



KERR-McGEE CHEMICAL LLC

POST OFFICE BOX 55 - HENDERSON, NEVADA 89009

April 28, 2003

Todd Croft
Supervisor
Nevada Division of Environmental Protection
1771 East Flamingo, Suite 121-A
Las Vegas, NV 89119

Dear Mr. Croft:

Subject: Perchlorate Remediation – First Quarter 2003 Performance Report

Kerr-McGee Chemical LLC (Kerr-McGee) has agreed to provide regular reports to Nevada Division of Environmental Protection (NDEP) describing the progress related to its perchlorate remediation efforts. Integral to those reports is an evaluation of the environment's response to the remedial efforts. A monitoring plan is in place to support these evaluations, and this report summarizes information obtained from monitoring occurring during the first quarter 2003.

Kerr-McGee continues to treat water collected from the on-site area, Athens Road area and seep area using single pass ion exchange resin perchlorate removal processes. In 2002, Kerr-McGee committed to increasing the quantity of water collected for treatment from the seep area. A temporary (six month) discharge permit was received from NDEP and 5 additional groundwater wells were installed in the seep area. A large single pass resin process (on-site IX) is being utilized while the ISEP / catalytic destruction (regenerative ion exchange resin) process is undergoing a difficult commissioning. The on-site IX process is treating about 750 gpm and the balance, up to the collective allowance of the NPDES discharge permit limitation and the temporary discharge permit limitation (collectively up to 1100 gpm) is being treated in the single pass ion exchange process which has been in place since 1999 near the Las Vegas wash (Wash IX). Expended resin from these two treatment processes is shipped to an incinerator for disposal.

Please feel free to contact me at (702) 651-2234 if you have any questions related to this information. Thank you.

Sincerely,

Susan M. Crowley
Staff Environmental Specialist

By Express Mail

Attachments

cc: Brenda Pohlmann, City of Henderson
Barry Conaty, City of Henderson
Doug Zimmerman, NDEP
Marshall Davis, Metro Water District of Southern California
Pat Mulroy, Southern Nevada Water Authority
Mitch Kaplan, EPA Region IX

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bcc: LKBailey
PSCorbett
WOGreen
KAHasbrouck
E Krish
TWReed
JTSmith, Covington and Burling
FRStater
WKTaylor
R Waters
Rick Simon, ENSR

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Report

Tables and Figures

GW Elevations

QUARTERLY PERFORMANCE REPORT
PERCHLORATE RECOVERY SYSTEM
KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA

JANUARY – MARCH, 2003

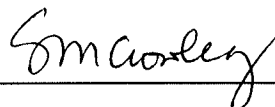
Submitted in Accordance with:

Administrative Order
On Consent
October 8, 2001

Prepared by:

Edward J. Krish
Hydrology Department
Kerr-McGee Corporation

April 28, 2003



Susan Crowley
Staff Environmental Specialist
Kerr-McGee Chemical LLC
Henderson, Nevada

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QUARTERLY PERFORMANCE REPORT
PERCHLORATE RECOVERY SYSTEM
KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA
JANUARY – MARCH, 2003

INTRODUCTION

In accordance with the Administrative Order on Consent for cleanup of perchlorate impacted groundwater in the Henderson area, finalized October 8, 2001, Kerr-McGee Chemical LLC (KMCLLC) submits this quarterly performance report to the Nevada Department of Environmental Protection (NDEP). This report, covering the period January through March, 2003, summarizes performance data for the perchlorate recovery system – consisting of the on-site well field, the off-site Athens Road well field, the off-site Seep well field and the off-site Seep area surface flow capture sump - and evaluates the effectiveness of the groundwater recovery system installed to carry out the perchlorate recovery program. In addition, information is provided on the status of the treatment technologies used for perchlorate removal from the water collected.

The components of this system are shown on Figure 1. The performance of each component will be discussed separately starting with the on-site well field and proceeding northward. In the last nine months since July, 2002, a total of about 639,000 pounds of perchlorate have been removed from the environment with the overall system. For the first quarter of 2003 the total pounds of perchlorate captured was about 225,000 which amounted to 2500 pounds per day. Of this total, about 98,000 pounds came from the on-site well field, about 83,000 pounds came from the Athens Road well field, about 33,000 pounds came from the Seep area well field and about 11,000 pounds came from the Seep surface flow capture sump. Figure 4 shows the monthly totals and relative significance of each of the four components.

Specific to the on-site well field, in December 1998, the Underground Injection Control (UIC) Permit (No. UNEV98203) for the Kerr-McGee chromium mitigation system was modified to include changes to the injection program. The chromium-remediated groundwater, which still contains perchlorate, is now transferred to an on-site double-lined impoundment and is no longer recharged into the shallow aquifer. The permit modification allows for recharge of fresh water (water from Lake Mead) to maintain groundwater levels downgradient from the on-site well field. All data requirements relative to the UIC permit modification are contained in quarterly reports describing the performance of the chromium remediation program, submitted by KMCLLC to NDEP.

ON-SITE WELL FIELD

Figure 2 shows the locations of the groundwater interceptor wells, monitor wells, the groundwater barrier (bentonite slurry) wall and the groundwater recharge trenches. Appendix A of this report lists monthly groundwater elevations recorded since June 1996 in these wells. Groundwater elevation data were recorded in January, 2003.

The on-site well field performance was evaluated during the first quarter of 2003. Figure 2 shows the potentiometric surface in the on-site interception area during the quarter. As shown in the Figure, the majority of interceptor wells have drawn groundwater levels down almost to the Muddy Creek contact. The map for the first quarter reporting period reflects areas of drawdown associated with the interceptor wells along with a marked elevation difference of the water table on either side of the groundwater barrier (slurry) wall. The groundwater "mound" on the downgradient side of the barrier wall in the

vicinity of wells M-80, M-27, and M-84 represents the area of fresh water entry from the recharge trenches as shown on Figure 2.

Table 1 lists perchlorate concentrations from September and December, 2002 and January, 2003 for wells in the vicinity of the on-site well field. The perchlorate in groundwater map, Figure 3, shows the contoured data from January, 2003. This mapping shows that the slurry wall has cut off the downgradient movement of the groundwater containing high perchlorate concentrations. It also shows the much lower perchlorate concentrations in the vicinity of the groundwater recharge trenches. Between these two lines there is a zone of relatively high perchlorate concentrations (M-70 series wells) that is stagnant, upgradient of the recharge trenches.

Based on low conductivity concentrations downgradient of the slurry wall, a separation in the perchlorate plume has been contoured between wells M73 and M86 on the east. Figure 5 shows, in graph-form, an east-west cross-section across the on-site well field, onto which is plotted the September, 2002, December, 2002 and January, 2003 perchlorate concentrations listed on Table 1. This graph shows that in most cases the change in perchlorate concentrations is slowly decreasing and that the concentrations are highly variable across the well field. Total capture of perchlorate has been achieved at this barrier and well field.

ATHENS ROAD WELL FIELD AND PIEZOMETER WELLS

The Athens Road well field was completed in March, 2002 and groundwater collection in this area began shortly afterward in support of commissioning the ISEP / catalytic destruction process. Continuous pumping from this well field began in mid-October 2002 as the On-Site IX process was placed in service to supplement the treatment capacity during the difficult commissioning period. Figure 1 and Plates 1 and 2 show the location

of the Athens Road Well Field. Recent mapping of the March, 2003 groundwater levels is shown on Plate 1, the *Potentiometric Surface Map between the Athens Road Well Field and the Seep*. The potentiometric surface is seen to slope generally NNE. The *Perchlorate in Groundwater Map between the Athens Road Well Field and the Seep*, Plate 2, shows that perchlorate concentrations north of Athens Road continue to vary in individual wells. For example, monitor well MW-K5, which contained 297 mg/l in May 2002, decreased to 1.43 mg/l in December but rose to 100 mg/l in March, 2003. Likewise the original three wells in the seep well field have increased from an average of 44 mg/l to an average of 87 mg/l between December, 2002 and March, 2003. A list of perchlorate concentrations in selected off-site wells is attached as Table 2.

In the Athens Road area, of the eight wells completed to intercept perchlorate in groundwater south of the City of Henderson Wastewater Reclamation Facility (COH WTF), only seven have adequate groundwater to pump. In late March – early April, back-up wells were completed adjacent to each of the original seven pumping wells. The well field was designed to pump about 280 gpm and is currently pumping at slightly less than this, but collecting the groundwater that is available. The change in perchlorate concentrations since October, 31, 2001 of these wells (ART-series) is shown in Figure 6. This graph shows that perchlorate concentrations fluctuate markedly in ART-2, 3, 4 and 8. However, after a recent spike, most pronounced in ART-3 and 8, it appears that the concentrations are decreasing in ART-2, 3, 4, 6 and 8.

The recent changes in perchlorate concentrations are clearly seen in Figure 7, an east-west cross-section graph through the well field. This graph shows the concentrations generally decreasing since the December, 2002 highs. Note that the perchlorate

concentrations on the western side of the field (PC-19 and ART-1) continue to be very low.

Five monitor wells in the well field are equipped with sensors to record continuous water level readings. Figure 8 shows both the long- and short-term drawdown associated with pumping the ART wells. The drawdown of PC-55 (west side, surrogate of ART-1) and PC-12 (east side, surrogate of ART-6) shows the initial pumping event in March, 2002, the intermittent pumping events between May and September, 2002 and the continuous pumping since October 22, 2002. As seen on the graph, October is when the other three monitor wells – PC-18, surrogate of ART-2; PC-17, surrogate of ART-3; and ART-5, surrogate of ART-6 - began recording drawdown. Between October 22, 2002 and April 11, 2003 drawdown has been 5.9 ft, 6.2 ft and 3.8 ft in monitor wells PC-18, PC-17 and ART-5, respectively.

Seven wells, the ARP-series, make up the Athens Road piezometer well line, located about 250 feet downgradient of the Athens Road well field. The changes in the contained perchlorate concentrations of these wells, completed in December, 2001, are shown in Figure 9. As shown, the western two wells, ARP-1 and 2, have decreased perchlorate concentrations. ARP-2 has recorded a concentration drop from 500 to 2.9 mg/l. Since December, ARP-3 and MW-K4, downgradient of ART-3 and 8, have also shown declines in concentrations.

Figure 10, an east-west cross-section graph across the piezometer line, shows that from December, 2002 to March, 2003 the perchlorate concentration in ARP-3 has decreased significantly whereas little change has occurred along the east side of the line. As shown by this figure, the Athens Road well field is in the beginning stages of capturing

the perchlorate plume. Both ARP-1 and 2 are significantly reduced in perchlorate content and ARP-3 is much reduced. It will take longer to demonstrate capture in the center of the well field because the cones of depression surrounding the recovery wells are still growing. In addition, because there is no additional groundwater recharge in the piezometer well area to make up for the loss due to pumping, the groundwater surrounding the piezometers is mostly stagnant. This means that the piezometer wells will take longer to clean up than downgradient wells. Note that of the three tracer test sites from which groundwater velocity estimates were obtained in 2000, the Athens Road area had the slowest estimated groundwater velocity at 20 ft/day under the prevailing gradient.

Intermediate between the Athens Road area and the Seep area is the monitor well line located within the COH WRF property, in the east-central part of section 36. Figure 11 shows the perchlorate concentrations in these wells between January, 2001 and March, 2003. As shown, well MW-K5 has been very erratic throughout the last year – decreasing from 380 mg/l in July to 1.43 mg/l in December and increasing to 100 mg/l in March. Figure 12, the east-west cross-section graph, shows that whereas MW-K5 was the only one of four wells that showed significant change in concentration, all the wells exhibited a downward trend. Figure 13 shows that, starting in July, 2002, the increased infiltration from the COH RIB's (unlined infiltration ponds) and associated drastic change in water levels in PC-98R corresponds to the start of the decrease in perchlorate concentration in well MW-K5. Now, even though water levels in PC-98R are low, perchlorate concentrations in MW-K5 are varying between 1 and 100 mg/l. This is probably evidence that the groundwater pumping at the Athens Road well field is causing groundwater from adjacent cleaner areas – containing variable lower

perchlorate concentrations – to flow into the downgradient channel to replace the missing groundwater.

Starting next quarter, data from a line of wells 2000 feet downgradient from the COH WRF well line will become part of this report. Perchlorate concentration data from these wells show that concentrations have fallen from 200 mg/l in May, 2002 to 50 mg/l in April, 2003.

SEEP AREA WELL FIELD AND SEEP SURFACE FLOW CAPTURE

At the direction of NDEP, Kerr-McGee has increased the quantity of water collected for treatment from the Seep area. In February, 2003 five additional wells (PC117-PC121) were completed in the Seep area well field (Plates 2 and 3). Now the Seep well field consists of nine wells – two of which (PC-99R2 and R3) are connected and operate as one – positioned over the deepest part of the alluvium channel that contains the highest concentrations of perchlorate. The well field is located about 600 feet upgradient of the Seep area surface flow capture sump. Plate 2 and Figure 14 show the regional and detailed depiction of the perchlorate content of the wells, respectively. It is interesting to note on Figure 14 that the perchlorate concentration decreases during the winter and increases during the summer. This trend has been observed for the last four years in the Seep surface flow and the last two years in the Seep area groundwater wells. As of January, 2003 the upward trend is starting again and is seen, to varying degrees, in all eight Seep area wells. Figure 15, the east-west cross-section graph of the Seep area well field shows this phenomenon clearly. In December, 2002 perchlorate concentrations in the well field were below 50 mg/l whereas by March, 2003 the concentrations have increased. However as shown on Figure 16, during this same period the perchlorate concentration of the seep surface flow has slowly declined from

79 to 48 mg/l and has not risen as high as it was last year at this same time. This graph also shows that in the winter, when the salt cedar vegetation is dormant the flow generally increases and the concentration decreases whereas the opposite is generally true in the summer. This winter however, the following two conditions have modified this generalization: 1) the seep wells are pumping more water – averaging about 600 gpm in March, 2003 and 2) the prolonged drought conditions in the area. The increased pumping rate in the seep well field is obviously reducing the surface flow and the long-term result of the drought will continue to lower the water table in the seep area.

CONCLUSIONS

Perchlorate continues to be captured by the four components of the remediation program. The on-site well field collection has been in operation many years and has fully matured cones of depression. This coupled with the slurry / barrier wall provides efficient capture in this area. Prior to October, 2002, the Athens Road area well field operation was operated as needed to support the ISEP / catalytic destruction process. This is the northernmost location where the alluvial channel is best defined. Since October, 2002 the Athens Road area well field has been in continuous operation and is maturing into an efficient interception line. The seep area well field and the seep area surface flow capture make up the remaining portions of the perchlorate recovery system. The seep area well field is advantageously located over the main part of the alluvium channel and is in close proximity to Las Vegas Wash. Capture in this area makes the most immediate impact on Wash perchlorate concentrations. In all cases, the amount of perchlorate removed at any of the four components depends on a constantly changing perchlorate movement in the groundwater controlled by many factors, some of which are beyond Kerr-McGee's control.

Kerr-McGee continues to treat water collected from the on-site, Athens Road area and seep area using a single pass ion exchange resin perchlorate removal process. The on-site single pass ion exchange process (On-Site IX) is treating about 750 gpm and the balance, up to the combined capacity of the NPDES Discharge permit and Temporary Discharge permit (1100 gpm) is being treated in the single pass ion exchange process which has been in place since 1999 near Las Vegas Wash (Wash IX). Expended resin from these two treatment processes is shipped to an incinerator for disposal.

