
27cbc	1/6/2004	Water Level Elevation	757.17	feet AMSL	Subsidence Program Measurement
	4/16/2004	Water Level Elevation	762.11	feet AMSL	Subsidence Program Measurement
	7/23/2004	Water Level Elevation	758.34	feet AMSL	Subsidence Program Measurement
	10/13/2004	Water Level Elevation	760.82	feet AMSL	Subsidence Program Measurement
27ddc	9/1/2004	Water Level Elevation	732.81	feet AMSL	GeoTrans Ambient
34abb	9/1/2004	Water Level Elevation	744.42	feet AMSL	GeoTrans Ambient
APP-1	5/25/2004	Water Level Elevation	Dry	feet AMSL	Preliminary
	5/28/2004	Water Level Elevation	Dry	feet AMSL	Monthly Contingency WL
	7/15/2004	Water Level Elevation	Dry	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	Dry	feet AMSL	Monthly Contingency WL
	9/9/2004	Water Level Elevation	Dry	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	Dry	feet AMSL	Monthly Contingency WL
PV-14H	2/18/2004	Boron (dissolved)	6.2	mg/L	Quarterly
	2/18/2004	Cesium-137	<12.90	pCi/L	Quarterly
	2/18/2004	Chloride	2000	mg/L	Quarterly
	2/18/2004	Cobalt-60	<9.84	pCi/L	Quarterly
	2/18/2004	Field Cond	10390	umhos/cm	Quarterly
	2/18/2004	Field pH	7.92	SU	Quarterly
	2/18/2004	Field Temp	24.8	°C	Quarterly
	2/18/2004	Fluoride	8.1	mg/L	Quarterly
	2/18/2004	Potassium (dissolved)	2.1	mg/L	Quarterly
	2/18/2004	Tritium	<270 (+161)	pCi/L	Quarterly
	2/18/2004	Water Level Elevation	865.61	feet AMSL	Quarterly
	5/25/2004	Boron (dissolved)	6.1	mg/L	Quarterly
	5/25/2004	Cesium-137	<50	pCi/L	Quarterly
	5/25/2004	Chloride	2000	mg/L	Quarterly
	5/25/2004	Cobalt-60	<100	pCi/L	Quarterly
	5/25/2004	Field Cond	10440	umhos/cm	Quarterly
	5/25/2004	Field pH	7.74	SU	Quarterly
	5/25/2004	Field Temp	26.5	°C	Quarterly
	5/25/2004	Fluoride	7.8	mg/L	Quarterly
	5/25/2004	Potassium (dissolved)	1.3	mg/L	Quarterly
	5/25/2004	Tritium	<1000	pCi/L	Quarterly
	9/14/2004	Boron (dissolved)	6.7	mg/L	Quarterly
	9/14/2004	Cesium-137	<50	pCi/L	Quarterly
	9/14/2004	Chloride	2000	mg/L	Quarterly
	9/14/2004	Cobalt-60	<100	pCi/L	Quarterly
	9/14/2004	Field Cond	10110	umhos/cm	Quarterly
	9/14/2004	Field pH	7.31	SU	Quarterly
	9/14/2004	Field Temp	26.2	°C	Quarterly
	9/14/2004	Fluoride	8.7	mg/L	Quarterly
	9/14/2004	Potassium (dissolved)	1.8	mg/L	Quarterly
	9/14/2004	Tritium	≤ 1000	pCi/L	Quarterly
	11/4/2004	Boron (dissolved)	6.6	mg/L	Quarterly
	11/4/2004	Cesium-137	<50	pCi/L	Quarterly
	11/4/2004	Chloride	2000	mg/L	Quarterly
	11/4/2004	Cobalt-60	<100	pCi/L	Quarterly
	11/4/2004	Field Cond	10190	umhos/cm	Quarterly
	11/4/2004	Field pH	7.54	SU	Quarterly
	11/4/2004	Field Temp	24.6	°C	Quarterly
	11/4/2004	Fluoride	7.7	mg/L	Quarterly
	11/4/2004	Potassium (dissolved)	1.8	mg/L	Quarterly
	11/4/2004	Tritium	≤ 1000	pCi/L	Quarterly
	11/4/2004	Water Level Elevation	865.51	feet AMSL	Quarterly WQ
PV-173	5/13/2004	Water Level Elevation	922.63	feet AMSL	Discretionary
PV-174	4/16/2004	Water Level Elevation	895.83	feet AMSL	Discretionary

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-183	3/17/2004	Water Level Elevation	895.34	feet AMSL	Discretionary
	4/8/2004	Water Level Elevation	895.5	feet AMSL	Discretionary
	4/16/2004	Water Level Elevation	895.65	feet AMSL	Discretionary
PV-193A	2/13/2004	Boron (dissolved)	5.8	mg/L	Quarterly
	2/13/2004	Cesium-137	≤12.41	pCi/L	Quarterly
	2/13/2004	Chloride	5800	mg/L	Quarterly
	2/13/2004	Cobalt-60	≤12.08	pCi/L	Quarterly
	2/13/2004	Field Cond	20970	umhos/cm	Quarterly
	2/13/2004	Field pH	7.41	SU	Quarterly
	2/13/2004	Field Temp	26.7	°C	Quarterly
	2/13/2004	Fluoride	2.7	mg/L	Quarterly
	2/13/2004	Potassium (dissolved)	6.3	mg/L	Quarterly
	2/13/2004	Tritium	≤266 (+159)	pCi/L	Quarterly
	2/13/2004	Water Level Elevation	864.45	feet AMSL	Quarterly WQ
	5/20/2004	Boron (dissolved)	5.8	mg/L	Quarterly
	5/20/2004	Cesium-137	≤13.48	pCi/L	Quarterly
	5/20/2004	Chloride	5800	mg/L	Quarterly
	5/20/2004	Cobalt-60	≤13.88	pCi/L	Quarterly
	5/20/2004	Field Cond	20820	umhos/cm	Quarterly
	5/20/2004	Field pH	7.48	SU	Quarterly
	5/20/2004	Field Temp	28.1	°C	Quarterly
	5/20/2004	Fluoride	2.5	mg/L	Quarterly
	5/20/2004	Potassium (dissolved)	4.1	mg/L	Quarterly
	5/20/2004	Tritium	≤269 (+159)	pCi/L	Quarterly
	7/14/2004	Water Level Elevation	864.62	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	864.66	feet AMSL	Monthly Contingency WL
	9/9/2004	Boron (dissolved)	6.6	mg/L	Quarterly
	9/9/2004	Cesium-137	≤ 50	pCi/L	Quarterly
	9/9/2004	Chloride	5400	mg/L	Quarterly
	9/9/2004	Cobalt-60	≤ 100	pCi/L	Quarterly
	9/9/2004	Field Cond	16180	umhos/cm	Quarterly
	9/9/2004	Field pH	7.33	SU	Quarterly
	9/9/2004	Field Temp	33.2	°C	Quarterly
	9/9/2004	Fluoride	2.6	mg/L	Quarterly
	9/9/2004	Potassium (dissolved)	3.2	mg/L	Quarterly
	9/9/2004	Tritium	≤ 1000	pCi/L	Quarterly
	9/9/2004	Water Level Elevation	864.71	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	864.61	feet AMSL	Monthly Contingency WL
	10/21/2004	Boron (dissolved)	5.9	mg/L	Quarterly
	10/21/2004	Cesium-137	≤ 50	pCi/L	Quarterly
	10/21/2004	Chloride	5800	mg/L	Quarterly
	10/21/2004	Cobalt-60	≤ 100	pCi/L	Quarterly
	10/21/2004	Field Cond	20810	umhos/cm	Quarterly
	10/21/2004	Field pH	6.85	SU	Quarterly
	10/21/2004	Field Temp	22.6	°C	Quarterly
	10/21/2004	Fluoride	2.5	mg/L	Quarterly
	10/21/2004	Potassium (dissolved)	5.1	mg/L	Quarterly
	10/21/2004	Tritium	≤ 1000	pCi/L	Quarterly
	10/21/2004	Water Level Elevation	864.8	feet AMSL	Quarterly WQ
	11/3/2004	Water Level Elevation	864.5	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	864.34	feet AMSL	Monthly Contingency WL
PV-195A	2/18/2004	Boron (dissolved)	23	mg/L	Quarterly
	2/18/2004	Cesium-137	≤12.02	pCi/L	Quarterly
	2/18/2004	Chloride	8600	mg/L	Quarterly
	2/18/2004	Cobalt-60	≤11.47	pCi/L	Quarterly
	2/18/2004	Field Cond	36040	umhos/cm	Quarterly