Alternatives to restart the ISEP / catalytic destruction process are still being considered. As an alternative, permanent treatment technology, a new 1000 gpm biological treatment plant is being evaluated. A decision on the technology to be employed is expected shortly.

PROPOSED FUTURE ACTIVITIES

KMCLLC will continue to record water levels in the AOC area on a quarterly basis. Sensors to allow for continuous monitoring of drawdown in off-site pumping wells will be installed. Quarterly potentiometric surface maps will be developed as well as perchlorate in groundwater maps. The effect of changing the pumping rates of the recovery wells will be monitored, and responses (i.e.- pump rate adjustments) will be made to assure optimal drawdown and plume interception at the well fields. Pumping wells will be rehabilitated as necessary. The monitoring plan in current use will be modified as necessary to insure collection of all pertinent data to track the progress of perchlorate capture at the well fields and the seep.

The perchlorate concentration in seep area groundwater is now rebounding from winter lows and should result in significant increases in perchlorate recovery. We anticipate

that the impact of continued pumping at the Athens Road well field will soon be observed in the seep area concentrations.

APPENDIX A
WATER ELEVATIONS

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	I-B 1752.67		I-C 1752.78		I-D 1752.66		I-E 1752.36		I-F 1749.7	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	43.10	1707.59	43.90	1706.54	43.80	1706.74	36.20	1714.02	44.10	1703.48
11-Jul-96	42.80	1707.89	43.65	1706.79	43.90	1706.64	34.50	1715.72	42.80	1704.78
28-Aug-96	43.60	1707.09	44.20	1706.24	43.80	1706.74	36.00	1714.22	32.20	1715.38
11-Sep-96	43.60	1707.09	43.70	1706.74	43.80	1706.74	34.70	1715.52	41.70	1705.88
17-Oct-96	43.25	1707.44	43.80	1706.64	43.85	1706.69	36.50	1713.72	41.40	1706.18
15-Nov-96	42.50	1708.19	43.80	1706.64	43.80	1706.74	34.80	1715.42	41.70	1705.88
20-Dec-96	42.80	1707.89	44.00	1706.44	43.85	1706.69	34.45	1715.77	40.00	1707.58
08-Jan-97	44.05	1706.64	43.80	1706.64	43.85	1706.69	35.30	1714.92	41.65	1705.93
18-Feb-97	44.00	1706.69	43.90	1706.54	43.85	1706.69	41.15	1709.07	41.70	1705.88
10-Mar-97	42.60	1708.09	43.90	1706.54	43.85	1706.69	35.70	1714.52	41.60	1705.98
09-Apr-97	42.65	1708.04	43.85	1706.59	43.80	1706.74	34.60	1715.62	41.60	1705.98
28-Apr-97	42.70	1707.99	43.90	1706.54	43.87	1706.67	33.80	1716.42	41.15	1706.43
18-Jun-97	43.40	1707.29	31.85	1718.59	43.00	1707.54	35.70	1714.52	40.60	1706.98
01-Aug-97										
15-Sep-97	43.15	1707.54	43.20	1707.24	34.60	1715.94			41.91	1705.67
20-Nov-97	43.00	1707.69	30.05	1720.39	44.05	1706.49	34.35	1715.87	43.00	1704.58
02-Dec-97	43.00	1707.69	30.05	1720.39	44.05	1706.49	34.35	1715.87	43.00	1704.58
22-Jan-98	35.00	1715.69	34.00	1716.44	42.80	1707.74	37.00	1713.22	33.30	1714.28
11-Feb-98	39.20	1711.49	42.20	1708.24	44.25	1706.29	37.50	1712.72	38.25	1709.33
25-Mar-98	43.00	1707.69	44.00	1706.44	44.70	1705.84	34.30	1715.92	40.85	1706.73
27-Apr-98	43.18	1707.51	42.73	1707.71	32.15	1718.39	33.22	1717.00	40.74	1706.84
14-Sep-98	42.73	1707.96	41.13	1709.31	44.41	1706.13	37.15	1713.07	40.70	1706.88
15-Dec-98	42.86	1707.83	41.10	1709.34	44.50	1706.04	35.63	1714.59	40.98	1706.60
4-Feb-99	43.21	1707.48	43.94	1706.50	44.64	1705.90	34.15	1716.07	41.32	1706.26
24-Mar-99	42.80	1707.89	43.90	1706.54	44.62	1705.92	36.00	1714.22	41.50	1706.08
4-May-99	42.10	1708.59	43.70	1706.74	43.87	1706.67	39.65	1710.57	40.56	1707.02
9-Aug-99	42.54	1708.15	43.37	1707.07	44.80	1705.74	35.50	1714.72	41.04	1706.54
8-Nov-99	43.54	1707.15	34.49	1715.95	44.32	1706.22	36.85	1713.37	44.00	1703.58
31-Jan-00	44.00	1706.69	35.32	1715.12	38.55	1711.99	36.62	1713.60	44.80	1702.78
01-May-00	43.19	1707.50	43.62	1706.82	43.42	1707.12	34.50	1715.72	32.81	1714.77
18-Sep-00			43.75	1706.69	41.47	1709.07	45.25	1704.97	43.92	1703.66
13-Nov-00	44.20	1706.49	43.70	1706.74	41.36	1709.18	45.10	1705.12	41.80	1705.78
01-Feb-01	42.33	1708.36	43.85	1706.59	41.41	1709.13	45.32	1704.90	44.42	1703.16
01-May-01	43.48	1707.21			41.95	1708.59	45.42	1704.80		
01-Sep-01	39.70	1710.99	44.15	1706.29	42.20	1708.34	46.30	1703.92	41.25	1706.33
01-Nov-01	40.68	1710.01	38.23	1712.21	41.50	1709.04	36.55	1713.67	29.50	1718.08
01-Mar-02	40.44	1710.25	44.00	1706.44	48.48	1702.06	43.00	1707.22	29.10	1718.48
01-May-02	31.31	1719.38	42.00	1708.44	39.80	1710.74	43.20	1707.02	27.80	1719.78
09-Sep-02	43.26	1709.41	44.45	1708.33	40.51	1712.15	41.20	1711.16	29.68	1720.02
09-Dec-02	39.66	1713.01	36.29	1716.49	30.93	1721.73	36.37	1715.99	27.40	1722.30
20-Jan-03	40.02	1712.65	36.78	1716.00	35.92	1716.74	38.92	1713.44	27.95	1721.75

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	I-G 1752.5		I-H 1753.21		I-I 1745.5		I-J 1750.07		I-K 1750.08	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	31.00	1719.42	36.00	1715.07	33.00	1710.36	36.60	1711.35	35.70	1708.27
11-Jul-96	32.20	1718.22	33.40	1717.67	36.00	1707.36	36.50	1711.45	32.50	1711.47
28-Aug-96	31.30	1719.12	33.95	1717.12	41.00	1702.36	37.50	1710.45	35.50	1708.47
11-Sep-96	31.45	1718.97	39.00	1712.07	41.30	1702.06	34.00	1713.95	35.60	1708.37
17-Oct-96	39.70	1710.72	36.00	1715.07			34.50	1713.45	34.30	1709.67
15-Nov-96	31.40	1719.02	35.10	1715.97	33.20	1710.16	33.50	1714.45	35.00	1708.97
20-Dec-96	31.30	1719.12	41.50	1709.57	41.00	1702.36	33.90	1714.05	33.40	1710.57
08-Jan-97	40.75	1709.67	41.70	1709.37	41.00	1702.36	35.81	1712.14	30.20	1713.77
18-Feb-97	40.70	1709.72	36.20	1714.87	40.30	1703.06	35.80	1712.15	30.80	1713.17
10-Mar-97	40.75	1709.67	35.65	1715.42	35.80	1707.56	33.00	1714.95	31.70	1712.27
09-Apr-97	40.75	1709.67	36.00	1715.07	41.00	1702.36	36.50	1711.45	34.80	1709.17
28-Apr-97	40.76	1709.66	42.00	1709.07	41.00	1702.36	35.80	1712.15	36.25	1707.72
18-Jun-97	40.70	1709.72	39.80	1711.27	40.00	1703.36	36.25	1711.70	36.20	1707.77
01-Aug-97										
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20-Nov-97	40.70	1709.72	36.40	1714.67	41.00	1702.36	30.65	1717.30	30.10	1713.87
02-Dec-97	40.70	1709.72	36.40	1714.67	41.00	1702.36	30.65	1717.30	30.10	1713.87
22-Jan-98	39.90	1710.52	37.70	1713.37	39.50	1703.86	29.60	1718.35	22.10	1721.87
11-Feb-98	39.44	1710.98	31.54	1719.53	35.90	1707.46	28.50	1719.45	26.17	1717.80
25-Mar-98	39.70	1710.72	34.20	1716.87	41.00	1702.36	37.00	1710.95	37.80	1706.17
27-Apr-98	35.87	1714.55	34.85	1716.22	30.30	1713.06	34.30	1713.65	24.51	1719.46
14-Sep-98	39.84	1710.58	36.02	1715.05	26.04	1717.32	35.55	1712.40	24.53	1719.44
15-Dec-98	39.00	1711.42	40.58	1710.49	24.77	1718.59	30.63	1717.32	22.76	1721.21
4-Feb-99	39.95	1710.47	31.00	1720.07	24.44	1718.92	32.51	1715.44	28.60	1715.37
24-Mar-99	39.80	1710.62	32.00	1719.07	23.50	1719.86	29.00	1718.95	28.90	1715.07
4-May-99	39.46	1710.96	32.67	1718.40	24.33	1719.03	29.25	1718.70	30.28	1713.69
9-Aug-99	40.94	1709.48	33.18	1717.89	25.34	1718.02	38.12	1709.83	30.07	1713.90
8-Nov-99	39.90	1710.52	39.90	1711.17	25.40	1717.96	39.04	1708.91	31.10	1712.87
31-Jan-00	33.58	1716.84	41.51	1709.56	26.30	1717.06	28.60	1719.35	25.86	1718.11
01-May-00	39.73	1710.69	34.83	1716.24	25.92	1717.44	40.70	1707.25	30.23	1713.74
18-Sep-00	34.56	1715.86	41.26	1709.81	30.70	1712.66	41.86	1706.09	29.41	1714.56
13-Nov-00			39.70	1711.37	35.10	1708.26			32.45	1711.52
01-Feb-01	34.80	1715.62	33.85	1717.22	36.39	1706.97	41.68	1706.27	31.12	1712.85
01-May-01	35.36	1715.06	37.62	1713.45	34.64	1708.72	31.60	1716.35	30.18	1713.79
01-Sep-01	40.20	1710.22	36.00	1715.07	22.95	1720.41			33.10	1710.87
01-Nov-01	36.75	1713.67	38.20	1712.87	22.00	1721.36	29.50	1718.45	26.20	1717.77
01-Mar-02	34.10	1716.32	30.32	1720.75	21.00	1722.36	28.98	1718.97	27.39	1716.58
01-May-02	39.10	1711.32	32.80	1718.27	21.20	1722.16	27.80	1720.15	25.90	1718.07
09-Sep-02	29.78	1722.72	31.52	1721.69	20.78	1724.72	28.00	1722.07	26.59	1723.49
09-Dec-02	29.74	1722.76	29.93	1723.28	20.45	1725.05	27.42	1722.65	24.58	1725.50
20-Jan-03			29.47	1723.74	21.18	1724.32	27.66	1722.41	24.88	1725.20

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	I-L 1751.7		I-M 1752.9		I-N 1751.45		I-O 1752.8		I-P 1751.66	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	40.00	1709.49	41.40	1709.32	39.10	1710.16	39.00	1711.66		
11-Jul-96	38.85	1710.64	41.60	1709.12	38.00	1711.26	34.50	1716.16		
28-Aug-96	40.00	1709.49	38.95	1711.77	39.00	1710.26	34.50	1716.16		
11-Sep-96	39.80	1709.69	38.60	1712.12	38.10	1711.16	33.30	1717.36		
17-Oct-96	40.00	1709.49	38.60	1712.12	38.00	1711.26	34.80	1715.86		
15-Nov-96	39.80	1709.69	40.80	1709.92	37.30	1711.96	34.30	1716.36		
20-Dec-96	39.90	1709.59	41.30	1709.42	32.75	1716.51	33.80	1716.86		
08-Jan-97	39.80	1709.69	41.75	1708.97	32.20	1717.06	38.40	1712.26		
18-Feb-97	40.10	1709.39	41.35	1709.37	37.55	1711.71	33.60	1717.06		
10-Mar-97	39.95	1709.54	41.80	1708.92	33.20	1716.06	35.60	1715.06		
09-Apr-97	39.50	1709.99	41.70	1709.02	33.30	1715.96	36.00	1714.66		
28-Apr-97	38.10	1711.39	33.15	1717.57	32.98	1716.28	39.95	1710.71		
18-Jun-97	38.85	1710.64	41.80	1708.92	33.60	1715.66	36.30	1714.36		
01-Aug-97										
15-Sep-97	38.05	1711.44	41.66	1709.06	39.18	1710.08	30.59	1720.07		
20-Nov-97	38.70	1710.79	41.70	1709.02	34.60	1714.66	36.00	1714.66		
02-Dec-97	38.70	1710.79	41.70	1709.02	34.60	1714.66	36.00	1714.66		
22-Jan-98	30.90	1718.59	40.00	1710.72	38.00	1711.26	32.85	1717.81		
11-Feb-98	37.32	1712.17	40.05	1710.67	37.00	1712.26	34.15	1716.51		
25-Mar-98	38.60	1710.89	41.20	1709.52	38.00	1711.26	35.00	1715.66		
27-Apr-98	32.59	1716.90	40.19	1710.53	33.43	1715.83	33.00	1717.66		
14-Sep-98	39.83	1709.66	41.94	1708.78	36.29	1712.97	38.08	1712.58	31.45	1720.21
15-Dec-98	38.60	1710.89	41.67	1709.05	36.12	1713.14	33.77	1716.89	31.21	1720.45
4-Feb-99	37.50	1711.99	41.73	1708.99	37.10	1712.16	40.72	1709.94	29.62	1722.04
24-Mar-99	39.25	1710.24	41.70	1709.02	39.20	1710.06	30.20	1720.46	30.00	1721.66
4-May-99	39.31	1710.18	37.45	1713.27	37.10	1712.16	30.70	1719.96	29.83	1721.83
9-Aug-99	32.00	1717.49	41.90	1708.82	37.04	1712.22	31.80	1718.86	31.49	1720.17
8-Nov-99	38.77	1710.72	41.75	1708.97	34.00	1715.26	33.00	1717.66	36.47	1715.19
31-Jan-00	37.31	1712.18	41.74	1708.98	33.90	1715.36	32.60	1718.06	35.78	1715.88
01-May-00	39.68	1709.81	40.25	1710.47	34.24	1715.02	32.58	1718.08	31.83	1719.83
18-Sep-00	40.08	1709.41	41.71	1709.01	38.50	1710.76	35.14	1715.52		
13-Nov-00	39.75	1709.74	41.25	1709.47	38.28	1710.98	36.57	1714.09		
01-Feb-01	39.87	1709.62	41.10	1709.62	35.09	1714.17	36.26	1714.40		
01-May-01	39.25	1710.24	33.55	1717.17	41.60	1707.66	37.25	1713.41		
01-Sep-01	40.80	1708.69	42.52	1708.20	38.00	1711.26	31.00	1719.66		
01-Nov-01	32.55	1716.94	39.20	1711.52	33.00	1716.26	32.60	1718.06		
01-Mar-02	34.88	1714.61	37.24	1713.48	32.42	1716.84	30.98	1719.68		
01-May-02	28.82	1720.67	36.48	1714.24	31.00	1718.26	31.31	1719.35	34.00	1717.66
09-Sep-02	31.44	1720.26	33.40	1719.50	29.57	1721.88	30.50	1722.30	30.38	1721.28
09-Dec-02	30.19	1721.51	34.09	1718.81	30.02	1721.43	30.41	1722.39	29.73	1721.93
20-Jan-03	30.50	1721.20			30.80	1720.65	30.82	1721.98	27.96	1723.70