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-195A (cont.)	2/18/2004	Field pH	7.29	SU	Quarterly
	2/18/2004	Field Temp	26.1	°C	Quarterly
	2/18/2004	Fluoride	4.1	mg/L	Quarterly
	2/18/2004	Potassium (dissolved)	7	mg/L	Quarterly
	2/18/2004	Tritium	≤270 (+159)	pCi/L	Quarterly
	2/18/2004	Water Level Elevation	874.61	feet AMSL	Quarterly
	5/26/2004	Boron (dissolved)	23	mg/L	Quarterly
	5/26/2004	Cesium-137	≤50	pCi/L	Quarterly
	5/26/2004	Chloride	8300	mg/L	Quarterly
	5/26/2004	Cobalt-60	≤100	pCi/L	Quarterly
	5/26/2004	Field Cond	35950	umhos/cm	Quarterly
	5/26/2004	Field pH	7.05	SU	Quarterly
	5/26/2004	Field Temp	26.7	°C	Quarterly
	5/26/2004	Fluoride	3.9	mg/L	Quarterly
	5/26/2004	Potassium (dissolved)	4.1	mg/L	Quarterly
	5/26/2004	Tritium	≤1000	pCi/L	Quarterly
	7/14/2004	Water Level Elevation	874.39	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	874.42	feet AMSL	Monthly Contingency WL
	9/14/2004	Boron (dissolved)	24	mg/L	Quarterly
	9/14/2004	Cesium-137	≤50	pCi/L	Quarterly
	9/14/2004	Chloride	8200	mg/L	Quarterly
	9/14/2004	Cobalt-60	≤100	pCi/L	Quarterly
	9/14/2004	Field Cond	34200	umhos/cm	Quarterly
	9/14/2004	Field pH	6.62	SU	Quarterly
	9/14/2004	Field Temp	27.2	°C	Quarterly
	9/14/2004	Fluoride	4.8	mg/L	Quarterly
	9/14/2004	Potassium (dissolved)	4	mg/L	Quarterly
	9/14/2004	Tritium	≤1000	pCi/L	Quarterly
	9/14/2004	Water Level Elevation	874.56	feet AMSL	Monthly Contingency WL
	10/29/2004	Water Level Elevation	874.11	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	874.42	feet AMSL	Monthly Contingency WL
	11/4/2004	Boron (dissolved)	23	mg/L	Quarterly
	11/4/2004	Cesium-137	≤50	pCi/L	Quarterly
	11/4/2004	Chloride	9200	mg/L	Quarterly
	11/4/2004	Cobalt-60	≤100	pCi/L	Quarterly
	11/4/2004	Field Cond	34500	umhos/cm	Quarterly
	11/4/2004	Field pH	6.86	SU	Quarterly
	11/4/2004	Field Temp	25.8	°C	Quarterly
	11/4/2004	Fluoride	8.9	mg/L	Quarterly
	11/4/2004	Potassium (dissolved)	4.5	mg/L	Quarterly
	11/4/2004	Tritium	≤1000	pCi/L	Quarterly
	11/4/2004	Water Level Elevation	874.28	feet AMSL	Quarterly WQ
	12/1/2004	Water Level Elevation	872.9	feet AMSL	Monthly Contingency WL
	12/7/2004	Boron (dissolved)	24	mg/L	Fluoride Verification
	12/7/2004	Cesium-137	≤50	pCi/L	Fluoride Verification
	12/7/2004	Chloride	9400	mg/L	Fluoride Verification
	12/7/2004	Cobalt-60	≤100	pCi/L	Fluoride Verification
	12/7/2004	Field Cond	34850	umhos/cm	Fluoride Verification
	12/7/2004	Field pH	6.87	SU	Fluoride Verification
	12/7/2004	Field Temp	24.7	°C	Fluoride Verification
	12/7/2004	Fluoride	3.9	mg/L	Fluoride Verification
	12/7/2004	Potassium (dissolved)	3.9	mg/L	Fluoride Verification
	12/7/2004	Tritium	≤1000	pCi/L	Fluoride Verification
	12/7/2004	Water Level Elevation	874.31	feet AMSL	Fluoride Verification Sampling

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-195B	12/7/2004	Boron (dissolved)	15	mg/L	Fluoride Verification
	12/7/2004	Cesium-137	≤50	pCi/L	Fluoride Verification
	12/7/2004	Chloride	15000	mg/L	Fluoride Verification
	12/7/2004	Cobalt-60	≤100	pCi/L	Fluoride Verification
	12/7/2004	Field Cond	42420	umhos/cm	Fluoride Verification
	12/7/2004	Field pH	6.69	SU	Fluoride Verification
	12/7/2004	Field Temp	18.4	°C	Fluoride Verification
	12/7/2004	Fluoride	2	mg/L	Fluoride Verification
	12/7/2004	Iodine-131	≤100	pCi/L	Fluoride Verification
	12/7/2004	Potassium (dissolved)	12	mg/L	Fluoride Verification
	12/7/2004	Tritium	≤3000	pCi/L	Fluoride Verification
	12/7/2004	Water Level Elevation	874.83	feet AMSL	Fluoride Verification Sampling
PV-198A	2/13/2004	Water Level Elevation	858.71	feet AMSL	Discretionary
PV-198B	4/13/2004	Water Level Elevation	859.11	feet AMSL	GeoTrans Discretionary
PV-201A	5/27/2004	Water Level Elevation	897.51	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	896.64	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	896.15	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	895.47	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	894.91	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	894.7	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	895.86	feet AMSL	Monthly Contingency WL
PV-201B	5/27/2004	Water Level Elevation	897.54	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	896.65	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	896.15	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	895.51	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	894.93	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	894.73	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	895.96	feet AMSL	Monthly Contingency WL
PV-202A	5/27/2004	Water Level Elevation	871.89	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	871.9	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	871.88	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	871.76	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	871.75	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	871.93	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	871.79	feet AMSL	Monthly Contingency WL
PV-204A	5/27/2004	Water Level Elevation	888.5	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	888.35	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	888.32	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	888.24	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	888.18	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	887.93	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	887.63	feet AMSL	Monthly Contingency WL
PV-204B	5/27/2004	Water Level Elevation	887.15	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	887.1	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	887.42	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	886.99	feet AMSL	Monthly Contingency WL
	10/19/2004	Water Level Elevation	886.92	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	886.77	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	887.04	feet AMSL	Monthly Contingency WL
PV-206A	2/13/2004	Boron (dissolved)	17	mg/L	Quarterly
	2/13/2004	Cesium-137	<13.28	pCi/L	Quarterly
	2/13/2004	Chloride	6300	mg/L	Quarterly
	2/13/2004	Cobalt-60	<14.70	pCi/L	Quarterly
	2/13/2004	Field Cond	23050	umhos/cm	Quarterly
	2/13/2004	Field pH	7.34	SU	Quarterly
	2/13/2004	Field Temp	26	°C	Quarterly
	2/13/2004	Fluoride	5.4	mg/L	Quarterly
	2/13/2004	Potassium (dissolved)	14	mg/L	Quarterly

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206A (cont.)	2/13/2004	Potassium (dissolved)	10	mg/L	Re-Analysis
	2/13/2004	Tritium	<268 (+160)	pCi/L	Quarterly
	2/13/2004	Water Level Elevation	872.43	feet AMSL	Quarterly WQ
	4/6/2004	Boron (dissolved)	10	mg/L	Verification
	4/6/2004	Cesium-137	≤11.20	pCi/L	Verification
	4/6/2004	Chloride	6100	mg/L	Verification
	4/6/2004	Cobalt-60	≤11.45	pCi/L	Verification
	4/6/2004	Field Cond	22340	umhos/cm	Verification
	4/6/2004	Field pH	7.45	SU	Verification
	4/6/2004	Field Temp	28.1	°C	Verification
	4/6/2004	Fluoride	5.6	mg/L	Verification
	4/6/2004	Potassium (dissolved)	19	mg/L	Verification
	4/6/2004	Tritium	≤270 (±161)	pCi/L	Verification
	4/6/2004	Water Level Elevation	872	feet AMSL	Verification WQ
	5/13/2004	Water Level Elevation	871.7	feet AMSL	Discretionary
	5/14/2004	Water Level Elevation	871.73	feet AMSL	Discretionary
	5/19/2004	Arsenic (dissolved)	<0.0040	mg/L	Quarterly & Contingency
	5/19/2004	Barium (dissolved)	0.023	mg/L	Quarterly & Contingency
	5/19/2004	Boron (dissolved)	17	mg/L	Quarterly & Contingency
	5/19/2004	Cadmium (dissolved)	<0.0030	mg/L	Quarterly & Contingency
	5/19/2004	Calcium (dissolved)	550	mg/L	Quarterly & Contingency
	5/19/2004	Cation Anion Balance	2		Quarterly & Contingency
	5/19/2004	Cesium-137	≤8.63	pCi/L	Quarterly & Contingency
	5/19/2004	Chloride	6100	mg/L	Quarterly & Contingency
	5/19/2004	Chromium (dissolved)	0.012	mg/L	Quarterly & Contingency
	5/19/2004	Cobalt-60	≤8.81	pCi/L	Quarterly & Contingency
	5/19/2004	Field Cond.	23340	umhos/cm	Quarterly & Contingency
	5/19/2004	Field pH	7.17	SU	Quarterly & Contingency
	5/19/2004	Field Temp	29	oC	Quarterly & Contingency
	5/19/2004	Fluoride	4.4	mg/L	Quarterly & Contingency
	5/19/2004	Lead (dissolved)	<0.0060	mg/L	Quarterly & Contingency
	5/19/2004	Magnesium (dissolved)	240	mg/L	Quarterly & Contingency
	5/19/2004	Mercury (dissolved)	<0.0002	mg/L	Quarterly & Contingency
	5/19/2004	Nitrate Nitrite (as N)	22	mg/L	Quarterly & Contingency
	5/19/2004	pH	8	SU	Quarterly & Contingency
	5/19/2004	Potassium (dissolved)	20	mg/L	Quarterly & Contingency
	5/19/2004	Selenium (dissolved)	0.024	mg/L	Quarterly & Contingency
	5/19/2004	Sodium (dissolved)	5600	mg/L	Quarterly & Contingency
	5/19/2004	Specific Conductance	26000	umhos/cm	Quarterly & Contingency
	5/19/2004	Sulfate	4800	mg/L	Quarterly & Contingency
	5/19/2004	TDS	18000	mg/L	Quarterly & Contingency
	5/19/2004	Total Alkalinity (as CaCO3)	320	mg/L	Quarterly & Contingency
	5/19/2004	Tritium	≤266 (±158)	pCi/L	Quarterly & Contingency
	6/3/2004	Arsenic (dissolved)	0.013	mg/L	Monthly Contingency
	6/3/2004	Barium (dissolved)	0.024	mg/L	Monthly Contingency
	6/3/2004	Boron (dissolved)	15	mg/L	Monthly Contingency
	6/3/2004	Cadmium (dissolved)	<0.0030	mg/L	Monthly Contingency
	6/3/2004	Calcium (dissolved)	600	mg/L	Monthly Contingency
	6/3/2004	Cation Anion Balance	7.072416848		Monthly Contingency
	6/3/2004	Cesium-137	≤50	pCi/L	Monthly Contingency
	6/3/2004	Chloride	5700	mg/L	Monthly Contingency
	6/3/2004	Chromium (dissolved)	0.014	mg/L	Monthly Contingency
	6/3/2004	Cobalt-60	≤100	pCi/L	Monthly Contingency
	6/3/2004	Field Cond.	23250	umhos/cm	Monthly Contingency
	6/3/2004	Field pH	7.21	SU	Monthly Contingency
	6/3/2004	Field Temp	29.6	oC	Monthly Contingency
	6/3/2004	Fluoride	5.2	mg/L	Monthly Contingency