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	I-Q 1753.11		I-R 1751.35		I-S 1750.03		I-T 1751.65		I-U 1752.16	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96										
11-Jul-96										
28-Aug-96										
11-Sep-96										
17-Oct-96										
15-Nov-96										
20-Dec-96										
08-Jan-97										
18-Feb-97										
10-Mar-97										
09-Apr-97										
28-Apr-97										
18-Jun-97										
01-Aug-97										
15-Sep-97										
20-Nov-97										
02-Dec-97										
22-Jan-98										
11-Feb-98										
25-Mar-98										
27-Apr-98										
14-Sep-98	40.95	1712.16								
15-Dec-98	40.14	1712.97								
4-Feb-99	38.30	1714.81								
24-Mar-99	38.00	1715.11								
4-May-99	37.24	1715.87	31.22	1720.13	43.12	1706.91	40.00	1711.65	39.20	1712.96
9-Aug-99	36.58	1716.53	32.26	1719.09	35.95	1714.08	30.37	1721.28	31.16	1721.00
8-Nov-99	39.33	1713.78	33.35	1718.00	39.91	1710.12	42.00	1709.65	41.80	1710.36
31-Jan-00	39.15	1713.96	35.37	1715.98	41.63	1708.40	27.80	1723.85	38.42	1713.74
01-May-00			34.74	1716.61	38.78	1711.25	41.58	1710.07	37.30	1714.86
18-Sep-00	38.07	1715.04	37.73	1713.62	42.94	1707.09	40.89	1710.76	40.16	1712.00
13-Nov-00	37.35	1715.76	36.80	1714.55	41.90	1708.13	40.83	1710.82	40.30	1711.86
01-Feb-01	36.21	1716.90	36.99	1714.36	42.77	1707.26	42.82	1708.83	43.80	1708.36
01-May-01	36.53	1716.58	36.18	1715.17	29.50	1720.53	41.82	1709.83	43.10	1709.06
01-Sep-01	38.10	1715.01	38.10	1713.25	43.80	1706.23	40.35	1711.30		
01-Nov-01	37.90	1715.21	33.70	1717.65	36.75	1713.28	41.90	1709.75	36.00	1716.16
01-Mar-02	39.62	1713.49	35.38	1715.97	27.32	1722.71	41.40	1710.25	35.78	1716.38
01-May-02	38.15	1714.96	28.50	1722.85	28.50	1721.53	38.28	1713.37	32.70	1719.46
09-Sep-02	36.94	1716.17	29.75	1721.60	43.54	1706.49	39.38	1712.27	36.14	1716.02
09-Dec-02	37.13	1715.98	29.95	1721.40	43.48	1706.55	40.99	1710.66	33.44	1718.72
20-Jan-03	35.39	1717.72	32.68	1718.67	43.25	1706.78	38.51	1713.14	34.55	1717.61

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	I-V 1752.13		I-AR 1758.35		M-14 1759.83		M-18 1740.48		M-19 1766.77	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96					33.30	1725.53	21.50	1716.78	34.00	1732.54
11-Jul-96									34.10	1732.44
28-Aug-96									34.00	1732.54
11-Sep-96					33.10	1725.73	21.50	1716.78	34.10	1732.44
17-Oct-96									34.00	1732.54
15-Nov-96									33.00	1733.54
20-Dec-96					33.50	1725.33	22.15	1716.13	33.10	1733.44
08-Jan-97									33.75	1732.79
18-Feb-97									33.70	1732.84
10-Mar-97									34.00	1732.54
09-Apr-97									34.00	1732.54
28-Apr-97					33.59	1725.24	22.30	1715.98	31.70	1734.84
18-Jun-97					33.55	1725.28	22.40	1715.88		
01-Aug-97					33.51	1725.32				
15-Sep-97					33.50	1725.33	21.48	1716.80	31.75	1734.51
20-Nov-97					33.85	1724.98	21.25	1717.03		
02-Dec-97					33.82	1725.01	21.25	1717.03	32.87	1733.39
22-Jan-98					33.00	1725.83	21.03	1717.25	32.15	1734.11
11-Feb-98					33.91	1724.92	21.25	1717.03	33.10	1733.16
25-Mar-98					33.00	1725.83	21.30	1716.98	31.95	1734.31
27-Apr-98					33.44	1725.39	21.60	1716.68	32.40	1733.86
14-Sep-98					34.38	1724.45	21.55	1716.73	32.17	1734.09
15-Dec-98					32.88	1725.95	20.44	1717.84	32.18	1734.08
4-Feb-99					32.76	1726.07	20.81	1717.47	32.69	1733.57
24-Mar-99					32.20	1726.63	21.35	1716.93	33.00	1733.26
4-May-99	40.19	1711.94			32.34	1726.49	21.74	1716.54	33.03	1733.23
9-Aug-99	38.33	1713.80			34.12	1724.71	22.50	1715.78	33.79	1732.47
8-Nov-99	40.50	1711.63			34.45	1724.38	23.00	1715.28	33.80	1732.46
31-Jan-00	31.30	1720.83			34.17	1724.66	23.51	1714.77	34.40	1731.86
01-May-00	39.48	1712.65			33.95	1724.88	23.86	1714.42	34.50	1731.76
18-Sep-00	40.53	1711.60	43.95	1714.40	34.12	1724.71	24.57	1713.71	35.24	1731.02
13-Nov-00	42.39	1709.74	43.03	1715.32	32.78	1726.05	24.80	1713.48	33.97	1732.29
01-Feb-01	32.90	1719.23	43.90	1714.45	33.80	1725.03	26.62	1711.66	34.93	1731.33
01-May-01	36.60	1715.53			33.73	1725.10	24.99	1713.29	35.06	1731.20
01-Sep-01	43.40	1708.73			34.24	1724.59	dry		35.33	1730.93
01-Nov-01	33.00	1719.13	33.78	1724.57	34.23	1724.60	dry		35.00	1731.26
01-Mar-02	27.27	1724.86	43.49	1714.86	33.40	1725.43	dry		34.00	1732.26
01-May-02	29.98	1722.15	43.90	1714.45	33.42	1725.41	dry		34.02	1732.24
09-Sep-02	29.46	1722.67	40.00	1718.35	31.92	1727.91	dry		34.22	1732.55
09-Dec-02	28.51	1723.62	40.15	1718.20	32.92	1726.91	dry		35.73	1731.04
20-Jan-03	28.72	1723.41	40.91	1717.44	33.78	1726.05	28.21	1710.07	35.27	1731.50

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	M-22A 1759.46		M-25 1759.93		M-27 1742.25		M-36 1759.82		M-37 1761.06	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	29.20	1729.15	33.30	1724.85	26.00	1714.16	34.80	1723.14	31.00	1728.28
11-Jul-96	28.90	1729.45	33.40	1724.75			34.60	1723.34		
28-Aug-96	29.45	1728.90	33.45	1724.70			34.60	1723.34		
11-Sep-96	29.15	1729.20	33.55	1724.60	26.10	1714.06	34.90	1723.04	31.00	1728.28
17-Oct-96	29.45	1728.90	33.50	1724.65			31.00	1726.94		
15-Nov-96	29.40	1728.95	33.50	1724.65			32.00	1725.94		
20-Dec-96	29.40	1728.95	33.45	1724.70	25.90	1714.26	32.25	1725.69	31.80	1727.48
08-Jan-97	29.45	1728.90	33.55	1724.60			32.20	1725.74		
18-Feb-97	29.40	1728.95	33.40	1724.75			32.00	1725.94		
10-Mar-97	29.35	1729.00	33.30	1724.85			32.20	1725.74		
09-Apr-97	29.45	1728.90	33.50	1724.65			32.30	1725.64		
28-Apr-97	29.54	1728.81	33.53	1724.62			32.35	1725.59	31.95	1727.33
18-Jun-97	29.68	1728.67	33.59	1724.56	dry		31.20	1726.74	31.93	1727.35
01-Aug-97	29.20	1728.56	33.53	1724.29			31.63	1726.31	31.93	1727.35
15-Sep-97	29.01	1728.75	33.45	1724.37			31.49	1726.45	31.77	1727.51
20-Nov-97	28.65	1729.11	33.10	1724.72	25.85	1714.31	31.25	1726.69	31.20	1728.08
02-Dec-97	28.64	1729.12	33.04	1724.78	25.85	1714.31	31.18	1726.76	31.30	1727.98
22-Jan-98	28.60	1729.16	33.00	1724.82	dry		31.12	1726.82	31.22	1728.06
11-Feb-98	28.52	1729.24	33.05	1724.77	dry		31.20	1726.74	31.37	1727.91
25-Mar-98	28.65	1729.11	33.00	1724.82	dry		31.20	1726.74	31.20	1728.08
27-Apr-98	29.00	1728.76	33.05	1724.77	dry		31.31	1726.63	31.41	1727.87
14-Sep-98	28.60	1729.16	33.72	1724.10	dry		31.82	1726.12	32.04	1727.24
15-Dec-98	29.10	1728.66	33.41	1724.41	26.00	1714.16	31.67	1726.27	31.42	1727.86
4-Feb-99	29.00	1728.76	33.35	1724.47	dry		31.47	1726.47	31.43	1727.85
24-Mar-99	29.00	1728.76	33.40	1724.42	26.00	1716.25	31.60	1726.34	31.60	1727.68
4-May-99	29.26	1728.50	33.33	1724.49	dry		31.48	1726.46	31.43	1727.85
9-Aug-99	29.90	1727.86	33.76	1724.06	dry		32.09	1725.85	32.11	1727.17
8-Nov-99	30.31	1727.45	34.00	1723.82	dry		32.42	1725.52	32.51	1726.77
31-Jan-00	30.29	1727.47	33.70	1724.12	dry		32.30	1725.64	32.09	1727.19
01-May-00	30.36	1727.40	33.53	1724.29	dry		32.29	1725.65	31.55	1727.73
18-Sep-00	30.91	1726.85	34.11	1723.71	dry		32.79	1725.15	32.29	1726.99
13-Nov-00	30.95	1726.81	33.95	1723.87	dry		32.70	1725.24	33.00	1726.28
01-Feb-01	30.92	1726.84	33.93	1723.89	dry		33.73	1724.21	34.09	1725.19
01-May-01	30.73	1727.03	33.58	1724.24	dry		32.47	1725.47	32.62	1726.66
01-Sep-01	30.77	1726.99	33.77	1724.05	dry		32.43	1725.51	32.04	1727.24
01-Nov-01	30.00	1727.76	33.42	1724.40	dry		31.95	1725.99	32.10	1727.18
01-Mar-02	29.56	1728.20	33.20	1724.62	dry		31.78	1726.16	32.10	1727.18
01-May-02	29.18	1728.58	32.82	1725.00	dry		31.35	1726.59	31.51	1727.77
09-Sep-02	29.08	1730.38	32.30	1727.63	23.25	1719.00	31.22	1728.60	30.94	1730.12
09-Dec-02	29.23	1730.23	33.07	1726.86	23.72	1718.53	31.47	1728.35	32.04	1729.02
20-Jan-03	29.25	1730.21	33.27	1726.66	23.71	1718.54	31.59	1728.23	33.23	1727.83

**KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA FACILITY
GROUNDWATER ELEVATIONS
SELECTED ON-SITE WELLS**

TOC-->	M-38 1759.73		M-39 1761.13		M-57 1753.83		M-61 1746.84		M-64 1749.76	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW		DTW	ELEV
20-Jun-96	31.10	1726.78	30.35	1728.96	30.40	1721.89	23.50	1722.05	30.10	1719.66
11-Jul-96			30.50	1728.81						
28-Aug-96			30.65	1728.66						
11-Sep-96	31.00	1726.88	30.70	1728.61	30.40	1721.89	23.50	1722.05	30.20	1719.56
17-Oct-96			30.55	1728.76						
15-Nov-96			30.50	1728.81						
20-Dec-96	31.00	1726.88	30.55	1728.76	31.35	1720.94	24.00	1721.55	30.25	1719.51
08-Jan-97			30.60	1728.71						
18-Feb-97			30.50	1728.81						
10-Mar-97			30.50	1728.81						
09-Apr-97			30.70	1728.61						
28-Apr-97	31.08	1726.80	30.68	1728.63	31.38	1720.91	24.15	1721.40	30.15	1719.61
18-Jun-97	31.15	1726.73	31.40	1727.91	31.28	1721.01	24.20	1721.35	30.40	1719.36
01-Aug-97			30.00	1729.31	31.40	1720.89				
15-Sep-97	30.90	1727.04	29.94	1729.37	31.33	1720.96			30.35	1719.41
20-Nov-97	30.75	1727.19	29.55	1729.76	30.60	1721.69	22.85	1722.70	29.70	1720.06
02-Dec-97	31.00	1726.94	29.47	1729.84	30.56	1721.73	23.50	1722.05	29.80	1719.96
22-Jan-98	30.73	1727.21	29.65	1729.66	30.64	1721.65	22.45	1723.10	28.45	1721.31
11-Feb-98	30.70	1727.24	29.44	1729.87	30.95	1721.34	22.90	1722.65	28.70	1721.06
25-Mar-98	30.70	1727.24	29.65	1729.66	31.00	1721.29	23.10	1722.45	29.60	1720.16
27-Apr-98	30.74	1727.20	30.06	1729.25	31.08	1721.21	23.49	1722.06	29.47	1720.29
14-Sep-98	31.21	1726.73	30.63	1728.68	31.20	1721.09	23.22	1722.33	30.40	1719.36
15-Dec-98	31.05	1726.89	29.28	1730.03	30.80	1721.49	23.55	1722.00	30.15	1719.61
4-Feb-99	30.94	1727.00	30.02	1729.29	29.35	1722.94	22.40	1723.15	30.10	1719.66
24-Mar-99	31.00	1726.94	30.38	1728.93	29.80	1722.49	23.33	1722.22	30.40	1719.36
4-May-99	30.90	1727.04	30.59	1728.72	30.28	1722.01	23.70	1721.85	30.55	1719.21
9-Aug-99	31.31	1726.63	31.12	1728.19	30.90	1721.39	24.20	1721.35	30.82	1718.94
8-Nov-99	31.48	1726.46	31.60	1727.71	31.34	1720.95	24.85	1720.70	32.03	1717.73
31-Jan-00	31.31	1726.63	31.58	1727.73	31.15	1721.14	24.99	1720.56	30.81	1718.95
01-May-00	31.30	1726.64	31.70	1727.61	31.10	1721.19	25.11	1720.44	30.35	1719.41
18-Sep-00	31.91	1726.03	32.26	1727.05	31.09	1721.20	25.20	1720.35	31.90	1717.86
13-Nov-00	31.40	1726.54	32.22	1727.09	31.28	1721.01	25.10	1720.45	31.80	1717.96
01-Feb-01	31.42	1726.52	32.23	1727.08	30.45	1721.84	27.23	1718.32	32.87	1716.89
01-May-01	31.17	1726.77	32.10	1727.21	30.85	1721.44	25.82	1719.73	30.43	1719.33
01-Sep-01	31.38	1726.56	31.96	1727.35	31.54	1720.75	24.60	1720.95	32.22	1717.54
01-Nov-01	31.32	1726.62	31.54	1727.77	31.81	1720.48	23.12	1722.43	30.31	1719.45
01-Mar-02	31.10	1726.84	31.10	1728.21	31.26	1721.03	23.15	1722.40	28.88	1720.88
01-May-02	30.81	1727.13	30.60	1728.71	30.72	1721.57	21.31	1724.24	28.60	1721.16
09-Sep-02	32.75	1726.98	30.62	1730.51	30.27	1723.56	22.20	1724.64	27.85	1721.91
09-Dec-02	31.01	1728.72	30.72	1730.41	30.77	1723.06	21.95	1724.89	28.67	1721.09
20-Jan-03	31.05	1728.68	30.66	1730.47	30.74	1723.09	23.18	1723.66	28.82	1720.94

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	M-65 1753.91		M-66 1754.24		M-67 1745.91		M-68 1748.73		M-69 1749.76	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	32.45	1720.43	30.20	1722.13	21.00	1723.98	23.00	1724.44	30.00	1718.77
11-Jul-96					21.00	1723.98	23.30	1724.14		
28-Aug-96					21.25	1723.73	23.35	1724.09		
11-Sep-96	32.45	1720.43	30.20	1722.13	21.30	1723.68	23.40	1724.04	30.10	1718.67
17-Oct-96					21.20	1723.78	23.25	1724.19		
15-Nov-96					21.20	1723.78	23.25	1724.19		
20-Dec-96	32.40	1720.48	30.60	1721.73	21.25	1723.73	23.30	1724.14	30.70	1718.07
08-Jan-97					21.25	1723.73	23.30	1724.14		
18-Feb-97					21.20	1723.78	23.20	1724.24		
10-Mar-97					21.25	1723.73	23.25	1724.19		
09-Apr-97					21.40	1723.58	23.25	1724.19		
28-Apr-97	32.60	1720.28	30.70	1721.63	21.38	1723.60	23.32	1724.12	30.46	1718.31
18-Jun-97	32.70	1720.18	30.78	1721.55	21.45	1723.53	23.50	1723.94	29.40	1719.37
01-Aug-97										
15-Sep-97										
20-Nov-97	32.25	1720.63	29.85	1722.48	20.35	1724.63	22.00	1725.44	28.90	1719.87
02-Dec-97	32.07	1720.81	30.32	1722.01	20.30	1724.68	23.14	1724.30	28.38	1720.39
22-Jan-98	31.95	1720.93	29.42	1722.91	20.00	1724.98	22.00	1725.44	28.85	1719.92
11-Feb-98	32.10	1720.78	29.70	1722.63	20.35	1724.63	21.80	1725.64	28.70	1720.07
25-Mar-98	32.15	1720.73	29.80	1722.53	20.48	1724.50	22.20	1725.24	30.00	1718.77
27-Apr-98	32.35	1720.53	30.12	1722.21	20.80	1724.18	22.67	1724.77	29.32	1719.45
14-Sep-98	32.69	1720.19	30.42	1721.91	20.79	1724.19	22.40	1725.04	30.58	1718.19
15-Dec-98	32.60	1720.28	30.55	1721.78	21.00	1723.98	22.20	1725.24	30.18	1718.59
4-Feb-99	32.35	1720.53	29.58	1722.75	20.10	1724.88	21.60	1725.84	30.00	1718.77
24-Mar-99	32.53	1720.35	29.90	1722.43	20.54	1724.44	22.90	1724.54	30.50	1718.27
4-May-99	32.64	1720.24	30.35	1721.98	20.90	1724.08	23.18	1724.26	31.14	1717.63
9-Aug-99	32.90	1719.98	30.89	1721.44	21.42	1723.56	23.60	1723.84	31.52	1717.25
8-Nov-99	33.00	1719.88	31.45	1720.88	22.04	1722.94	24.29	1723.15	31.92	1716.85
31-Jan-00	32.95	1719.93	31.47	1720.86	22.03	1722.95	24.01	1723.43	32.00	1716.77
01-May-00	32.87	1720.01	31.60	1720.73	22.24	1722.74	24.52	1722.92	31.31	1717.46
18-Sep-00	33.10	1719.78	31.80	1720.53	22.41	1722.57	24.86	1722.58	32.20	1716.57
13-Nov-00	33.05	1719.83	31.85	1720.48	22.40	1722.58	24.68	1722.76	32.10	1716.67
01-Feb-01	34.61	1718.27	31.89	1720.44			26.29	1721.15	31.99	1716.78
01-May-01	33.22	1719.66	32.10	1720.23	22.75	1722.23	25.75	1721.69	31.30	1717.47
01-Sep-01	33.93	1718.95	31.57	1720.76	21.77	1723.21	25.49	1721.95	33.50	1715.27
01-Nov-01	31.91	1720.97	29.86	1722.47	20.38	1724.60	24.14	1723.30	33.42	1715.35
01-Mar-02	31.32	1721.56	29.20	1723.13	19.99	1724.99	24.00	1723.44	33.03	1715.74
01-May-02	30.48	1722.40	29.29	1723.04	19.70	1725.28	24.92	1722.52	33.28	1715.49
09-Sep-02	29.53	1724.38	28.80	1725.44	19.43	1726.48	23.26	1725.47	31.96	1717.80
09-Dec-02	30.04	1723.87	28.92	1725.32	19.45	1726.46	23.12	1725.61	32.12	1717.64
20-Jan-03	31.62	1722.29	29.09	1725.15			24.85	1723.88	32.42	1717.34

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	M-70 1748.25		M-71 1747.05		M-72 1746.5		M-73 1741.15		M-74 1744.38	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	28.90	1718.06	29.70	1716.18	26.01	1719.28	20.60	1719.45	23.10	1720.32
11-Jul-96			29.90	1715.98	26.25	1719.04	20.75	1719.30		
28-Aug-96			30.00	1715.88	26.00	1719.29	20.70	1719.35		
11-Sep-96	29.00	1717.96	30.20	1715.68	26.20	1719.09	20.75	1719.30	23.30	1720.12
17-Oct-96			29.85	1716.03	25.90	1719.39	20.60	1719.45		
15-Nov-96			29.85	1716.03	26.20	1719.09	20.70	1719.35		
20-Dec-96	29.05	1717.91	29.65	1716.23	26.45	1718.84	20.85	1719.20	23.40	1720.02
08-Jan-97			30.10	1715.78	26.30	1718.99	20.45	1719.60		
18-Feb-97			30.50	1715.38	26.50	1718.79	20.80	1719.25		
10-Mar-97			30.15	1715.73	26.30	1718.99	20.90	1719.15		
09-Apr-97			30.35	1715.53	26.65	1718.64	21.00	1719.05		
28-Apr-97	29.38	1717.58	29.90	1715.98	26.75	1718.54	21.00	1719.05	23.51	1719.91
18-Jun-97	29.85	1717.11	30.80	1715.08	26.85	1718.44	21.12	1718.93	23.61	1719.81
01-Aug-97										
15-Sep-97			30.31	1715.57	26.06	1719.23				
20-Nov-97	29.40	1717.56	29.75	1716.13	25.65	1719.64	20.20	1719.85	22.20	1721.22
02-Dec-97	29.51	1717.45	29.14	1716.74	25.93	1719.36	21.51	1718.54	22.04	1721.38
22-Jan-98	28.74	1718.22	29.65	1716.23	25.40	1719.89	19.70	1720.35	21.85	1721.57
11-Feb-98	28.77	1718.19	30.02	1715.86	25.47	1719.82	20.00	1720.05	22.10	1721.32
25-Mar-98	28.40	1718.56	29.37	1716.51	25.70	1719.59	20.15	1719.90	22.34	1721.08
27-Apr-98	27.84	1719.12	29.46	1716.42	27.22	1718.07	20.46	1719.59	22.80	1720.62
14-Sep-98	29.32	1717.64	29.40	1716.48	25.99	1719.30	20.27	1719.78	22.38	1721.04
15-Dec-98	29.15	1717.81	28.29	1717.59	25.74	1719.55	19.74	1720.31	22.80	1720.62
4-Feb-99	29.65	1717.31	29.40	1716.48	25.32	1719.97	19.64	1720.41	20.00	1723.42
24-Mar-99	30.40	1716.56	30.00	1715.88	25.58	1719.71	19.84	1720.21	22.65	1720.77
4-May-99	30.91	1716.05	30.78	1715.10	26.22	1719.07	20.44	1719.61	23.02	1720.40
9-Aug-99	31.00	1715.96	30.97	1714.91	27.22	1718.07	21.21	1718.84	23.58	1719.84
8-Nov-99	31.14	1715.82	31.55	1714.33	27.78	1717.51	21.58	1718.47	24.20	1719.22
31-Jan-00	31.10	1715.86	31.63	1714.25	28.30	1716.99	22.03	1718.02	24.34	1719.08
01-May-00	30.87	1716.09	31.07	1714.81	28.37	1716.92	22.17	1717.88	24.77	1718.65
18-Sep-00	31.65	1715.31	32.14	1713.74	28.91	1716.38	22.84	1717.21	24.55	1718.87
13-Nov-00	31.60	1715.36	31.90	1713.98	28.99	1716.30	22.98	1717.07	24.70	1718.72
01-Feb-01	32.40	1714.56	32.16	1713.72	29.17	1716.12	23.07	1716.98	26.65	1716.77
01-May-01	30.22	1716.74	31.97	1713.91	29.03	1716.26	23.03	1717.02	25.72	1717.70
01-Sep-01	31.78	1715.18	32.92	1712.96	29.33	1715.96	26.60	1713.45		
01-Nov-01	33.55	1713.41	32.40	1713.48	30.39	1714.90	28.53	1711.52	28.59	1714.83
01-Mar-02	32.55	1714.41	29.10	1716.78	30.30	1714.99	28.75	1711.30	27.98	1715.44
01-May-02	33.95	1713.01	30.31	1715.57	31.65	1713.64	28.80	1711.25	27.57	1715.85
09-Sep-02	30.05	1718.20	26.34	1720.71	29.76	1716.74	28.57	1712.58	27.41	1716.97
09-Dec-02	30.30	1717.95	26.91	1720.14	29.84	1716.66	28.44	1712.71	27.35	1717.03
20-Jan-03	29.70	1718.55	27.32	1719.73	30.78	1715.72	29.51	1711.64	28.55	1715.83

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	M-79 1742.54		M-80 1746.04		M-81A 1744.16		M-83 1742.36		M-84 1741.03	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	25.25	1717.68	31.00	1714.73	27.20	1714.88	26.00	1714.83	24.30	1715.33
11-Jul-96									25.35	1714.28
28-Aug-96									25.80	1713.83
11-Sep-96	25.35	1717.58	31.20	1714.53	27.20	1714.88	26.40	1714.43	25.70	1713.93
17-Oct-96									25.85	1713.78
15-Nov-96									25.60	1714.03
20-Dec-96	26.35	1716.58	30.80	1714.93	26.90	1715.18	26.40	1714.43	25.35	1714.28
08-Jan-97									25.85	1713.78
18-Feb-97									25.55	1714.08
10-Mar-97									25.95	1713.68
09-Apr-97									26.00	1713.63
28-Apr-97	27.00	1715.93	31.05	1714.68	27.40	1714.68	26.92	1713.91	25.55	1714.08
18-Jun-97	27.25	1715.68	32.45	1713.28	27.85	1714.23	27.45	1713.38	26.50	1713.13
01-Aug-97							26.80	1714.03		
15-Sep-97							26.93	1713.90	26.21	1713.42
20-Nov-97	26.20	1716.73	31.25	1714.48	26.55	1715.53	26.74	1714.09	25.44	1714.19
02-Dec-97	26.08	1716.85	31.65	1714.08	27.24	1714.84	26.82	1714.01	25.78	1713.85
22-Jan-98	25.65	1717.28	31.52	1714.21	26.80	1715.28	26.29	1714.54	25.85	1713.78
11-Feb-98	25.35	1717.58	30.70	1715.03	26.20	1715.88	26.40	1714.43	25.87	1713.76
25-Mar-98	25.55	1717.38	30.10	1715.63	26.35	1715.73	24.72	1716.11	24.40	1715.23
27-Apr-98	25.56	1717.37	28.12	1717.61	26.55	1715.53	24.35	1716.48	24.22	1715.41
14-Sep-98	25.10	1717.83	31.00	1714.73	25.60	1716.48	26.57	1714.26	25.05	1714.58
15-Dec-98	25.25	1717.68	31.00	1714.73	25.40	1716.68	25.72	1715.11	24.66	1714.97
4-Feb-99	26.85	1716.08	31.14	1714.59	24.60	1717.48	26.46	1714.37	25.10	1714.53
24-Mar-99	27.72	1715.21	31.95	1713.78	25.98	1716.10	27.20	1713.63	25.90	1713.73
4-May-99	28.28	1714.65	32.56	1713.17	26.92	1715.16	27.89	1712.94	26.60	1713.03
9-Aug-99	28.68	1714.25	33.05	1712.68	27.89	1714.19	28.82	1712.01	27.23	1712.40
8-Nov-99	29.15	1713.78	33.40	1712.33	29.10	1712.98	29.37	1711.46	27.53	1712.10
31-Jan-00	29.21	1713.72	32.18	1713.55	30.19	1711.89	29.48	1711.35	28.14	1711.49
01-May-00	28.80	1714.13	33.60	1712.13	30.09	1711.99	29.18	1711.65	27.93	1711.70
18-Sep-00	29.15	1713.78	34.75	1710.98	31.30	1710.78	29.75	1711.08	29.34	1710.29
13-Nov-00	29.05	1713.88	34.80	1710.93	31.38	1710.70	29.73	1711.10	29.42	1710.21
01-Feb-01	29.42	1713.51	34.77	1710.96	31.79	1710.29	29.70	1711.13	29.50	1710.13
01-May-01	28.43	1714.50	33.88	1711.85	31.58	1710.50	27.78	1713.05	28.29	1711.34
01-Sep-01	30.86	1712.07	34.65	1711.08	32.27	1709.81	30.22	1710.61	29.18	1710.45
01-Nov-01	31.69	1711.24	33.60	1712.13	28.74	1713.34	28.60	1712.23	27.94	1711.69
01-Mar-02	30.00	1712.93	31.24	1714.49	28.96	1713.12	28.13	1712.70	25.28	1714.35
01-May-02	30.84	1712.09	32.45	1713.28	30.65	1711.43	30.02	1710.81	26.52	1713.11
09-Sep-02	28.78	1713.76	25.55	1720.49	26.99	1717.17	24.60	1717.76	21.54	1719.49
09-Dec-02	28.61	1713.93	27.79	1718.25	27.89	1716.27	25.39	1716.97	22.12	1718.91
20-Jan-03	26.14	1716.40	27.73	1718.31	26.33	1717.83	24.52	1717.84	22.24	1718.79

**KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA FACILITY
 GROUNDWATER ELEVATIONS
 SELECTED ON-SITE WELLS**

TOC-->	M-85 1741.19		M-86 1744.23		M-87 1744.13		M-88 1739.36		M-89 1766.2	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
20-Jun-96	25.80	1715.39	28.00	1714.73	27.60	1714.67	22.95	1715.04	32.85	1732.40
11-Jul-96			27.10	1715.63			23.25	1714.74	32.95	1732.30
28-Aug-96			26.50	1716.23			23.10	1714.89	33.00	1732.25
11-Sep-96	25.80	1715.39	27.10	1715.63	27.60	1714.67	23.20	1714.79	32.70	1732.55
17-Oct-96			26.50	1716.23			23.15	1714.84	32.95	1732.30
15-Nov-96			27.55	1715.18			23.20	1714.79	32.95	1732.30
20-Dec-96	26.90	1714.29	28.00	1714.73	28.00	1714.27	23.35	1714.64	33.00	1732.25
08-Jan-97			27.00	1715.73			23.30	1714.69	33.00	1732.25
18-Feb-97			28.05	1714.68			23.50	1714.49	32.90	1732.35
10-Mar-97			27.35	1715.38			23.35	1714.64	32.95	1732.30
09-Apr-97			28.50	1714.23			23.55	1714.44	33.15	1732.10
28-Apr-97	27.35	1713.84	28.48	1714.25	28.27	1714.00	23.60	1714.39	33.15	1732.10
18-Jun-97	28.03	1713.16	28.70	1714.03	28.35	1713.92	23.67	1714.32		
01-Aug-97			27.90	1714.83			22.45	1715.54	33.02	1732.23
15-Sep-97	27.52	1713.67	27.74	1714.99	27.58	1714.69	22.81	1715.18	32.83	1732.42
20-Nov-97	26.52	1714.67	27.75	1714.98	27.55	1714.72	22.70	1715.29		
02-Dec-97	27.40	1713.79	28.11	1714.62	27.53	1714.74	22.63	1715.36	32.36	1732.89
22-Jan-98	27.55	1713.64	27.88	1714.85	27.32	1714.95	22.50	1715.49	32.56	1732.69
11-Feb-98	27.43	1713.76	27.43	1715.30	27.22	1715.05	22.58	1715.41	32.31	1732.94
25-Mar-98	26.57	1714.62	27.48	1715.25	27.35	1714.92	22.70	1715.29	32.45	1732.80
27-Apr-98	26.66	1714.53	27.77	1714.96	27.63	1714.64	22.64	1715.35	32.59	1732.66
14-Sep-98	25.53	1715.66	26.42	1716.31	26.70	1715.57	22.78	1715.21	33.43	1731.82
15-Dec-98	25.80	1715.39	26.59	1716.14	26.68	1715.59	21.63	1716.36	33.13	1732.12
4-Feb-99	25.27	1715.92	26.70	1716.03	26.32	1715.95	22.81	1715.18	32.95	1732.30
24-Mar-99	26.22	1714.97	27.00	1715.73	27.13	1715.14	22.53	1715.46	33.00	1732.25
4-May-99	27.37	1713.82	27.88	1714.85	27.49	1714.78	22.87	1715.12	32.84	1732.41
9-Aug-99	27.49	1713.70	28.78	1713.95	28.52	1713.75	23.78	1714.21	33.51	1731.74
8-Nov-99	28.74	1712.45	29.92	1712.81	29.05	1713.22	24.54	1713.45	33.83	1731.42
31-Jan-00	29.42	1711.77	30.51	1712.22	29.65	1712.62	24.92	1713.07	33.43	1731.82
01-May-00	29.41	1711.78	30.80	1711.93	30.01	1712.26	25.25	1712.74	33.46	1731.79
18-Sep-00	31.14	1710.05	31.90	1710.83	30.75	1711.52	26.06	1711.93	33.93	1731.32
13-Nov-00	31.20	1709.99	32.03	1710.70	31.06	1711.21	26.34	1711.65	33.09	1732.16
01-Feb-01	31.62	1709.57	32.52	1710.21	31.40	1710.87	26.65	1711.34	33.71	1731.54
01-May-01	31.03	1710.16	32.45	1710.28	31.44	1710.83	26.77	1711.22	33.47	1731.78
01-Sep-01	31.62	1709.57	33.00	1709.73	32.47	1709.80	27.98	1710.01	33.89	1731.36
01-Nov-01	28.88	1712.31	30.25	1712.48	35.35	1706.92	30.34	1707.65	33.73	1731.52
01-Mar-02	26.22	1714.97	30.00	1712.73	35.29	1706.98	30.49	1707.50	33.09	1732.16
01-May-02	27.21	1713.98	31.80	1710.93	36.00	1706.27	30.70	1707.29	32.83	1732.42
09-Sep-02	23.01	1718.18	28.25	1715.98	34.67	1709.46	30.50	1708.86	32.92	1733.28
09-Dec-02	23.66	1717.53	29.96	1714.27	34.60	1709.53	30.54	1708.82	33.31	1732.89
20-Jan-03	23.69	1717.50	28.18	1716.05	34.24	1709.89	31.23	1708.13	33.29	1732.91

KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA
GROUNDWATER ELEVATIONS
SELECTED OFF-SITE WELLS

TOC	ARP-1 1613.32		ARP-2 1612.79		ARP-3 1612.17		ARP-4 1613.01		ARP-5 1615.01		ARP-6 1615.28	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11/7/01												
12/13/01												
1/21/02	15.30	1598.02	14.96	1597.83	15.08	1597.09	16.54	1596.47	19.49	1595.52	20.09	1595.19
2/21/02	15.66	1597.66	15.36	1597.43	15.57	1596.60	17.17	1595.84	20.13	1594.88	20.74	1594.54
3/19/02	15.83	1597.49	15.52	1597.27	15.83	1596.34	17.49	1595.52	20.53	1594.48	21.12	1594.16
4/30/02	16.18	1597.14	15.90	1596.89	16.26	1595.91	18.04	1594.97	21.12	1593.89	21.75	1593.53
6/17/02												
7/2/02	16.94	1596.38	16.71	1596.08	17.13	1595.04	18.99	1594.02	22.21	1592.80	22.81	1592.47
8/7/02	18.65	1594.67	18.00	1594.79	18.21	1593.96	20.22	1592.79			23.91	1591.37
9/12/02	19.12	1594.20	19.21	1593.58	19.29	1592.88	21.72	1591.29			25.14	1590.14
10/22/02	16.27	1597.05	16.06	1596.73	16.35	1595.82	18.32	1594.69				
11/14/02												
11/27/02	19.31	1594.01	19.11	1593.68	19.04	1593.13	20.42	1592.59			24.97	1590.31
12/11/02	20.22	1593.10	19.95	1592.84	19.98	1592.19	21.71	1591.30				
12/16/02												
1/7/03	20.53	1592.79	20.48	1592.31	20.56	1591.61	21.92	1591.09	24.84	1590.17	25.28	1590.00
2/11/03	20.04	1593.28	20.93	1591.86	21.14	1591.03	22.65	1590.36	25.66	1589.35		
3/12/03	21.73	1591.59	21.57	1591.22	22.92	1589.25	23.26	1589.75	26.24	1588.77	26.38	1588.90

KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA
 GROUNDWATER ELEVATIONS
 SELECTED OFF-SITE WELLS

TOC	ARP-7 1613.20		ART-1 1614.47		ART-2 1617.10		ART-3 1617.94		ART-4 1617.46		ART-5 1614.06	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11/7/01					17.88	1599.22	18.30	1599.64	18.53	1598.93	15.57	1598.49
12/13/01					18.21	1598.89	19.50	1598.44	18.86	1598.60	17.60	1596.46
1/21/02	17.99	1595.21	15.90	1598.57	18.70	1598.40	18.64	1599.30	19.65	1597.81	16.70	1597.36
2/21/02	18.63	1594.57	15.08	1599.39	17.67	1599.43			18.59	1598.87	16.59	1597.47
3/19/02	19.04	1594.16										
4/30/02	19.63	1593.57	15.46	1599.01	18.05	1599.05	18.30	1599.64	19.13	1598.33	17.85	1596.21
6/17/02							19.50	1598.44				
7/2/02	20.69	1592.51										
8/7/02	21.88	1591.32										
9/12/02	23.42	1589.78										
10/22/02											19.45	1594.61
11/14/02									22.20	1595.26	20.67	1593.39
11/27/02											21.14	1592.92
12/11/02											21.58	1592.48
12/16/02									23.68	1593.78	21.70	1592.36
1/7/03	35.52	1577.68									22.4	1591.66
2/11/03											22.88	1591.18
3/12/03	24.42	1588.78									23.35	1590.71

KERR-McGEE CHEMICAL LLC
 HENDERSON, NEVADA
 GROUNDWATER ELEVATIONS
 SELECTED OFF-SITE WELLS

TOC	ART-6 1615.31		ART-7 1615.38		ART-8 1617.69		L-635 1620.94		L-637 1621.60		MW-K2 1618.83	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11/7/01	17.73	1597.58	17.83	1597.55								
12/13/01	17.77	1597.54	18.81	1596.57					9.54	1612.06	18.52	1600.31
1/21/02	18.70	1596.61	18.65	1596.73	18.80	1598.89	13.82	1607.12	9.56	1612.04	18.74	1600.09
2/21/02	18.54	1596.77	18.68	1596.70	18.35	1599.34	13.89	1607.05	9.61	1611.99	18.81	1600.02
3/19/02							13.85	1607.09	9.65	1611.95		
4/30/02	19.09	1596.22	19.21	1596.17	18.75	1598.94	13.93	1607.01	9.70	1611.90		
6/17/02											19.76	1599.07
7/2/02							14.11	1606.83	9.83	1611.77		
8/7/02							14.94	1606.00	10.62	1610.98	21.33	1597.50
9/12/02							16.22	1604.72	11.12	1610.48	21.86	1596.97
10/22/02							13.87	1607.07	9.88	1611.72	19.42	1599.41
11/14/02												
11/27/02							14.27	1606.67	10.21	1611.39	23.08	1595.75
12/11/02							15.51	1605.43	10.82	1610.78	23.60	1595.23
12/16/02											24.31	1594.52
1/7/03											24.31	1594.52
2/11/03											DRY	
3/12/03							14.98	1605.96	10.13	1611.47	DRY	

KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA
GROUNDWATER ELEVATIONS
SELECTED OFF-SITE WELLS

TOC	MW-K4 1614.96		MW-K5 1598.87		PC-10 1618.95		PC-12 1616.37		PC-17 1617.00		PC-18 1618.47	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11/7/01							17.49	1598.88			18.22	1600.25
12/13/01	17.90	1597.06			19.32	1599.63	17.38	1598.99			18.39	1600.08
1/21/02	18.48	1596.48	19.58	1579.29	19.49	1599.46	18.13	1598.24			18.73	1599.74
2/21/02	19.05	1595.91	20.34	1578.53	20.30	1598.65	18.80	1597.57			19.03	1599.44
3/19/02	19.35	1595.61			20.71	1598.24	19.26	1597.11			19.13	1599.34
4/30/02							19.89	1596.48			19.44	1599.03
6/17/02												
7/2/02	20.72	1594.24	24.01	1574.86	22.43	1596.52	20.98	1595.39			20.14	1598.33
8/7/02	21.78	1593.18	24.20	1574.67	23.4	1595.55	22.8	1593.57			21.56	1596.91
9/12/02			13.85	1585.02	25.29	1593.66	23.68	1592.69			22.16	1596.31
10/22/02	19.94	1595.02	13.28	1585.59	22.76	1596.19	20.91	1595.46			20.84	1597.63
11/14/02												
11/27/02	23.36	1591.60	20.33	1578.54	23.74	1595.21	23.33	1593.04			24.01	1594.46
12/11/02	23.59	1591.37	21.46	1577.41			24.21	1592.16			25.82	1592.65
12/16/02					24.2	1594.75						
1/7/03	24.21	1590.75	24.22	1574.65			24.39	1591.98			25.06	1593.41
2/11/03	24.69	1590.27	23.83	1575.04	25.32	1593.63	24.11	1592.26			25.61	1592.86
3/12/03	25.36	1589.60	23.68	1575.19	25.98	1592.97	25.58	1590.79			26.12	1592.35

KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA
GROUNDWATER ELEVATIONS
SELECTED OFF-SITE WELLS

TOC	PC-19 1617.62		PC-53 1595.03		PC-86 1553.85		PC-89 1551.10		PC-91 1552.33		PC-95 1550.62	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11/7/01												
12/13/01	17.21	1600.41										
1/21/02	17.60	1600.02	16.62	1578.41	+ 0.30	1554.15	+ 0.60	1551.70	4.18	1548.15	1.45	1549.17
2/21/02	17.86	1599.76	17.29	1577.74							1.43	1549.19
3/19/02	17.91	1599.71										
4/30/02	18.25	1599.37	18.62	1576.41	0.38	1553.47	+ 0.12	1551.22	5.32	1547.01	1.83	1548.79
6/17/02												
7/2/02	18.94	1598.68	21.02	1574.01	2.79	1551.06	3.06	1548.04	7.64	1544.69	3.66	1546.96
8/7/02	20.56	1597.06	21.48	1573.55	3.08	1550.77	4.38	1546.72	8.73	1543.6	4.23	1546.39
9/12/02	20.66	1596.96			3.92	1549.93	4.90	1546.20	9.30	1543.03	5.23	1545.39
10/22/02	18.63	1598.99	9.43	1585.60	0.20	1553.65	1.45	1549.65	5.81	1546.52	2.38	1548.24
11/14/02												
11/27/02	22.23	1595.39	17.28	1577.75	0.40	1553.45	1.60	1549.50	4.91	1547.42	2.27	1548.35
12/11/02	23.15	1594.47	18.45	1576.58	0.05	1553.80	1.14	1549.96	5.13	1547.2	2.50	1548.12
12/16/02											2.40	1548.22
1/7/03	23.36	1594.26	21.87	1573.16	0.7	1553.15	0.86	1550.24	4.86	1547.47	2.65	1547.97
2/11/03	24.12	1593.50	20.7	1574.33	1.53	1552.32	3.28	1547.82	6.15	1546.18	3.7	1546.92
3/12/03	24.39	1593.23	20.71	1574.32	2.73	1551.12	0.89	1550.21	6.16	1546.17	1.85	1548.77

KERR-McGEE CHEMICAL LLC
HENDERSON, NEVADA
GROUNDWATER ELEVATIONS
SELECTED OFF-SITE WELLS

TOC	PC-97		PC-99R2/R3		PC-101R		PC-103		PC-115R		PC-116R	
	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV	DTW	ELEV
11/7/01												
12/13/01												
1/21/02	+ 0.10	1548.63			18.61	1599.51	15.81	1583.68				
2/21/02					18.90	1599.22	16.60	1582.89				
3/19/02					19.10	1599.02						
4/30/02	0.41	1548.12			19.41	1598.71	17.77	1581.72			1.62	1550.48
6/17/02												
7/2/02	2.55	1545.98			21.11	1597.01	19.53	1579.96				
8/7/02	3.26	1545.27			21.83	1596.29	19.89	1579.60				
9/12/02	4.16	1544.37					19.54	1579.95				
10/22/02	1.31	1547.22			19.7	1598.42	12.64	1586.85				
11/14/02												
11/27/02	0.80	1547.73			23.91	1594.21	16.96	1582.53				
12/11/02	1.32	1547.21			24.74	1593.38	17.82	1581.67				
12/16/02												
1/7/03	0.38	1548.15			25.12	1593.00	21.12	1578.37				
2/11/03	2.21	1546.32			25.55	1592.57	20.23	1579.26				
3/12/03	3.22	1545.31			26.32	1591.80	20.56	1578.93				

Las Vegas Wash

25

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36

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TEMP IX PLANT

PITTMAN LATERAL

T. 21 S.
T. 22 S.

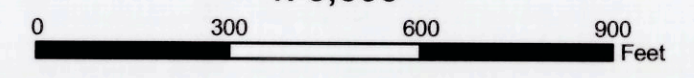
R. 62 E.
R. 63 E.