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206A (cont.)	6/3/2004	Lead (dissolved)	<0.010	mg/L	Monthly Contingency
	6/3/2004	Magnesium (dissolved)	260	mg/L	Monthly Contingency
	6/3/2004	Mercury (dissolved)	<0.0002	mg/L	Monthly Contingency
	6/3/2004	Nitrate Nitrite (as N)	19	mg/L	Monthly Contingency
	6/3/2004	pH	7.5	SU	Monthly Contingency
	6/3/2004	Potassium (dissolved)	17	mg/L	Monthly Contingency
	6/3/2004	Selenium (dissolved)	0.028	mg/L	Monthly Contingency
	6/3/2004	Sodium (dissolved)	6000	mg/L	Monthly Contingency
	6/3/2004	Specific Conductance	24000	umhos/cm	Monthly Contingency
	6/3/2004	Sulfate	4900	mg/L	Monthly Contingency
	6/3/2004	TDS	18000	mg/L	Monthly Contingency
	6/3/2004	Total Alkalinity (as CaCO3)	350	mg/L	Monthly Contingency
	6/3/2004	Tritium	≤1000	pCi/L	Monthly Contingency
	6/3/2004	Water Level Elevation	871.59	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	871.41	feet AMSL	Monthly Contingency WL
	7/27/2004	Boron (dissolved)	14	mg/L	Contingency
	7/27/2004	Cesium-137	≤50	pCi/L	Quarterly
	7/27/2004	Chloride	6700	mg/L	Contingency
	7/27/2004	Cobalt-60	≤100	pCi/L	Quarterly
	7/27/2004	Field Cond	25400	umhos/cm	Contingency
	7/27/2004	Field pH	7.01	SU	Contingency
	7/27/2004	Field Temp	30.2	°C	Contingency
	7/27/2004	Fluoride	4.3	mg/L	Contingency
	7/27/2004	Potassium (dissolved)	8.3	mg/L	Contingency
	7/27/2004	Tritium	≤1000	pCi/L	Quarterly
	8/12/2004	Water Level Elevation	871.41	feet AMSL	Monthly Contingency WL
	9/7/2004	Cesium-134	≤ 75	pCi/L	Qtr WQ & Contingency
	9/7/2004	Cesium-137	≤ 110	pCi/L	Qtr WQ & Contingency
	9/7/2004	Cobalt-60	≤ 200	pCi/L	Qtr WQ & Contingency
	9/7/2004	Iodine-131	≤ 100	pCi/L	Qtr WQ & Contingency
	9/7/2004	Tritium	≤ 1000	pCi/L	Qtr WQ & Contingency
	9/7/2004	Water Level Elevation	869.11	feet AMSL	Pump Stopped Pumping
	9/8/2004	1,1 Dichloroethylene	<0.005	mg/L	Qtr WQ & Contingency
	9/8/2004	1,1,1 Trichloroethane	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	1,1,2 Trichloroethane	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	1,2 Dichloroethane	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	1,2 Dichloropropane	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	1,2,4-Trichlorobenzene	<0.01	mg/L	Qtr WQ & Contingency
	9/8/2004	2,3,7,8-TCDD (Dioxin)	<1.0E-11	mg/L	Qtr WQ & Contingency
	9/8/2004	Antimony (dissolved)	<0.050	mg/L	Qtr WQ & Contingency
	9/8/2004	Arsenic (dissolved)	<0.050	mg/L	Qtr WQ & Contingency
	9/8/2004	Barium (dissolved)	0.031	mg/L	Qtr WQ & Contingency
	9/8/2004	Benzene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Benzo (a) pyrene	<0.01	mg/L	Qtr WQ & Contingency
	9/8/2004	Beryllium (dissolved)	<0.0040	mg/L	Qtr WQ & Contingency
	9/8/2004	Boron (dissolved)	19	mg/L	Qtr WQ & Contingency
	9/8/2004	Cadmium (dissolved)	<0.0050	mg/L	Qtr WQ & Contingency
	9/8/2004	Calcium (dissolved)	650	mg/L	Qtr WQ & Contingency
	9/8/2004	Carbon tetrachloride	<0.0025	mg/L	Qtr WQ & Contingency
	9/8/2004	Chloride	7000	mg/L	Qtr WQ & Contingency
	9/8/2004	Chromium (dissolved)	0.02	mg/L	Qtr WQ & Contingency
	9/8/2004	cis-1,2-Dichloroethylene	<0.0005	mg/L	Qtr WQ & Contingency
	9/8/2004	Di (2-ethylhexyl) adipate	0.0006	mg/L	Qtr WQ & Contingency
	9/8/2004	Di (2-ethylhexyl) phthalate	<0.01	mg/L	Qtr WQ & Contingency
	9/8/2004	Dichloromethane	<0.005	mg/L	Qtr WQ & Contingency
	9/8/2004	Ethylbenzene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Field Cond	23560	umhos/cm	Qtr WQ & Contingency

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206A (cont.)	9/8/2004	Field pH	6.97	SU	Qtr WQ & Contingency
	9/8/2004	Field Temp	32.7	oC	Qtr WQ & Contingency
	9/8/2004	Fluoride	4.8	mg/L	Qtr WQ & Contingency
	9/8/2004	Hexachlorobenzene	<0.01	mg/L	Qtr WQ & Contingency
	9/8/2004	Hexachlorocyclopentadiene	<0.01	mg/L	Qtr WQ & Contingency
	9/8/2004	Lead (dissolved)	<0.0020	mg/L	Qtr WQ & Contingency
	9/8/2004	Magnesium (dissolved)	270	mg/L	Qtr WQ & Contingency
	9/8/2004	Mercury (dissolved)	<0.00020	mg/L	Qtr WQ & Contingency
	9/8/2004	Monochlorobenzene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Nickel (dissolved)	0.1	mg/L	Qtr WQ & Contingency
	9/8/2004	Nitrate/Nitrite (as N)	21	mg/L	Qtr WQ & Contingency
	9/8/2004	o-Dichlorobenzene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	para-Dichlorobenzene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Pentachlorophenol	<0.01	mg/L	Qtr WQ & Contingency
	9/8/2004	pH	7.34	SU	Qtr WQ & Contingency
	9/8/2004	Potassium (dissolved)	16	mg/L	Qtr WQ & Contingency
	9/8/2004	Selenium (dissolved)	0.056	mg/L	Qtr WQ & Contingency
	9/8/2004	Sodium (dissolved)	6000	mg/L	Qtr WQ & Contingency
	9/8/2004	Specific Conductance	25000	umhos/cm	Qtr WQ & Contingency
	9/8/2004	Styrene	<0.0005	mg/L	Qtr WQ & Contingency
	9/8/2004	Sulfate	4600	mg/L	Qtr WQ & Contingency
	9/8/2004	TDS	18000	mg/L	Qtr WQ & Contingency
	9/8/2004	Tetrachloroethylene	<0.0028	mg/L	Qtr WQ & Contingency
	9/8/2004	Thallium (dissolved)	<0.0020	mg/L	Qtr WQ & Contingency
	9/8/2004	Toluene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Total Alkalinity (as CaCO3)	260	mg/L	Qtr WQ & Contingency
	9/8/2004	Total Petroleum Hydrocarbons	<1.0	mg/L	Qtr WQ & Contingency
	9/8/2004	trans-1,2-Dichloroethylene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Trichloroethylene	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Trihalomethanes (Total)	<0.008	mg/L	Qtr WQ & Contingency
	9/8/2004	Vinyl Chloride	<0.002	mg/L	Qtr WQ & Contingency
	9/8/2004	Xylenes (Total)	<0.01	mg/L	Qtr WQ & Contingency
	9/15/2004	Coliform	1	Present	Fecal Coliform Sample
	9/15/2004	ecoli	0	Present	Fecal Coliform Sample
	9/15/2004	Field Cond	24790	umhos/cm	Fecal Coliform Sample
	9/15/2004	Field pH	6.68	SU	Fecal Coliform Sample
	9/15/2004	Field Temp	28	°C	Fecal Coliform Sample
	9/15/2004	Water Level Elevation	871.19	feet AMSL	Fecal Coliform Sample
	10/20/2004	Boron (dissolved)	13	mg/L	Qtr WQ & Monthly WL
	10/20/2004	Cesium-137	≤50	pCi/L	Qtr WQ & Monthly WL
	10/20/2004	Chloride	6800	mg/L	Qtr WQ & Monthly WL
	10/20/2004	Cobalt-60	≤100	pCi/L	Qtr WQ & Monthly WL
	10/20/2004	Field Cond	26800	umhos/cm	Qtr WQ & Monthly WL
	10/20/2004	Field pH	6.64	SU	Qtr WQ & Monthly WL
	10/20/2004	Field Temp	27.9	°C	Qtr WQ & Monthly WL
	10/20/2004	Fluoride	4.2	mg/L	Qtr WQ & Monthly WL
	10/20/2004	Potassium (dissolved)	15	mg/L	Qtr WQ & Monthly WL
	10/20/2004	Tritium	≤1000	pCi/L	Qtr WQ & Monthly WL
	11/5/2004	Water Level Elevation	870.99	feet AMSL	Monthly Contingency WL
	11/10/2004	Field Cond	25,620	umhos/cm	Qtr WQ & Contingency
	11/10/2004	Field pH	6.89	SU	Qtr WQ & Contingency
	11/10/2004	Field Temp	30.4	°C	Qtr WQ & Contingency
	11/10/2004	Potassium (dissolved)	11	mg/L	Qtr WQ & Contingency
	11/10/2004	Selenium (dissolved)	0.054	mg/L	Qtr WQ & Contingency
	11/17/2004	1,1 Dichloroethylene	<0.005	mg/L	Qtr WQ & Contingency
	11/17/2004	1,1,1 Trichloroethane	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	1,1,2 Trichloroethane	<0.002	mg/L	Qtr WQ & Contingency