PLATE:1
POTENTIOMETRIC SURFACE
BETWEEN THE ATHENS ROAD
WELL FIELD AND THE SEEP
MARCH 12, 2003

- 1600- ISOELEVATION LINE OF TOP OF MUDDY CREEK
- DIRECTION OF GROUNDWATER FLOW
- ★ SEEP PUMPING STATION
- ACCESSIBLE MONITOR WELLS (JULY , 2002)

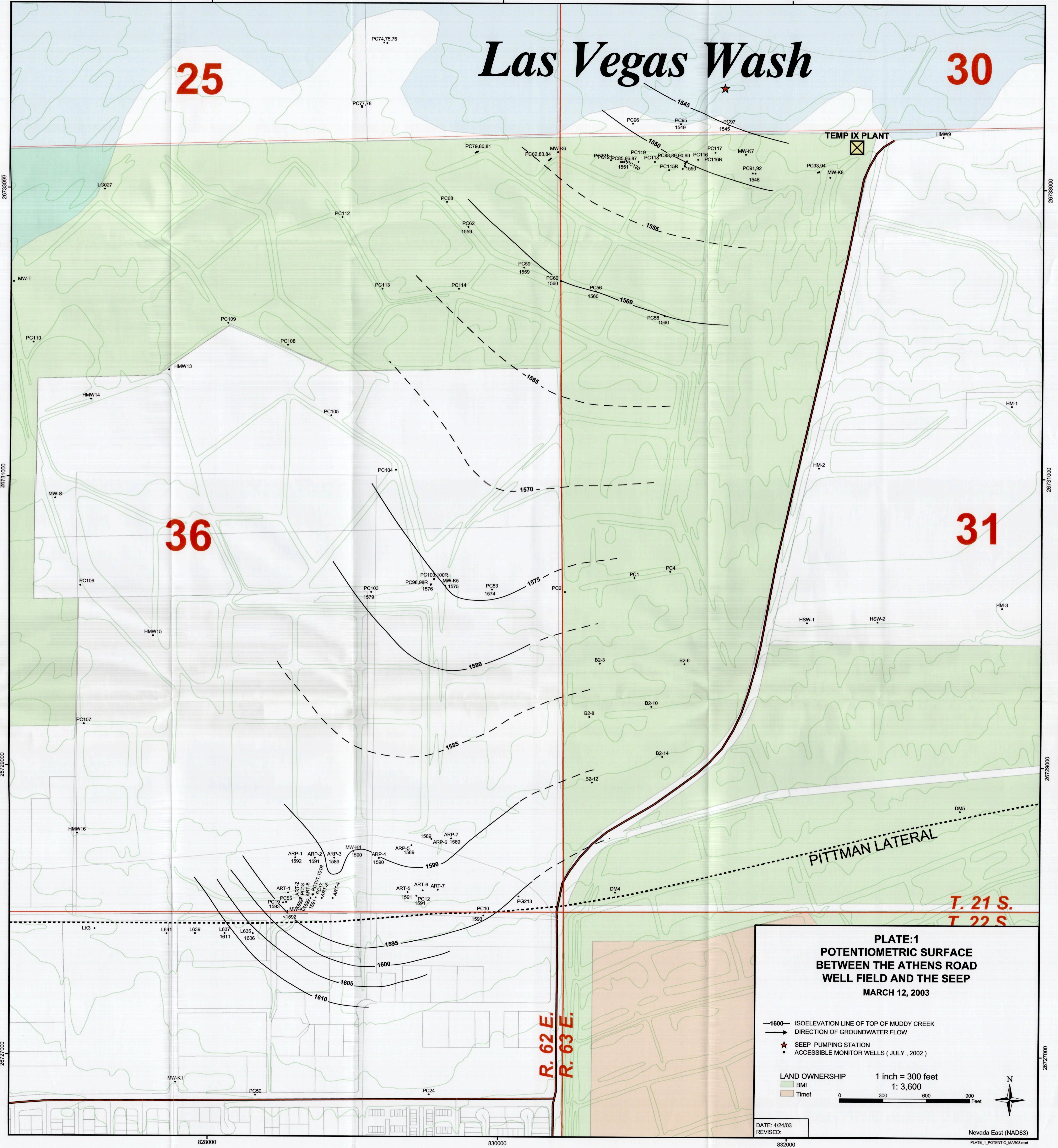
LAND OWNERSHIP
BMI
Timet

1 inch = 300 feet
1: 3,600



DATE: 4/24/03
REVISED:

Nevada East (NAD83)
PLATE_1_POTENTIO_MAR03.mxd



Las Vegas Wash

25

30

36

31

TEMP IX PLANT

PITTMAN LATERAL

T. 21 S.
T. 22 S.

R. 62 E.
R. 63 E.

PLATE:2
PERCHLORATE IN GROUNDWATER
BETWEEN THE ATHENS ROAD
WELL FIELD AND THE SEEP
MARCH 12, 2003

- 1600— ISOCONCENTRATION CONTOUR
- ★ SEEP PUMPING STATION
- ACCESSIBLE MONITOR WELLS (JULY , 2002)

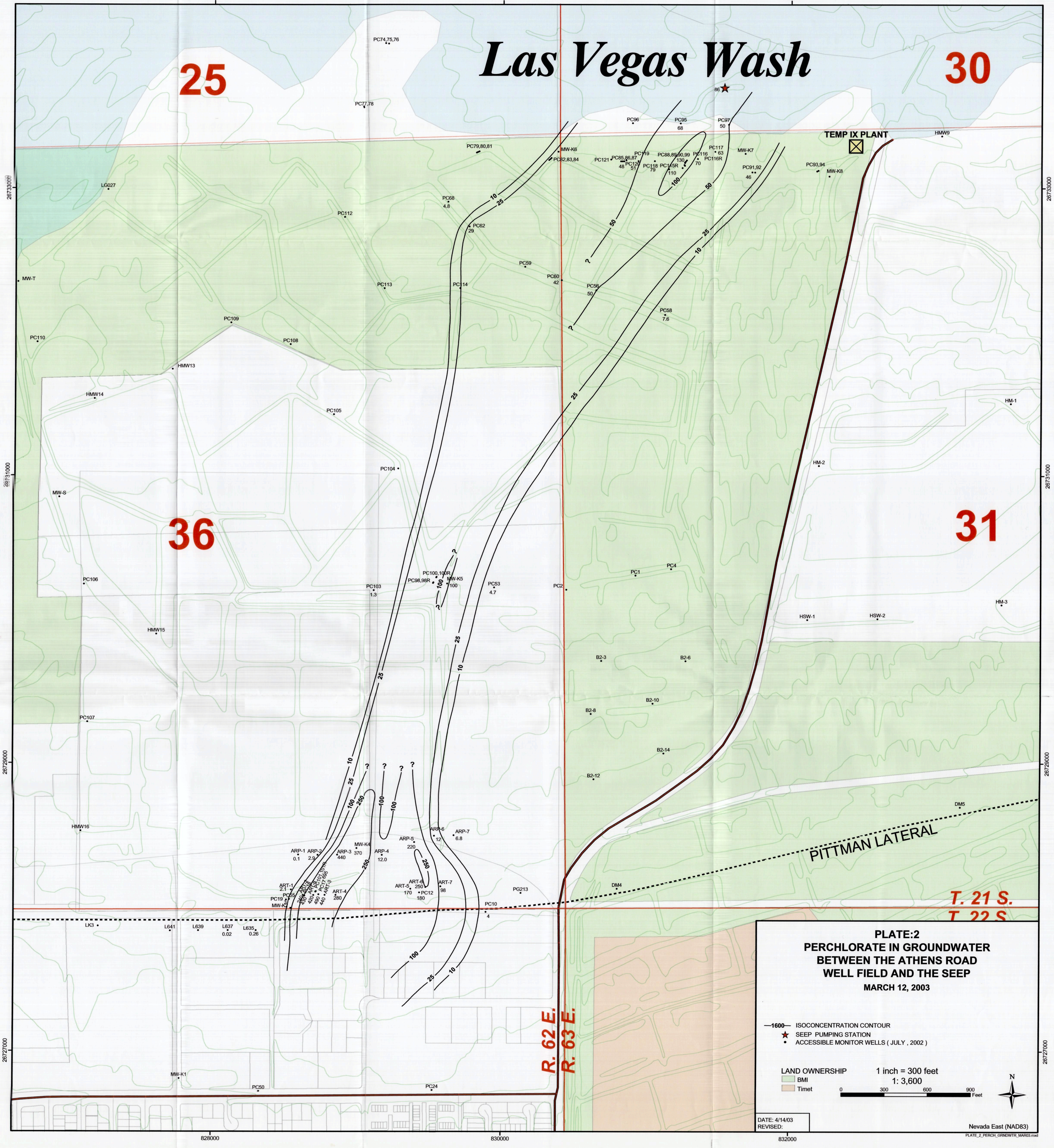
LAND OWNERSHIP
BM
Timet

1 inch = 300 feet
1: 3,600

0 300 600 900 Feet

DATE: 4/14/03
REVISED:

Nevada East (NAD83)
PLATE_2_PERCH_GRODWTW_MAR03.mxd



825000

830000

PLATES 1-2

Las Vegas Wash

25

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SEEP PUMPING STATION

TEMP IX PLANT

SEEP WF

36

31

ATHENS RD. WF

PITTMAN LATERAL

T. 21 S.
T. 22 S.

1

6

ON-SITE WF

FIG. 2-3

12

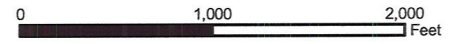
**FIGURE: 1
LOCATION MAP
HENDERSON, NEVADA**

• ACCESSIBLE MONITOR WELLS (JULY , 2002)

LAND OWNERSHIP

- BMI
- Chemstar
- Kerr-McGee
- Pioneer
- Timet

1 inch = 1000 feet
1: 12,000



DATE: 1/24/03
REVISED: 4/28/03

Nevada East (NAD83)

FIGURE_1.mxd

26734000

26734000

26729000

26729000

26724000

26724000

26719000

26719000

825000

830000

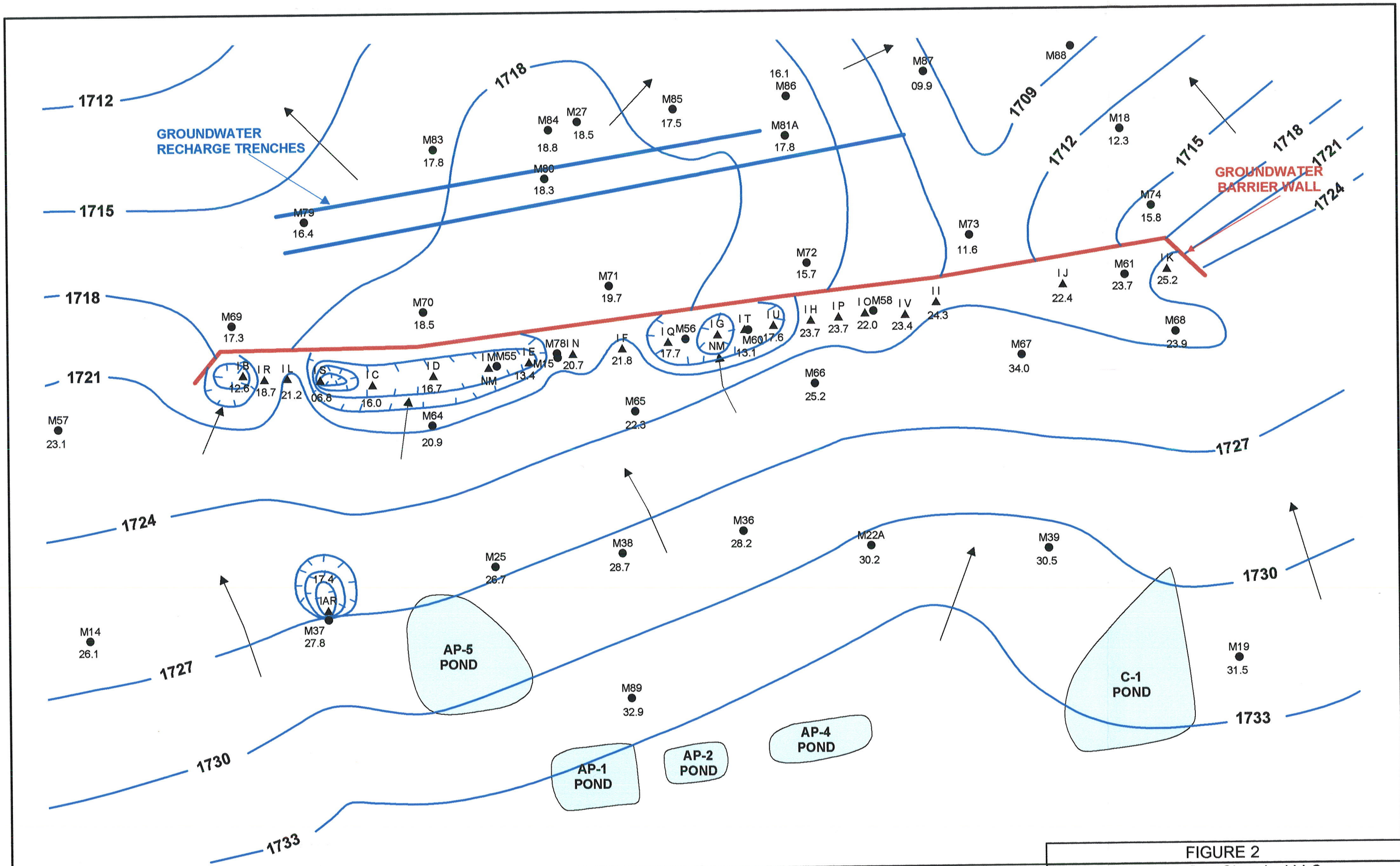
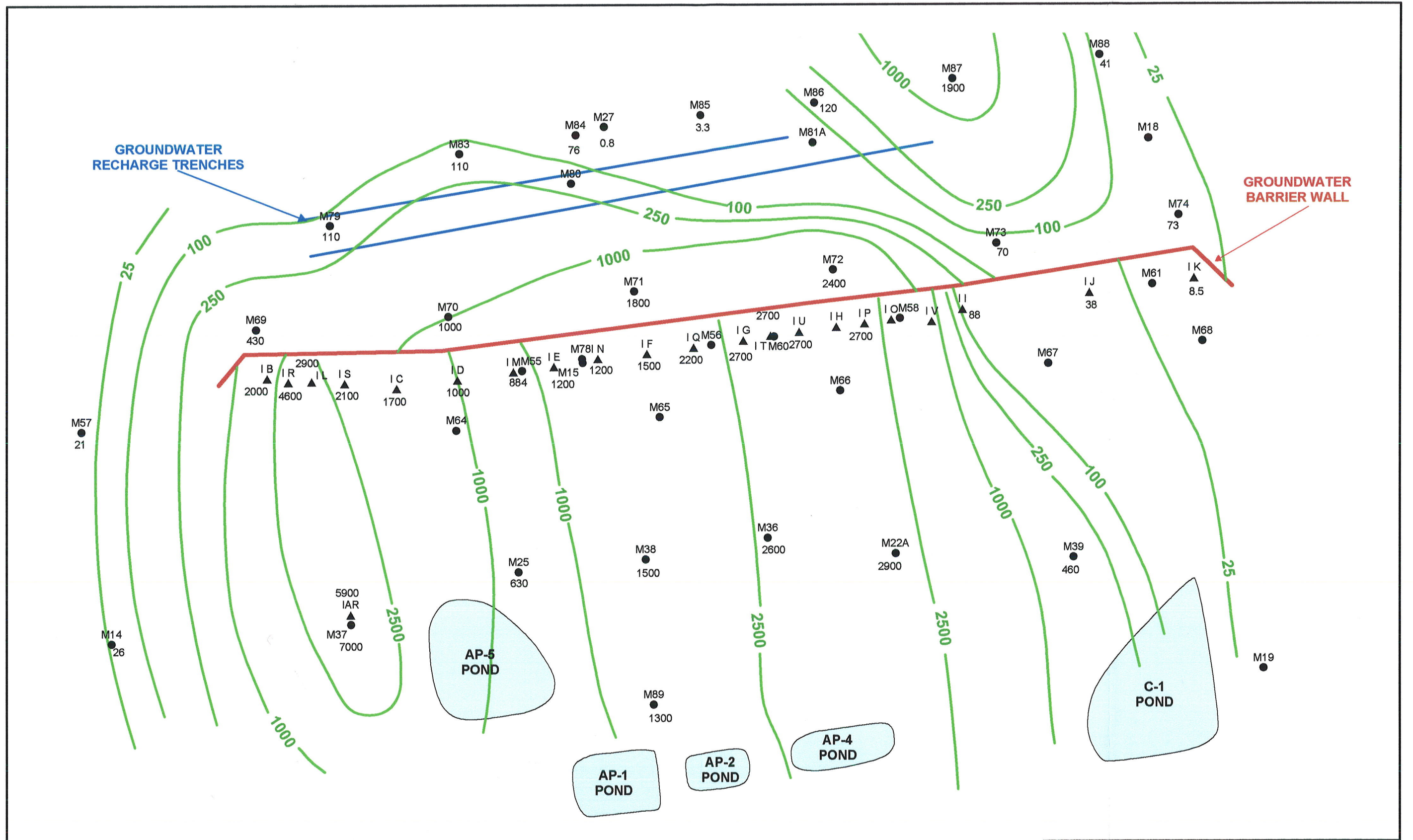