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206A (cont.)	11/17/2004	1,2 Dichloroethane	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	1,2 Dichloropropane	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	1,2,4-Trichlorobenzene	<0.01	mg/L	Qtr WQ & Contingency
	11/17/2004	2,3,7,8-TCDD (Dioxin)	<5.0E-09	mg/L	Qtr WQ & Contingency
	11/17/2004	Alkalinity as CaCO3	190	mg/L	Qtr WQ & Contingency
	11/17/2004	Antimony (dissolved)	<0.050	mg/L	Qtr WQ & Contingency
	11/17/2004	Arsenic (dissolved)	<0.050	mg/L	Qtr WQ & Contingency
	11/17/2004	Barium (dissolved)	0.030	mg/L	Qtr WQ & Contingency
	11/17/2004	Benzene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Benzo (a) pyrene	<0.02	mg/L	Qtr WQ & Contingency
	11/17/2004	Beryllium (dissolved)	<0.0040	mg/L	Qtr WQ & Contingency
	11/17/2004	Boron (dissolved)	12	mg/L	Qtr WQ & Contingency
	11/17/2004	Bromodichloromethane	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Bromoform	<0.005	mg/L	Qtr WQ & Contingency
	11/17/2004	Cadmium (dissolved)	<0.0050	mg/L	Qtr WQ & Contingency
	11/17/2004	Calcium (dissolved)	760	mg/L	Qtr WQ & Contingency
	11/17/2004	Carbon tetrachloride	<0.0025	mg/L	Qtr WQ & Contingency
	11/17/2004	Cesium-134	≤75	pCi/L	Qtr WQ & Contingency
	11/17/2004	Cesium-137	≤110	pCi/L	Qtr WQ & Contingency
	11/17/2004	Chloride	7400	mg/L	Qtr WQ & Contingency
	11/17/2004	Chromium (dissolved)	0.013	mg/L	Qtr WQ & Contingency
	11/17/2004	cis-1,2-Dichloroethylene	<0.0005	mg/L	Qtr WQ & Contingency
	11/17/2004	Cobalt-60	≤200	pCi/L	Qtr WQ & Contingency
	11/17/2004	Coliform	0	present	Qtr WQ & Contingency
	11/17/2004	Di (2-ethylhexyl) adipate	<0.0006	mg/L	Qtr WQ & Contingency
	11/17/2004	Di (2-ethylhexyl) phthalate	<0.05	mg/L	Qtr WQ & Contingency
	11/17/2004	Dibromochloromethane	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Dichloromethane	<0.005	mg/L	Qtr WQ & Contingency
	11/17/2004	ecoli	0	present	Qtr WQ & Contingency
	11/17/2004	Ethylbenzene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Field Cond	24090	umhos/cm	Qtr WQ & Contingency
	11/17/2004	Field pH	6.93	SU	Qtr WQ & Contingency
	11/17/2004	Field Temp	26	°C	Qtr WQ & Contingency
	11/17/2004	Fluoride	4.1	mg/L	Qtr WQ & Contingency
	11/17/2004	Hexachlorobenzene	<0.01	mg/L	Qtr WQ & Contingency
	11/17/2004	Hexachlorocyclopentadiene	<0.04	mg/L	Qtr WQ & Contingency
	11/17/2004	Iodine-131	≤100	pCi/L	Qtr WQ & Contingency
	11/17/2004	Lead (dissolved)	<0.0020	mg/L	Qtr WQ & Contingency
	11/17/2004	Magnesium (dissolved)	540	mg/L	Qtr WQ & Contingency
	11/17/2004	Mercury (dissolved)	<0.00020	mg/L	Qtr WQ & Contingency
	11/17/2004	Monochlorobenzene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Nickel (dissolved)	0.054	mg/L	Qtr WQ & Contingency
	11/17/2004	NitateNitrite	22	mg/L	Qtr WQ & Contingency
	11/17/2004	o-Dichlorobenzene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	para-Dichlorobenzene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Pentachlorophenol	<0.01	mg/L	Qtr WQ & Contingency
	11/17/2004	pH	7.26	SU	Qtr WQ & Contingency
	11/17/2004	Potassium (dissolved)	18	mg/L	Qtr WQ & Contingency
	11/17/2004	Selenium (dissolved)	0.060	mg/L	Qtr WQ & Contingency
	11/17/2004	Sodium (dissolved)	5200	mg/L	Qtr WQ & Contingency
	11/17/2004	Specific Conductance	23000	umhos/cm	Qtr WQ & Contingency
	11/17/2004	Styrene	<0.0005	mg/L	Qtr WQ & Contingency
	11/17/2004	Sulfate	3700	mg/L	Qtr WQ & Contingency
	11/17/2004	TDS	17000	mg/L	Qtr WQ & Contingency
	11/17/2004	Tetrachloroethylene	<0.0022	mg/L	Qtr WQ & Contingency
	11/17/2004	Thallium (dissolved)	<0.0020	mg/L	Qtr WQ & Contingency
	11/17/2004	Toluene	<0.002	mg/L	Qtr WQ & Contingency

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206A (cont.)	11/17/2004	Total Petroleum Hydrocarbons	<1.0	mg/L	Qtr WQ & Contingency
	11/17/2004	trans-1,2-Dichloroethylene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Trichloroethylene	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Trihalomethanes (Total)	<0.008	mg/L	Qtr WQ & Contingency
	11/17/2004	Tritium	≤3000	pCi/L	Qtr WQ & Contingency
	11/17/2004	Vinyl Chloride	<0.002	mg/L	Qtr WQ & Contingency
	11/17/2004	Xylenes (Total)	<0.01	mg/L	Qtr WQ & Contingency
	12/1/2004	Water Level Elevation	870.81	feet AMSL	Monthly Contingency WL
	12/3/2004	Boron (dissolved)	19	mg/L	Discretionary
	12/3/2004	Boron (dissolved)	12	mg/L	Discretionary
	12/3/2004	Chloride	7200	mg/L	Discretionary
	12/3/2004	Chloride	7500	mg/L	Discretionary
	12/3/2004	Field Cond	27070	umhos/cm	Discretionary
	12/3/2004	Field Cond	26270	umhos/cm	Discretionary
	12/3/2004	Field pH	7	SU	Discretionary
	12/3/2004	Field pH	7.02	SU	Discretionary
	12/3/2004	Field Temp	27.04	°C	Discretionary
	12/3/2004	Field Temp	26.9	°C	Discretionary
	12/3/2004	Fluoride	3.8	mg/L	Discretionary
	12/3/2004	Fluoride	5	mg/L	Discretionary
	12/3/2004	Potassium (dissolved)	8.6	mg/L	Discretionary
	12/3/2004	Potassium (dissolved)	7.8	mg/L	Discretionary
	12/3/2004	Water Level Elevation	870.81	feet AMSL	Discretionary WQ
PV-206B	4/6/2004	Boron (dissolved)	2.9	mg/L	Potassium Verification
	4/6/2004	Cesium-137	≤13.02	pCi/L	Potassium Verification
	4/6/2004	Chloride	6200	mg/L	Potassium Verification
	4/6/2004	Cobalt-60	≤14.28	pCi/L	Potassium Verification
	4/6/2004	Field Cond	20160	umhos/cm	Potassium Verification
	4/6/2004	Field pH	7.45	SU	Potassium Verification
	4/6/2004	Field Temp	26.9	°C	Potassium Verification
	4/6/2004	Fluoride	2.9	mg/L	Potassium Verification
	4/6/2004	Iodine-131	≤12.70	pCi/L	Potassium Verification
	4/6/2004	Potassium (dissolved)	13	mg/L	Potassium Verification
	4/6/2004	Tritium	≤269 (±158)	pCi/L	Potassium Verification
	4/6/2004	Water Level Elevation	870.35	feet AMSL	Verification WQ
	5/13/2004	Water Level Elevation	871.83	feet AMSL	Discretionary
	5/14/2004	Water Level Elevation	871.91	feet AMSL	Discretionary
	5/19/2004	Alkalinity as CaCO3	81	mg/L	Contingency and Discretionary
	5/19/2004	Arsenic (dissolved)	<0.0040	mg/L	Contingency and Discretionary
	5/19/2004	Barium (dissolved)	0.052	mg/L	Contingency and Discretionary
	5/19/2004	Boron (dissolved)	3.2	mg/L	Contingency and Discretionary
	5/19/2004	Cadmium (dissolved)	<0.0030	mg/L	Contingency and Discretionary
	5/19/2004	Calcium (dissolved)	1100	mg/L	Contingency and Discretionary
	5/19/2004	Cation Sum	6.1	meq/L	Contingency and Discretionary
	5/19/2004	Cesium-137	≤4.50	pCi/L	Contingency
	5/19/2004	Chloride	5900	mg/L	Contingency and Discretionary
	5/19/2004	Chromium (dissolved)	0.010	mg/L	Contingency and Discretionary
	5/19/2004	Cobalt-60	≤4.08	pCi/L	Contingency
	5/19/2004	Field Cond	19730	umhos/cm	Contingency and Discretionary
	5/19/2004	Field pH	7.21	SU	Contingency and Discretionary
	5/19/2004	Field Temp	28.7	°C	Contingency and Discretionary
	5/19/2004	Fluoride	2.2	mg/L	Contingency and Discretionary
	5/19/2004	Iodine-131	≤5.54	pCi/L	Contingency
	5/19/2004	Lead (dissolved)	<0.0060	mg/L	Contingency and Discretionary
	5/19/2004	Magnesium (dissolved)	310	mg/L	Contingency and Discretionary
	5/19/2004	Mercury (dissolved)	<0.0002	mg/L	Contingency and Discretionary
	5/19/2004	NitateNitrite	21	mg/L	Contingency and Discretionary

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206B (cont.)	5/19/2004	pH	7.5	SU	Contingency and Discretionary
	5/19/2004	Potassium (dissolved)	33	mg/L	Contingency and Discretionary
	5/19/2004	Selenium (dissolved)	0.021	mg/L	Contingency and Discretionary
	5/19/2004	Sodium (dissolved)	3400	mg/L	Contingency and Discretionary
	5/19/2004	Specific Conductance	20000	umhos/cm	Contingency and Discretionary
	5/19/2004	Sulfate	1600	mg/L	Contingency and Discretionary
	5/19/2004	TDS	14000	mg/L	Contingency and Discretionary
	5/19/2004	Tritium	≤267 (±159)	pCi/L	Contingency
	5/19/2004	Water Level Elevation	871.78	feet AMSL	Contingency Monthly WQ & WL
	6/3/2004	Alkalinity as CaCO3	87	mg/L	Contingency and Discretionary
	6/3/2004	Arsenic (dissolved)	<0.010	mg/L	Contingency and Discretionary
	6/3/2004	Barium (dissolved)	0.051	mg/L	Contingency and Discretionary
	6/3/2004	Boron (dissolved)	3.4	mg/L	Contingency and Discretionary
	6/3/2004	Cadmium (dissolved)	<0.0030	mg/L	Contingency and Discretionary
	6/3/2004	Calcium (dissolved)	1100	mg/L	Contingency and Discretionary
	6/3/2004	Cesium-137	≤50	pCi/L	Contingency
	6/3/2004	Chloride	6600	mg/L	Contingency and Discretionary
	6/3/2004	Chromium (dissolved)	<0.010	mg/L	Contingency and Discretionary
	6/3/2004	Cobalt-60	≤100	pCi/L	Contingency
	6/3/2004	Field Cond	18110	umhos/cm	Contingency and Discretionary
	6/3/2004	Field pH	7.15	SU	Contingency and Discretionary
	6/3/2004	Field Temp	29.3	°C	Contingency and Discretionary
	6/3/2004	Fluoride	2.2	mg/L	Contingency and Discretionary
	6/3/2004	Iodine-131	≤100	pCi/L	Contingency
	6/3/2004	Lead (dissolved)	<0.010	mg/L	Contingency and Discretionary
	6/3/2004	Magnesium (dissolved)	320	mg/L	Contingency and Discretionary
	6/3/2004	Mercury (dissolved)	<0.0002	mg/L	Contingency and Discretionary
	6/3/2004	NitateNitrite	20	mg/L	Contingency and Discretionary
	6/3/2004	pH	7.3	SU	Contingency and Discretionary
	6/3/2004	Potassium (dissolved)	24	mg/L	Contingency and Discretionary
	6/3/2004	Selenium (dissolved)	0.020	mg/L	Contingency and Discretionary
	6/3/2004	Sodium (dissolved)	3500	mg/L	Contingency and Discretionary
	6/3/2004	Specific Conductance	20000	umhos/cm	Contingency and Discretionary
	6/3/2004	Sulfate	1500	mg/L	Contingency and Discretionary
	6/3/2004	TDS	14000	mg/L	Contingency and Discretionary
	6/3/2004	Tritium	≤3000	pCi/L	Contingency
	6/3/2004	Water Level Elevation	871.7	feet AMSL	Contingency Monthly WQ & WL
	7/27/2004	Boron (dissolved)	4.4	mg/L	Contingency
	7/27/2004	Cesium-137	≤50	pCi/L	Contingency
	7/27/2004	Chloride	6600	mg/L	Contingency
	7/27/2004	Cobalt-60	≤100	pCi/L	Contingency
	7/27/2004	Field Cond	21200	umhos/cm	Contingency
	7/27/2004	Field pH	7.05	SU	Contingency
	7/27/2004	Field Temp	30.4	°C	Contingency
	7/27/2004	Fluoride	2.1	mg/L	Contingency
	7/27/2004	Iodine-131	≤ 100	pCi/L	Contingency
	7/27/2004	Potassium (dissolved)	13	mg/L	Contingency
	7/27/2004	Tritium	≤ 3000	pCi/L	Contingency
	7/27/2004	Water Level Elevation	871.58	feet AMSL	Contingency Monthly WQ & WL
	9/7/2004	Boron (dissolved)	4.8	mg/L	Chloride Verification & Contin
	9/7/2004	Cesium-137	≤50	pCi/L	Chloride Verification & Contin
	9/7/2004	Chloride	7100	mg/L	Chloride Verification & Contin
	9/7/2004	Cobalt-60	≤100	pCi/L	Chloride Verification & Contin
	9/7/2004	Field Cond	20860	umhos/cm	Chloride Verification & Contin
	9/7/2004	Field pH	6.94	SU	Chloride Verification & Contin
	9/7/2004	Field Temp	29.1	°C	Chloride Verification & Contin
	9/7/2004	Fluoride	2.6	mg/L	Chloride Verification & Contin

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-206B (cont.)	9/7/2004	Iodine-131	≤ 100	pCi/L	Chloride Verification & Contin
	9/7/2004	Potassium (dissolved)	18	mg/L	Chloride Verification & Contin
	9/7/2004	Tritium	≤ 3000	pCi/L	Chloride Verification & Contin
	9/7/2004	Water Level Elevation	871.45	feet AMSL	Contingency Monthly WQ & WL
	10/20/2004	Boron (dissolved)	4.5	mg/L	Contingency
	10/20/2004	Cesium-137	≤50	pCi/L	Contingency
	10/20/2004	Chloride	6400	mg/L	Contingency
	10/20/2004	Cobalt-60	≤100	pCi/L	Contingency
	10/20/2004	Field Cond	20370	umhos/cm	Contingency
	10/20/2004	Field pH	6.67	SU	Contingency
	10/20/2004	Field Temp	27.2	°C	Contingency
	10/20/2004	Fluoride	6.2	mg/L	Contingency
	10/20/2004	Iodine-131	≤ 100	pCi/L	Contingency
	10/20/2004	Potassium (dissolved)	16	mg/L	Contingency
	10/20/2004	Tritium	≤ 3000	pCi/L	Contingency
	11/17/2004	Water Level Elevation	871.03	feet AMSL	Discretionary
PV-216R	1/6/2004	Water Level Elevation	704.31	feet AMSL	Subsidence Program Measurement
	4/16/2004	Water Level Elevation	704.05	feet AMSL	Subsidence Program Measurement
	7/21/2004	Water Level Elevation	701.41	feet AMSL	Subsidence Program Measurement
	9/2/2004	Water Level Elevation	701.54	feet AMSL	GeoTrans Discretionary
	10/13/2004	Water Level Elevation	701.46	feet AMSL	Subsidence Program Measurement
PV-21H	4/16/2004	Water Level Elevation	889.34	feet AMSL	Discretionary
PV-21HB	4/16/2004	Water Level Elevation	889.42	feet AMSL	Discretionary
PV-25HA	3/17/2004	Water Level Elevation	882.89	feet AMSL	Discretionary
	4/8/2004	Water Level Elevation	882.97	feet AMSL	Discretionary
	4/16/2004	Water Level Elevation	883.07	feet AMSL	Discretionary
PV-33H	2/17/2004	Boron (dissolved)	5.2	mg/L	Quarterly
	2/17/2004	Cesium-137	≤9.89	pCi/L	Quarterly
	2/17/2004	Chloride	5000	mg/L	Quarterly
	2/17/2004	Cobalt-60	≤10.95	pCi/L	Quarterly
	2/17/2004	Field Cond	18770	umhos/cm	Quarterly
	2/17/2004	Field pH	7.43	SU	Quarterly
	2/17/2004	Field Temp	25.4	°C	Quarterly
	2/17/2004	Fluoride	2.8	mg/L	Quarterly
	2/17/2004	Potassium (dissolved)	3.7	mg/L	Re-Analysis on K on 03/25/04
	2/17/2004	Potassium (dissolved)	4.9	mg/L	Quarterly
	2/17/2004	Tritium	≤270 (±160)	pCi/L	Quarterly
	2/17/2004	Water Level Elevation	874.35	feet AMSL	Quarterly
	5/21/2004	Boron (dissolved)	5.3	mg/L	Quarterly
	5/21/2004	Cesium-137	≤11.94	pCi/L	Quarterly
	5/21/2004	Chloride	4700	mg/L	Quarterly
	5/21/2004	Cobalt-60	≤9.73	pCi/L	Quarterly
	5/21/2004	Field Cond	16080	umhos/cm	Quarterly
	5/21/2004	Field pH	7.31	SU	Quarterly
	5/21/2004	Field Temp	27.2	°C	Quarterly
	5/21/2004	Fluoride	2.8	mg/L	Quarterly
	5/21/2004	Potassium (dissolved)	3.1	mg/L	Quarterly
	5/21/2004	Tritium	≤267 (±159)	pCi/L	Quarterly
	7/14/2004	Water Level Elevation	874.31	feet AMSL	Monthly Contingency WL
	8/3/2004	Water Level Elevation	874.3	feet AMSL	GeoTrans Discretionary
	8/12/2004	Water Level Elevation	874.22	feet AMSL	Monthly Contingency WL
	9/9/2004	Boron (dissolved)	6.1	mg/L	Quarterly
	9/9/2004	Cesium-137	≤ 50	pCi/L	Quarterly
	9/9/2004	Chloride	4400	mg/L	Quarterly
	9/9/2004	Cobalt-60	≤ 100	pCi/L	Quarterly
	9/9/2004	Field Cond	17500	umhos/cm	Quarterly
	9/9/2004	Field pH	7.1	SU	Quarterly

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-33H (cont.)	9/9/2004	Field Temp	27.6	°C	Quarterly
	9/9/2004	Fluoride	2.9	mg/L	Quarterly
	9/9/2004	Potassium (dissolved)	2.9	mg/L	Quarterly
	9/9/2004	Tritium	≤ 1000	pCi/L	Quarterly
	9/9/2004	Water Level Elevation	874.24	feet AMSL	Monthly Contingency WL
	10/21/2004	Boron (dissolved)	5.4	mg/L	Quarterly
	10/21/2004	Cesium-137	≤ 50	pCi/L	Quarterly
	10/21/2004	Chloride	4800	mg/L	Quarterly
	10/21/2004	Cobalt-60	≤ 100	pCi/L	Quarterly
	10/21/2004	Field Cond	17950	umhos/cm	Quarterly
	10/21/2004	Field pH	6.9	SU	Quarterly
	10/21/2004	Field Temp	23	°C	Quarterly
	10/21/2004	Fluoride	2.8	mg/L	Quarterly
	10/21/2004	Potassium (dissolved)	3.9	mg/L	Quarterly
	10/21/2004	Tritium	≤ 1000	pCi/L	Quarterly
	10/21/2004	Water Level Elevation	874.21	feet AMSL	Quarterly
	11/3/2004	Water Level Elevation	874.18	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	874.1	feet AMSL	Monthly Contingency WL
PV-34H	2/17/2004	Boron (dissolved)	5	mg/L	Quarterly
	2/17/2004	Cesium-137	≤ 13.41	pCi/L	Quarterly
	2/17/2004	Chloride	1800	mg/L	Quarterly
	2/17/2004	Cobalt-60	≤ 10.44	pCi/L	Quarterly
	2/17/2004	Field Cond	9010	umhos/cm	Quarterly
	2/17/2004	Field pH	7.81	SU	Quarterly
	2/17/2004	Field Temp	26.1	°C	Quarterly
	2/17/2004	Fluoride	15	mg/L	Quarterly
	2/17/2004	Potassium (dissolved)	1	mg/L	Quarterly
	2/17/2004	Tritium	≤ 271 (±160)	pCi/L	Quarterly
	2/17/2004	Water Level Elevation	869.09	feet AMSL	Quarterly
	5/21/2004	Boron (dissolved)	5.1	mg/L	Quarterly
	5/21/2004	Cesium-137	≤ 15.35	pCi/L	Quarterly
	5/21/2004	Chloride	1900	mg/L	Quarterly
	5/21/2004	Cobalt-60	≤ 13.07	pCi/L	Quarterly
	5/21/2004	Field Cond	8200	umhos/cm	Quarterly
	5/21/2004	Field pH	7.72	SU	Quarterly
	5/21/2004	Field Temp	28.6	°C	Quarterly
	5/21/2004	Fluoride	14	mg/L	Quarterly
	5/21/2004	Potassium (dissolved)	1	mg/L	Quarterly
	5/21/2004	Tritium	≤ 268 (±161)	pCi/L	Quarterly
	7/14/2004	Water Level Elevation	869.7	feet AMSL	Monthly Contingency WL
	8/3/2004	Water Level Elevation	868.75	feet AMSL	GeoTrans Discretionary
	8/12/2004	Water Level Elevation	868.69	feet AMSL	Monthly Contingency WL
	9/10/2004	Boron (dissolved)	5.7	mg/L	Quarterly
	9/10/2004	Cesium-137	≤ 50	pCi/L	Quarterly
	9/10/2004	Chloride	1900	mg/L	Quarterly
	9/10/2004	Cobalt-60	≤ 100	pCi/L	Quarterly
	9/10/2004	Field Cond	9150	umhos/cm	Quarterly
	9/10/2004	Field pH	7.44	SU	Quarterly
	9/10/2004	Field Temp	27.3	°C	Quarterly
	9/10/2004	Fluoride	15	mg/L	Quarterly
	9/10/2004	Potassium (dissolved)	1	mg/L	Quarterly
	9/10/2004	Tritium	≤ 1000	pCi/L	Quarterly
	9/10/2004	Water Level Elevation	868.71	feet AMSL	Monthly Contingency WL
	10/21/2004	Boron (dissolved)	5.2	mg/L	Quarterly
	10/21/2004	Cesium-137	≤ 50	pCi/L	Quarterly
	10/21/2004	Chloride	1900	mg/L	Quarterly
	10/21/2004	Cobalt-60	≤ 100	pCi/L	Quarterly