FIGURE 2
 Kerr-McGee Chemical LLC
 Henderson, Nevada
INTERCEPTOR WELL FIELD
POTENTIOMETRIC SURFACE MAP
JANUARY 20-24, 2003

DATE: 4/03 DRAWN BY: KB

LEGEND
 ● Water Level Well Location (Ref. 1700 Ft. MSL)
 ▲ Interceptor Well Location
 — Potentiometric Surface Contour
 Line (Ft. MSL) Contour Interval = 3 Ft.
 Water Level Data Recorded January 20-24, 2003
 ← Direction of Groundwater Flow



LEGEND

- Water Level Well Location
- ▲ Interceptor Well Location
- Isoconcentration Contour Line (Ft. MSL)

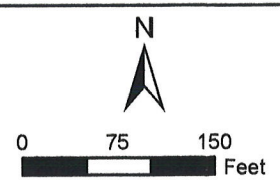


FIGURE 3
 Kerr-McGee Chemical LLC
 Henderson, Nevada
INTERCEPTOR WELL FIELD
PERCHLORATE IN GROUNDWATER
 JANUARY 20-24, 2003
 DATE: 1/03 DRAWN BY: KB

**FIGURE 4: TOTAL PERCHLORATE REMOVED FROM THE ENVIRONMENT:
JANUARY-MARCH, 2003**

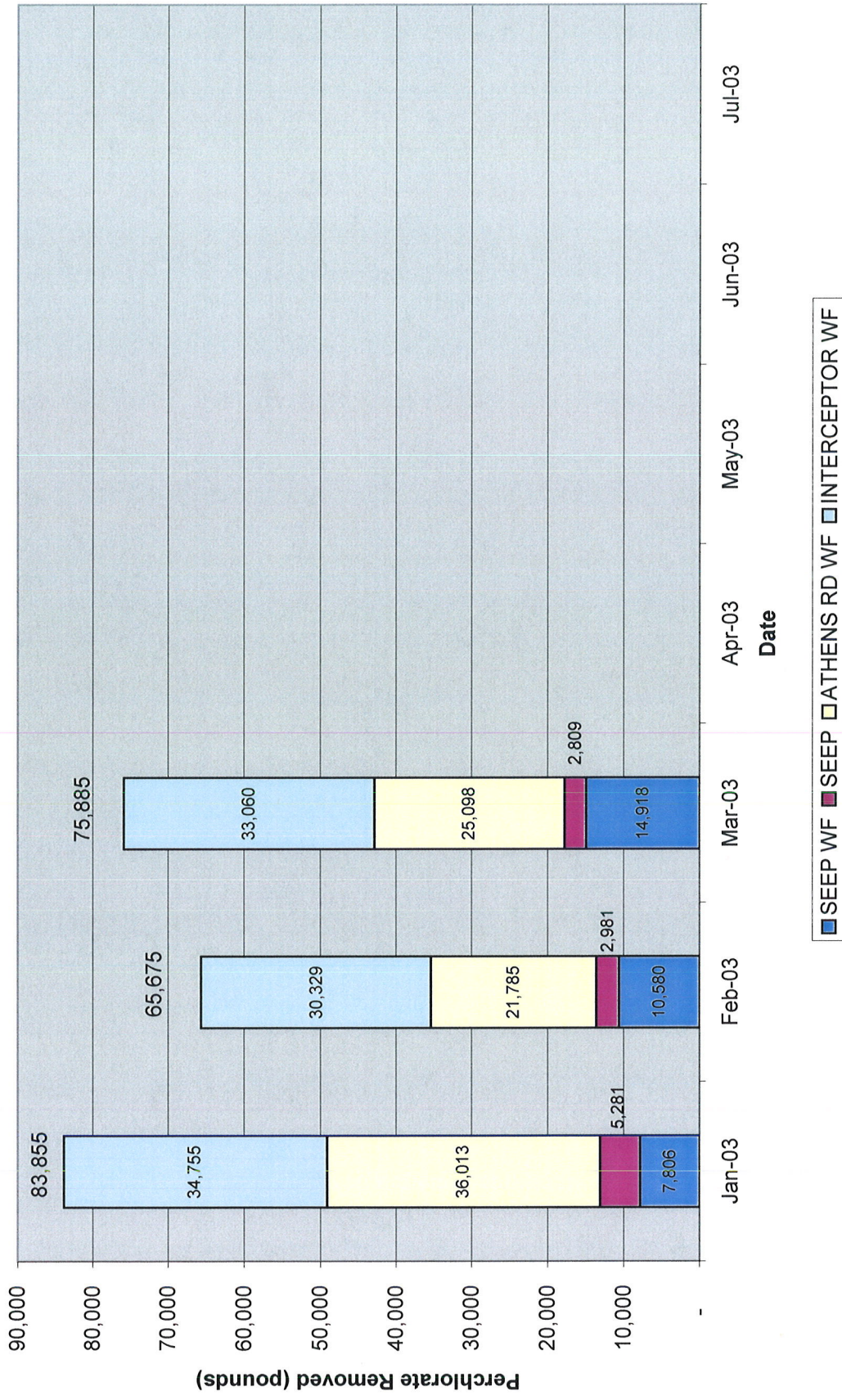


FIGURE 5: INTERCEPTOR WELL FIELD SECTION GRAPH

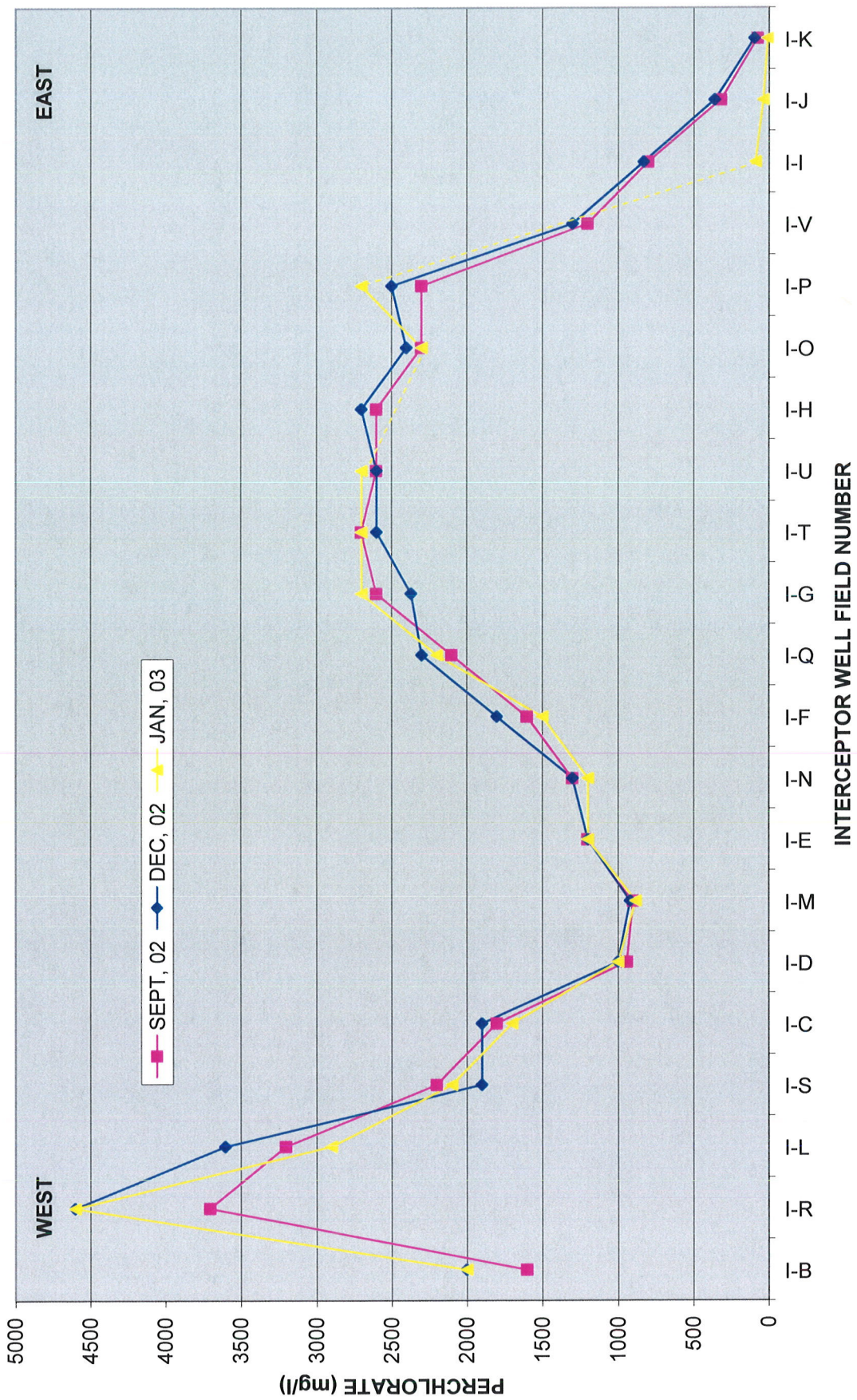
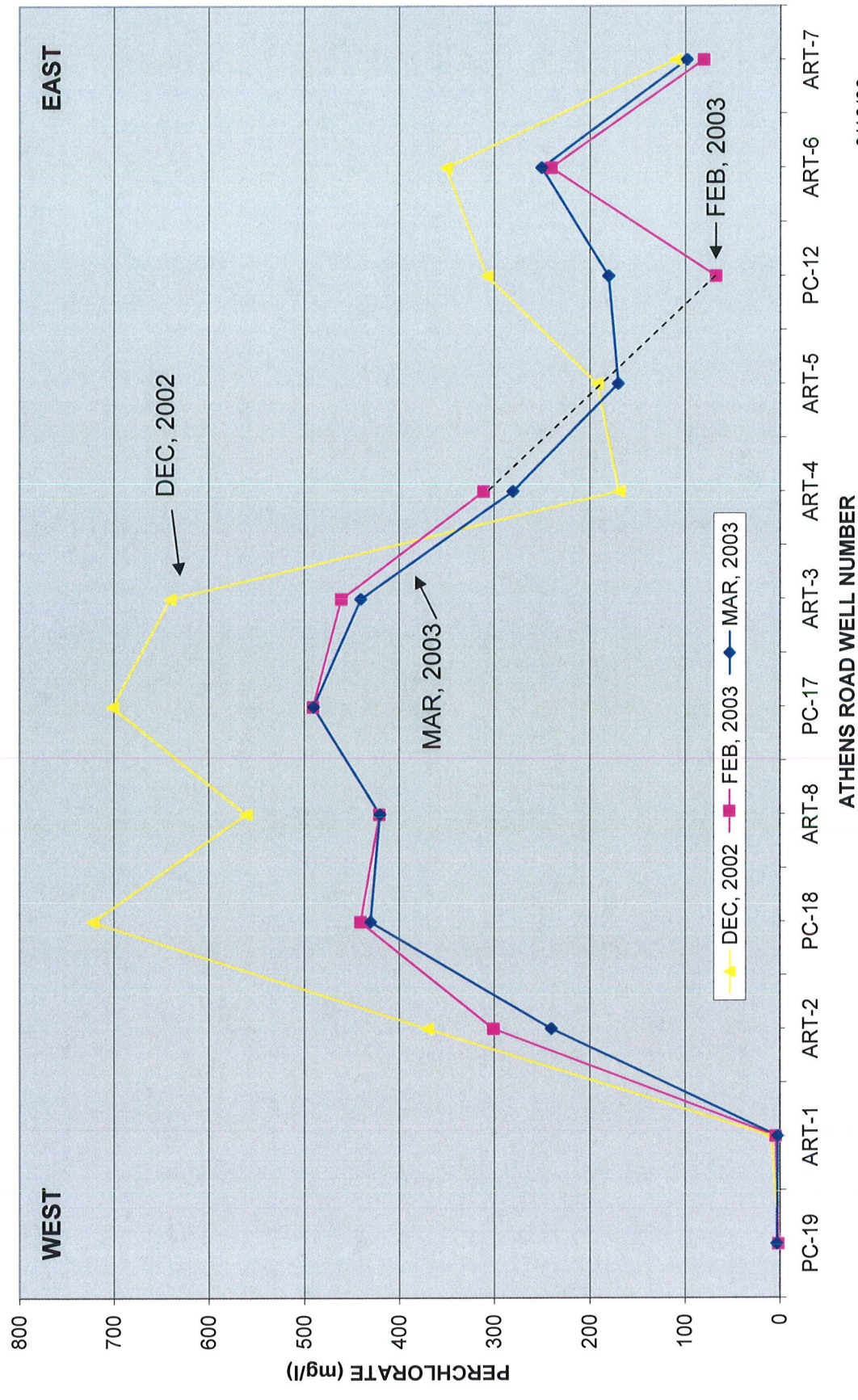