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-34H (cont.)	10/21/2004	Field Cond	9000	umhos/cm	Quarterly
	10/21/2004	Field pH	7.63	SU	Quarterly
	10/21/2004	Field Temp	17.3	°C	Quarterly
	10/21/2004	Fluoride	17	mg/L	Quarterly
	10/21/2004	Potassium (dissolved)	1	mg/L	Quarterly
	10/21/2004	Tritium	≤ 1000	pCi/L	Quarterly
	10/21/2004	Water Level Elevation	868.64	feet AMSL	Quarterly
	11/3/2004	Water Level Elevation	868.75	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	868.74	feet AMSL	Monthly Contingency WL
PV-R2A	2/19/2004	Boron (dissolved)	3.9	mg/L	Quarterly
	2/19/2004	Cesium-137	≤12.77	pCi/L	Quarterly
	2/19/2004	Chloride	1500	mg/L	Quarterly
	2/19/2004	Cobalt-60	≤12.30	pCi/L	Quarterly
	2/19/2004	Field Cond	8550	umhos/cm	Quarterly
	2/19/2004	Field pH	8.04	SU	Quarterly
	2/19/2004	Field Temp	26.1	°C	Quarterly
	2/19/2004	Fluoride	9.9	mg/L	Quarterly
	2/19/2004	Potassium (dissolved)	8.8	mg/L	Quarterly
	2/19/2004	Tritium	≤269 (±157)	pCi/L	Quarterly
	2/19/2004	Water Level Elevation	868.42	feet AMSL	Quarterly
	4/13/2004	Water Level Elevation	868.88	feet AMSL	GeoTrans Discretionary
	4/16/2004	Water Level Elevation	868.78	feet AMSL	Discretionary
	4/22/2004	Water Level Elevation	868.91	feet AMSL	Discretionary
	4/23/2004	Alkalinity as CaCO3	79	mg/L	Discretionary
	4/23/2004	Arsenic (dissolved)	<0.050	mg/L	Discretionary
	4/23/2004	Barium (dissolved)	0.019	mg/L	Discretionary
	4/23/2004	Boron (dissolved)	1.4	mg/L	Discretionary
	4/23/2004	Cadmium (dissolved)	<0.0050	mg/L	Discretionary
	4/23/2004	Calcium (dissolved)	26	mg/L	Discretionary
	4/23/2004	Cation Sum	29.5	meq/L	Discretionary
	4/23/2004	Chloride	480	mg/L	Discretionary
	4/23/2004	Chromium (dissolved)	0.074	mg/L	Discretionary
	4/23/2004	Copper (dissolved)	<0.020	mg/L	Discretionary
	4/23/2004	Field Cond	6730	umhos/cm	Discretionary
	4/23/2004	Field pH	8.28	SU	Discretionary
	4/23/2004	Field Temp	33	°C	Discretionary
	4/23/2004	Fluoride	16	mg/L	Discretionary
	4/23/2004	Iron (dissolved)	<0.20	mg/L	Discretionary
	4/23/2004	Lead (dissolved)	<0.0010	mg/L	Discretionary
	4/23/2004	Magnesium (dissolved)	0.71	mg/L	Discretionary
	4/23/2004	Manganese (dissolved)	<0.020	mg/L	Discretionary
	4/23/2004	Mercury (dissolved)	<0.00020	mg/L	Discretionary
	4/23/2004	NitateNitrite	26	mg/L	Discretionary
	4/23/2004	pH	9.50	SU	Discretionary
	4/23/2004	Potassium (dissolved)	3.6	mg/L	Discretionary
	4/23/2004	Selenium (dissolved)	0.0098	mg/L	Discretionary
	4/23/2004	Silver (dissolved)	<0.0050	mg/L	Discretionary
	4/23/2004	Sodium (dissolved)	1000	mg/L	Discretionary
	4/23/2004	Specific Conductance	2700	umhos/cm	Discretionary
	4/23/2004	Sulfate	320	mg/L	Discretionary
	4/23/2004	TDS	1600	mg/L	Discretionary
	4/23/2004	Zinc (dissolved)	<0.050	mg/L	Discretionary
	5/27/2004	Boron (dissolved)	6.9	mg/L	Quarterly
	5/27/2004	Cesium-137	≤50	pCi/L	Quarterly
	5/27/2004	Chloride	2600	mg/L	Quarterly
	5/27/2004	Cobalt-60	≤100	pCi/L	Quarterly
	5/27/2004	Field Cond	12320	umhos/cm	Quarterly

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-R2A (cont.)	5/27/2004	Field pH	7.81	SU	Quarterly
	5/27/2004	Field Temp	29.8	°C	Quarterly
	5/27/2004	Fluoride	7.6	mg/L	Quarterly
	5/27/2004	Potassium (dissolved)	9.6	mg/L	Quarterly
	5/27/2004	Tritium	≤1000	pCi/L	Quarterly
	7/14/2004	Water Level Elevation	869.31	feet AMSL	Monthly Contingency WL
	7/28/2004	Water Level Elevation	869.44	feet AMSL	Discretionary
	8/6/2004	Water Level Elevation	869.51	feet AMSL	Discretionary
	8/10/2004	Field Cond	13910	umhos/cm	Discretionary
	8/10/2004	Field pH	7.38	SU	Discretionary
	8/10/2004	Field TDS	9,713	mg/L	Discretionary
	8/10/2004	Water Level Elevation	869.39	feet AMSL	Discretionary
	8/11/2004	Field Cond	11030	umhos/cm	Discretionary
	8/11/2004	Field pH	7.47	SU	Discretionary
	8/11/2004	Field TDS	6,725	mg/L	Discretionary
	8/11/2004	Water Level Elevation	869.06	feet AMSL	Discretionary
	8/12/2004	Water Level Elevation	867.79	feet AMSL	Monthly Contingency WL
	8/13/2004	Water Level Elevation	867.94	feet AMSL	Discretionary
	8/17/2004	Field Cond	817	umhos/cm	Discretionary
	8/17/2004	Field pH	7.9	SU	Discretionary
	8/17/2004	Field TDS	6,418	mg/L	Discretionary
	8/17/2004	Water Level Elevation	869.06	feet AMSL	Discretionary
	8/18/2004	Field Cond	928	umhos/cm	Discretionary
	8/18/2004	Field pH	8.26	SU	Discretionary
	8/18/2004	Field TDS	6,360	mg/L	Discretionary
	8/18/2004	Water Level Elevation	868.31	feet AMSL	Discretionary
	8/19/2004	Field Cond	2945	umhos/cm	Discretionary
	8/19/2004	Field pH	8.02	SU	Discretionary
	8/19/2004	Field TDS	2,918	mg/L	Discretionary
	8/19/2004	Water Level Elevation	867.1	feet AMSL	Discretionary
	8/20/2004	Field Cond	4808	umhos/cm	Discretionary
	8/20/2004	Field pH	8.06	SU	Discretionary
	8/20/2004	Field TDS	3,945	mg/L	Discretionary
	8/20/2004	Water Level Elevation	867.54	feet AMSL	Discretionary
	8/24/2004	Field Cond	758	umhos/cm	Discretionary
	8/24/2004	Field pH	8	SU	Discretionary
	8/24/2004	Field TDS	4,615	mg/L	Discretionary
	8/24/2004	Water Level Elevation	869.06	feet AMSL	Discretionary
	8/25/2004	Field Cond	4553	umhos/cm	Discretionary
	8/25/2004	Field pH	8.25	SU	Discretionary
	8/25/2004	Field TDS	2,753	mg/L	Discretionary
	8/25/2004	Water Level Elevation	867	feet AMSL	Discretionary
	8/26/2004	Alkalinity as CaCO3	180	mg/L	Discretionary
	8/26/2004	Alkalinity as CaCO3	130	mg/L	Discretionary
	8/26/2004	Antimony (dissolved)	<0.050	mg/L	Discretionary
	8/26/2004	Arsenic (dissolved)	<0.050	mg/L	Discretionary
	8/26/2004	Barium (dissolved)	0.035	mg/L	Discretionary
	8/26/2004	Boron (dissolved)	2	mg/L	Discretionary
	8/26/2004	Cadmium (dissolved)	<0.0050	mg/L	Discretionary
	8/26/2004	Calcium (dissolved)	43	mg/L	Discretionary
	8/26/2004	Chloride	750	mg/L	Discretionary
	8/26/2004	Chloride	740	mg/L	Discretionary
	8/26/2004	Chromium (dissolved)	< 0.010	mg/L	Discretionary
	8/26/2004	Field Cond	3818	umhos/cm	Discretionary
	8/26/2004	Field pH	8.14	SU	Discretionary
	8/26/2004	Fluoride	14	mg/L	Discretionary
	8/26/2004	Fluoride	14	mg/L	Discretionary

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-R2A (cont.)	8/26/2004	Lead (dissolved)	<0.0010	mg/L	Discretionary
	8/26/2004	Magnesium (dissolved)	6.8	mg/L	Discretionary
	8/26/2004	Mercury (dissolved)	<0.00020	mg/L	Discretionary
	8/26/2004	NitateNitrite	30	mg/L	Discretionary
	8/26/2004	NitateNitrite	29	mg/L	Discretionary
	8/26/2004	pH	8.37	SU	Discretionary
	8/26/2004	pH	8.42	SU	Discretionary
	8/26/2004	Potassium (dissolved)	2.6	mg/L	Discretionary
	8/26/2004	Selenium (dissolved)	0.0077	mg/L	Discretionary
	8/26/2004	Sodium (dissolved)	720	mg/L	Discretionary
	8/26/2004	Specific Conductance	3800	umhos/cm	Discretionary
	8/26/2004	Specific Conductance	3800	umhos/cm	Discretionary
	8/26/2004	Sulfate	460	mg/L	Discretionary
	8/26/2004	Sulfate	470	mg/L	Discretionary
	8/26/2004	TDS	2100	mg/L	Discretionary
	8/26/2004	TDS	2300	mg/L	Discretionary
	9/15/2004	Boron (dissolved)	5.5	mg/L	Quarterly
	9/15/2004	Cesium-137	≤50	pCi/L	Quarterly
	9/15/2004	Chloride	2700	mg/L	Quarterly
	9/15/2004	Cobalt-60	≤100	pCi/L	Quarterly
	9/15/2004	Field Cond	10810	umhos/cm	Quarterly
	9/15/2004	Field pH	7.29	SU	Quarterly
	9/15/2004	Field Temp	29.2	°C	Quarterly
	9/15/2004	Fluoride	9.1	mg/L	Quarterly
	9/15/2004	Potassium (dissolved)	6.5	mg/L	Quarterly
	9/15/2004	Tritium	≤1000	pCi/L	Quarterly
	10/20/2004	Water Level Elevation	870.15	feet AMSL	Monthly Contingency WL
	11/4/2004	Boron (dissolved)	6.1	mg/L	Quarterly
	11/4/2004	Cesium-137	≤50	pCi/L	Quarterly
	11/4/2004	Chloride	3300	mg/L	Quarterly
	11/4/2004	Cobalt-60	≤100	pCi/L	Quarterly
	11/4/2004	Field Cond	15880	umhos/cm	Quarterly
	11/4/2004	Field pH	7.44	SU	Quarterly
	11/4/2004	Field Temp	28.1	°C	Quarterly
	11/4/2004	Fluoride	10	mg/L	Quarterly
	11/4/2004	Potassium (dissolved)	7.5	mg/L	Quarterly
	11/4/2004	Tritium	≤1000	pCi/L	Quarterly
	12/1/2004	Water Level Elevation	869.76	feet AMSL	Monthly Contingency WL
PV-R2B	4/13/2004	Water Level Elevation	868.76	feet AMSL	GeoTrans Discretionary
	4/16/2004	Water Level Elevation	868.61	feet AMSL	Discretionary
	4/22/2004	Water Level Elevation	868.76	feet AMSL	Discretionary
	4/23/2004	Alkalinity as CaCO3	120	mg/L	Discretionary
	4/23/2004	Arsenic (dissolved)	<0.050	mg/L	Discretionary
	4/23/2004	Barium (dissolved)	0.076	mg/L	Discretionary
	4/23/2004	Boron (dissolved)	4.4	mg/L	Discretionary
	4/23/2004	Cadmium (dissolved)	<0.0050	mg/L	Discretionary
	4/23/2004	Calcium (dissolved)	80	mg/L	Discretionary
	4/23/2004	Cation Sum	1.30	meq/L	Discretionary
	4/23/2004	Chloride	1700	mg/L	Discretionary
	4/23/2004	Chromium (dissolved)	0.019	mg/L	Discretionary
	4/23/2004	Copper (dissolved)	<0.020	mg/L	Discretionary
	4/23/2004	Field Cond	3750	umhos/cm	Discretionary
	4/23/2004	Field pH	10.32	SU	Discretionary
	4/23/2004	Fluoride	10	mg/L	Discretionary
	4/23/2004	Iron (dissolved)	<0.20	mg/L	Discretionary
	4/23/2004	Lead (dissolved)	<0.0010	mg/L	Discretionary
	4/23/2004	Magnesium (dissolved)	9.5	mg/L	Discretionary

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

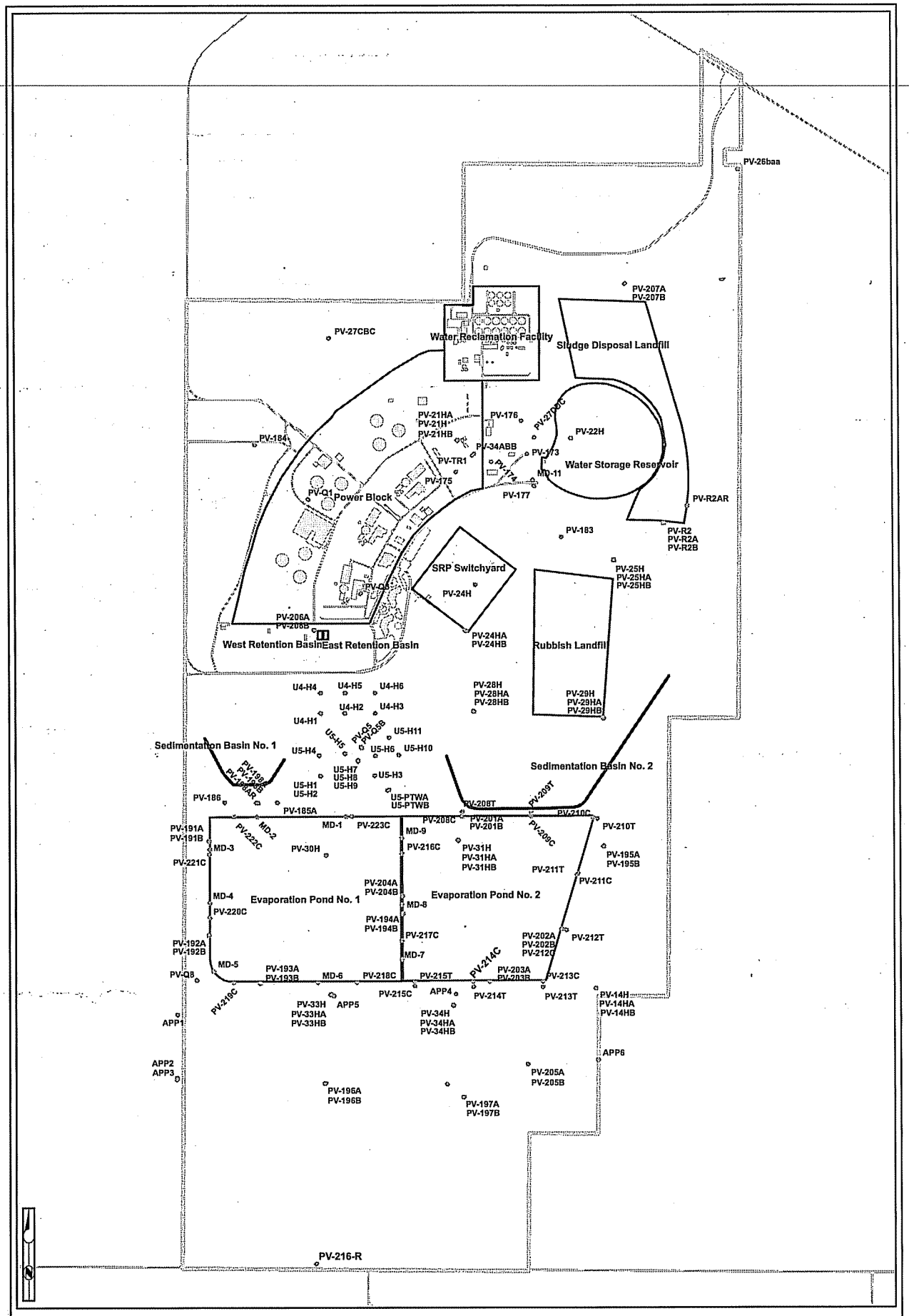
WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-R2B (cont.)	4/23/2004	Manganese (dissolved)	0.11	mg/L	Discretionary
	4/23/2004	Mercury (dissolved)	<0.00020	mg/L	Discretionary
	4/23/2004	NitateNitrite	73	mg/L	Discretionary
	4/23/2004	pH	10.7	SU	Discretionary
	4/23/2004	Potassium (dissolved)	7.5	mg/L	Discretionary
	4/23/2004	Selenium (dissolved)	0.012	mg/L	Discretionary
	4/23/2004	Silver (dissolved)	<0.0050	mg/L	Discretionary
	4/23/2004	Sodium (dissolved)	1700	mg/L	Discretionary
	4/23/2004	Specific Conductance	8000	umhos/cm	Discretionary
	4/23/2004	Sulfate	1000	mg/L	Discretionary
	4/23/2004	TDS	5100	mg/L	Discretionary
	4/23/2004	Zinc (dissolved)	<0.050	mg/L	Discretionary
	7/28/2004	Field Cond	9300	umhos/cm	Discretionary
	7/28/2004	Field pH	11.21	SU	Discretionary
	7/28/2004	Water Level Elevation	869.36	feet AMSL	Discretionary
	8/6/2004	Field Cond	5500	umhos/cm	Discretionary
	8/6/2004	Field pH	10.92	SU	Discretionary
	8/6/2004	Water Level Elevation	869.53	feet AMSL	Discretionary
	8/10/2004	Field Cond	4170	umhos/cm	Discretionary
	8/10/2004	Field pH	10.01	SU	Discretionary
	8/10/2004	Field TDS	2,455	mg/L	Discretionary
	8/10/2004	Water Level Elevation	869.4	feet AMSL	Discretionary
	8/11/2004	Field Cond	4170	umhos/cm	Discretionary
	8/11/2004	Field pH	9.27	SU	Discretionary
	8/11/2004	Field TDS	1,883	mg/L	Discretionary
	8/11/2004	Water Level Elevation	865.24	feet AMSL	Discretionary
	8/12/2004	Field Cond	3361	umhos/cm	Discretionary
	8/12/2004	Field pH	9.17	SU	Discretionary
	8/12/2004	Field TDS	2,014	mg/L	Discretionary
	8/12/2004	Water Level Elevation	866.08	feet AMSL	Discretionary
	8/13/2004	Field Cond	2954	umhos/cm	Discretionary
	8/13/2004	Field pH	9.02	SU	Discretionary
	8/13/2004	Field TDS	1,790	mg/L	Discretionary
	8/13/2004	Water Level Elevation	866.37	feet AMSL	Discretionary
	8/17/2004	Field Cond	3147	umhos/cm	Discretionary
	8/17/2004	Field pH	9.36	SU	Discretionary
	8/17/2004	Field TDS	1,935	mg/L	Discretionary
	8/17/2004	Water Level Elevation	868.82	feet AMSL	Discretionary
	8/18/2004	Field Cond	3553	umhos/cm	Discretionary
	8/18/2004	Field pH	9.33	SU	Discretionary
	8/18/2004	Field TDS	2,473	mg/L	Discretionary
	8/18/2004	Water Level Elevation	864.02	feet AMSL	Discretionary
	8/19/2004	Field Cond	2822	umhos/cm	Discretionary
	8/19/2004	Field pH	9.33	SU	Discretionary
	8/19/2004	Field TDS	1,658	mg/L	Discretionary
	8/19/2004	Water Level Elevation	863.21	feet AMSL	Discretionary
	8/20/2004	Field Cond	3318	umhos/cm	Discretionary
	8/20/2004	Field pH	9.3	SU	Discretionary
	8/20/2004	Field TDS	1,796	mg/L	Discretionary
	8/20/2004	Water Level Elevation	864.35	feet AMSL	Discretionary
	8/24/2004	Field Cond	4312	umhos/cm	Discretionary
	8/24/2004	Field pH	9.85	SU	Discretionary
	8/24/2004	Field TDS	1,603	mg/L	Discretionary
	8/24/2004	Water Level Elevation	868.51	feet AMSL	Discretionary
	8/25/2004	Field Cond	3033	umhos/cm	Discretionary
	8/25/2004	Field pH	9.32	SU	Discretionary
	8/25/2004	Field TDS	1,678	mg/L	Discretionary

TABLE C-3. SUMMARY OF ALL WELL DATA - 2004

WELL ID	DATE	PARAMETER	RESULT	UNITS	SAMPLE TYPE
PV-R2B (cont.)	8/25/2004	Water Level Elevation	863.04	feet AMSL	Discretionary
	8/26/2004	Alkalinity as CaCO3	63	mg/L	Discretionary
	8/26/2004	Alkalinity as CaCO3	48	mg/L	Discretionary
	8/26/2004	Antimony (dissolved)	<0.050	mg/L	Discretionary
	8/26/2004	Arsenic (dissolved)	<0.050	mg/L	Discretionary
	8/26/2004	Barium (dissolved)	0.014	mg/L	Discretionary
	8/26/2004	Boron (dissolved)	0.89	mg/L	Discretionary
	8/26/2004	Cadmium (dissolved)	<0.0050	mg/L	Discretionary
	8/26/2004	Calcium (dissolved)	18	mg/L	Discretionary
	8/26/2004	Chloride	510	mg/L	Discretionary
	8/26/2004	Chloride	560	mg/L	Discretionary
	8/26/2004	Chromium (dissolved)	0.049	mg/L	Discretionary
	8/26/2004	Field Cond	2778	umhos/cm	Discretionary
	8/26/2004	Field pH	9.55	SU	Discretionary
	8/26/2004	Fluoride	15	mg/L	Discretionary
	8/26/2004	Fluoride	15	mg/L	Discretionary
	8/26/2004	Lead (dissolved)	<0.0010	mg/L	Discretionary
	8/26/2004	Magnesium (dissolved)	< 0.50	mg/L	Discretionary
	8/26/2004	Mercury (dissolved)	<0.00020	mg/L	Discretionary
	8/26/2004	NitateNitrite	20	mg/L	Discretionary
	8/26/2004	NitateNitrite	21	mg/L	Discretionary
	8/26/2004	pH	9.64	SU	Discretionary
	8/26/2004	pH	9.55	SU	Discretionary
	8/26/2004	Potassium (dissolved)	1.5	mg/L	Discretionary
	8/26/2004	Selenium (dissolved)	0.0061	mg/L	Discretionary
	8/26/2004	Sodium (dissolved)	520	mg/L	Discretionary
	8/26/2004	Specific Conductance	2900	umhos/cm	Discretionary
	8/26/2004	Specific Conductance	2600	umhos/cm	Discretionary
	8/26/2004	Sulfate	340	mg/L	Discretionary
	8/26/2004	Sulfate	370	mg/L	Discretionary
	8/26/2004	TDS	1600	mg/L	Discretionary
	8/26/2004	TDS	1600	mg/L	Discretionary
PV-TR1	4/16/2004	Water Level Elevation	895.46	feet AMSL	Discretionary
U5-PTWA	5/27/2004	Water Level Elevation	889.81	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	889.6	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	889.63	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	889.51	feet AMSL	Monthly Contingency WL
	10/20/2004	Water Level Elevation	889.47	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	889.25	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	889.2	feet AMSL	Monthly Contingency WL
U5-PTWB	5/27/2004	Water Level Elevation	890.05	feet AMSL	Monthly Contingency WL
	7/14/2004	Water Level Elevation	889.81	feet AMSL	Monthly Contingency WL
	8/12/2004	Water Level Elevation	889.81	feet AMSL	Monthly Contingency WL
	9/16/2004	Water Level Elevation	889.7	feet AMSL	Monthly Contingency WL
	10/20/2004	Water Level Elevation	889.81	feet AMSL	Monthly Contingency WL
	11/3/2004	Water Level Elevation	889.76	feet AMSL	Monthly Contingency WL
	12/1/2004	Water Level Elevation	889.61	feet AMSL	Monthly Contingency WL

ft AMSL = Feet above mean sea level
mg/L = milligrams per liter
pCi/L - picoCuries per liter
umhos/cm = micromhos per centimeter
SU = standard units
°C = Degrees Celsius
< = Less than the indicated reporting limit

C4 – BASE MAPS



0 1,000
Feet

Legend

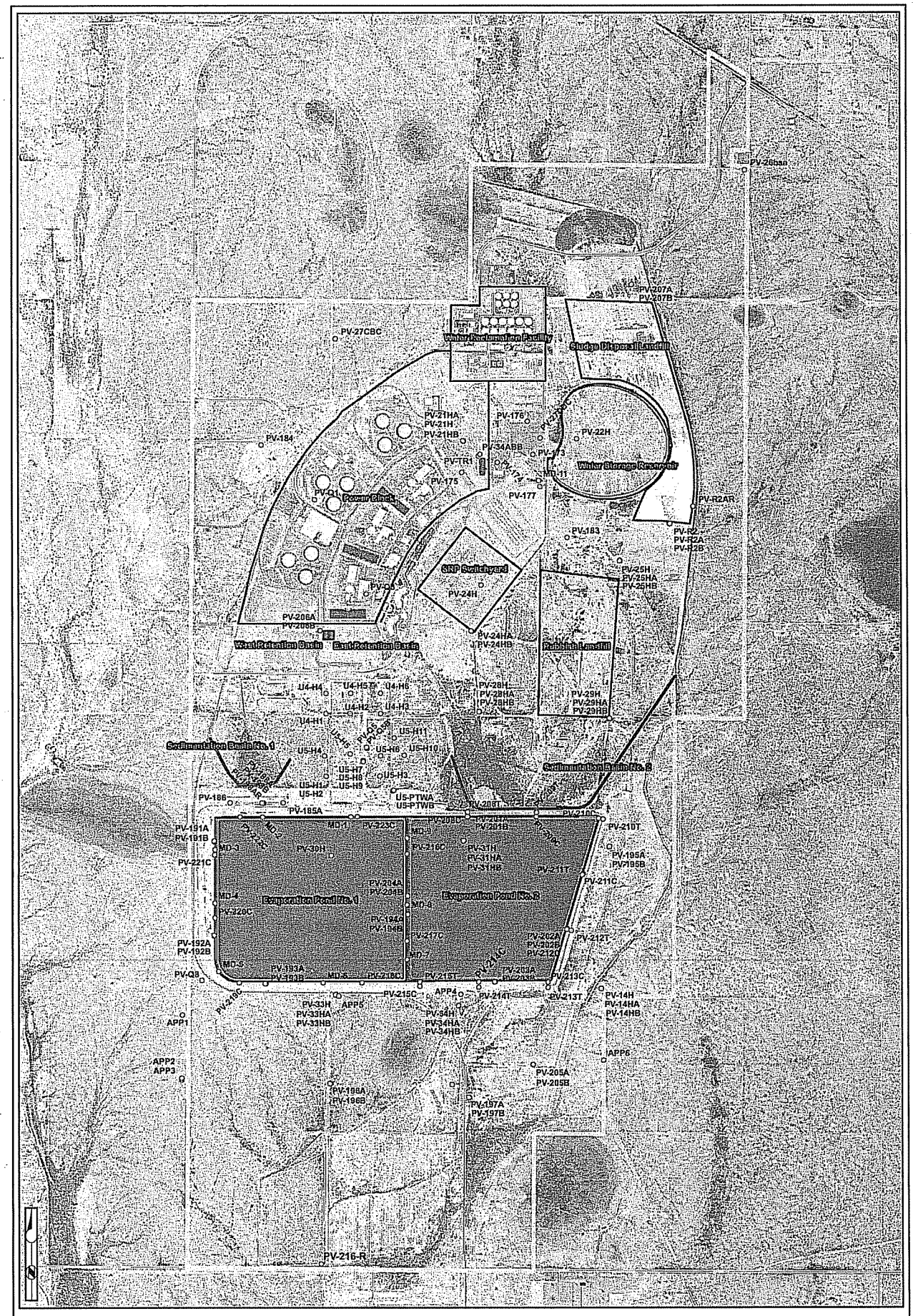
Wells
Facilities
Buildings
Site Boundary

Palo Verde Nuclear Generating Station

Base Map

BROWN AND CALDWELL

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186001 5/11/2005



Palo Verde Nuclear Generating Station

Base Map with 2004 Aerial Photo

P:\BC - Tucson\APS-PVNGS\128186 - APP Annual Rptng\GIS\128186001 5/11/2005

Photo Source - Landiscor