FIGURE 7: ATHENS ROAD WELL FIELD SECTION GRAPH



3/10/03

ATHENS ROAD WELL NUMBER

FIGURE 8: ATHENS ROAD WF DRAWDOWN, FEB, 2002 TO APR, 2003

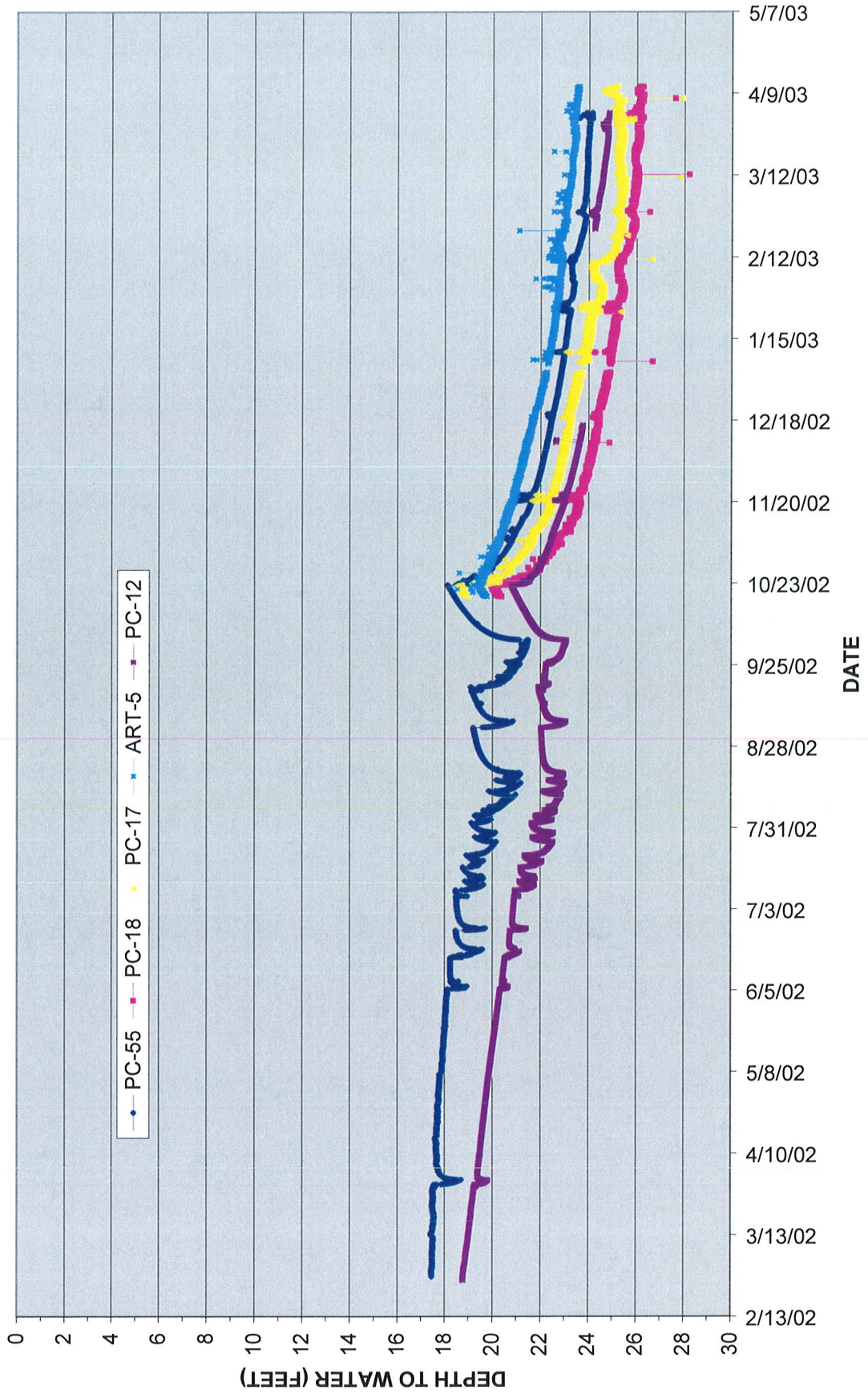


FIGURE 10: ATHENS ROAD PIEZOMETER WELL LINE SECTION GRAPH

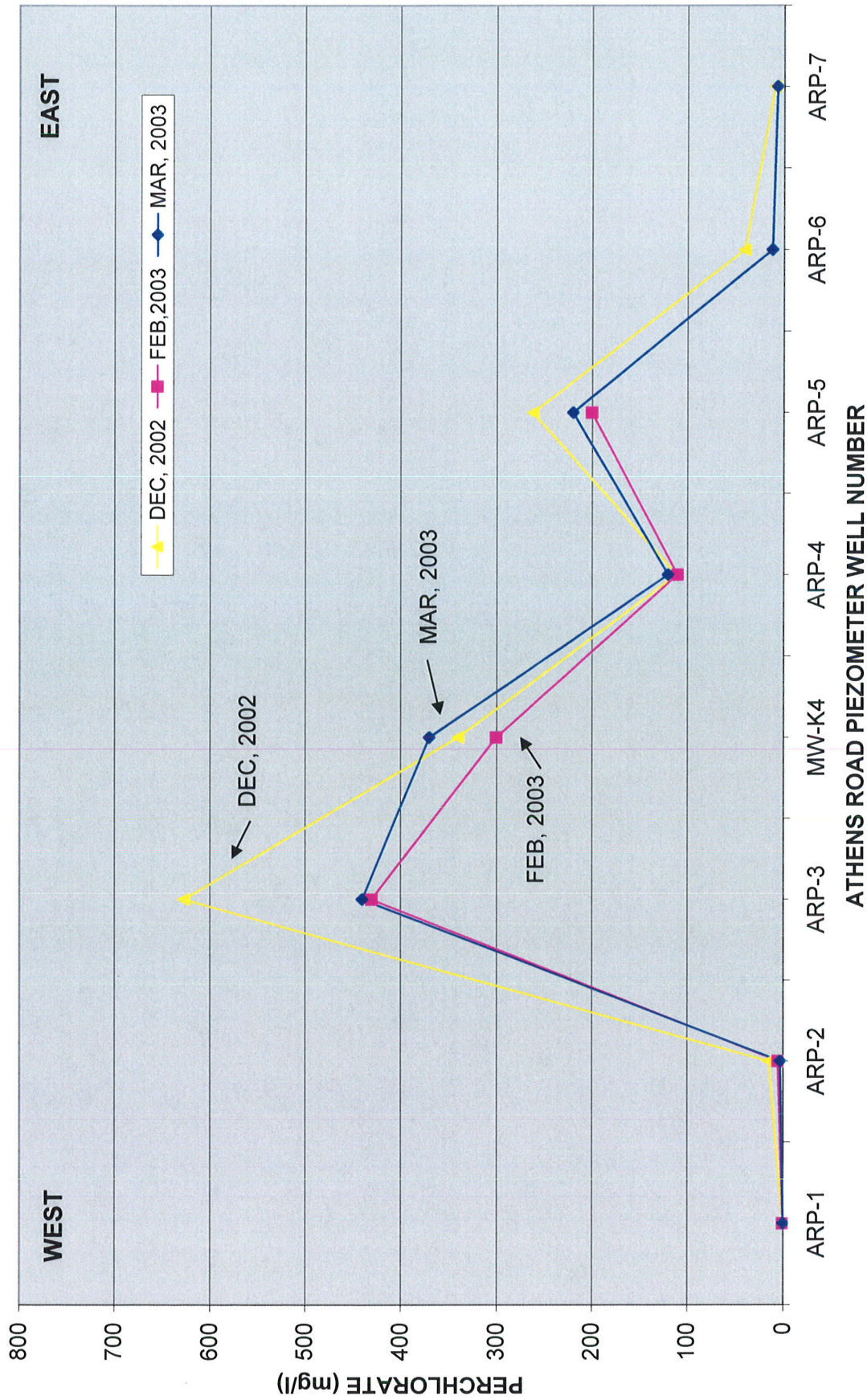


FIGURE 11: COH WRF WELL LINE: PERCHLORATE CONCENTRATIONS

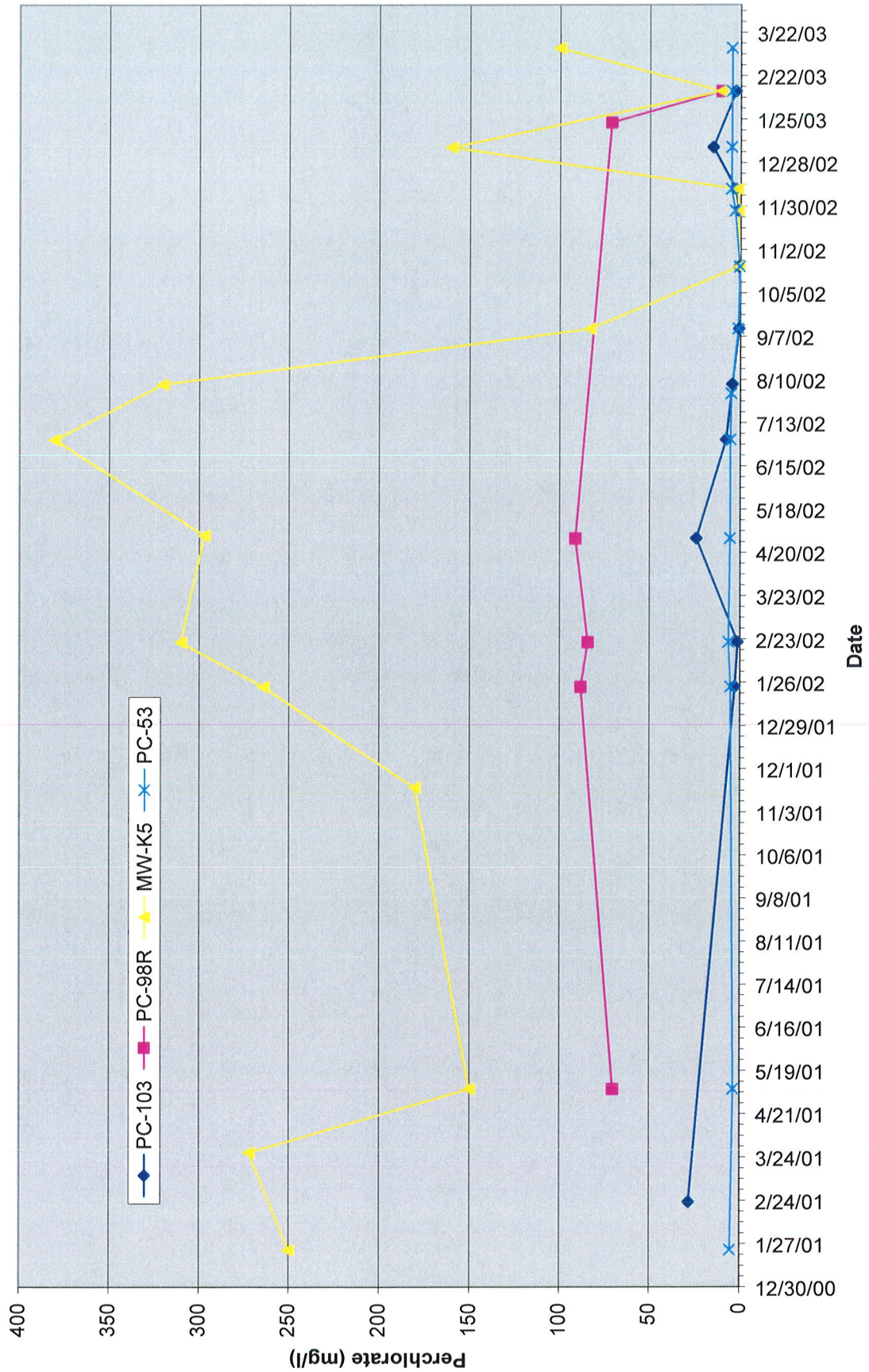


FIGURE 12: COH WRF WELL LINE SECTION GRAPH

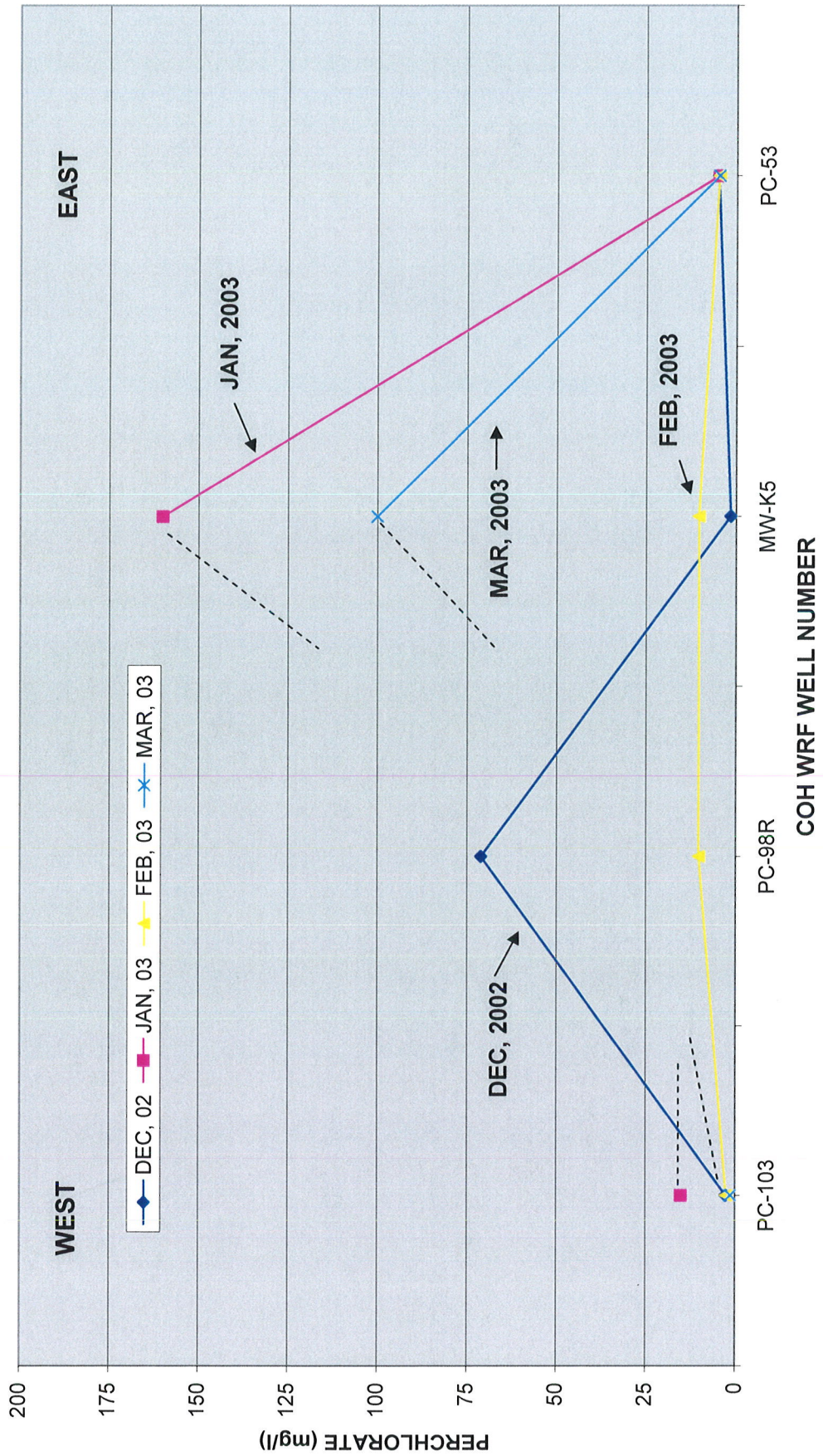


FIGURE 13: PC-98R: DEPTH TO WATER, APR, 2002 TO MAR, 2003

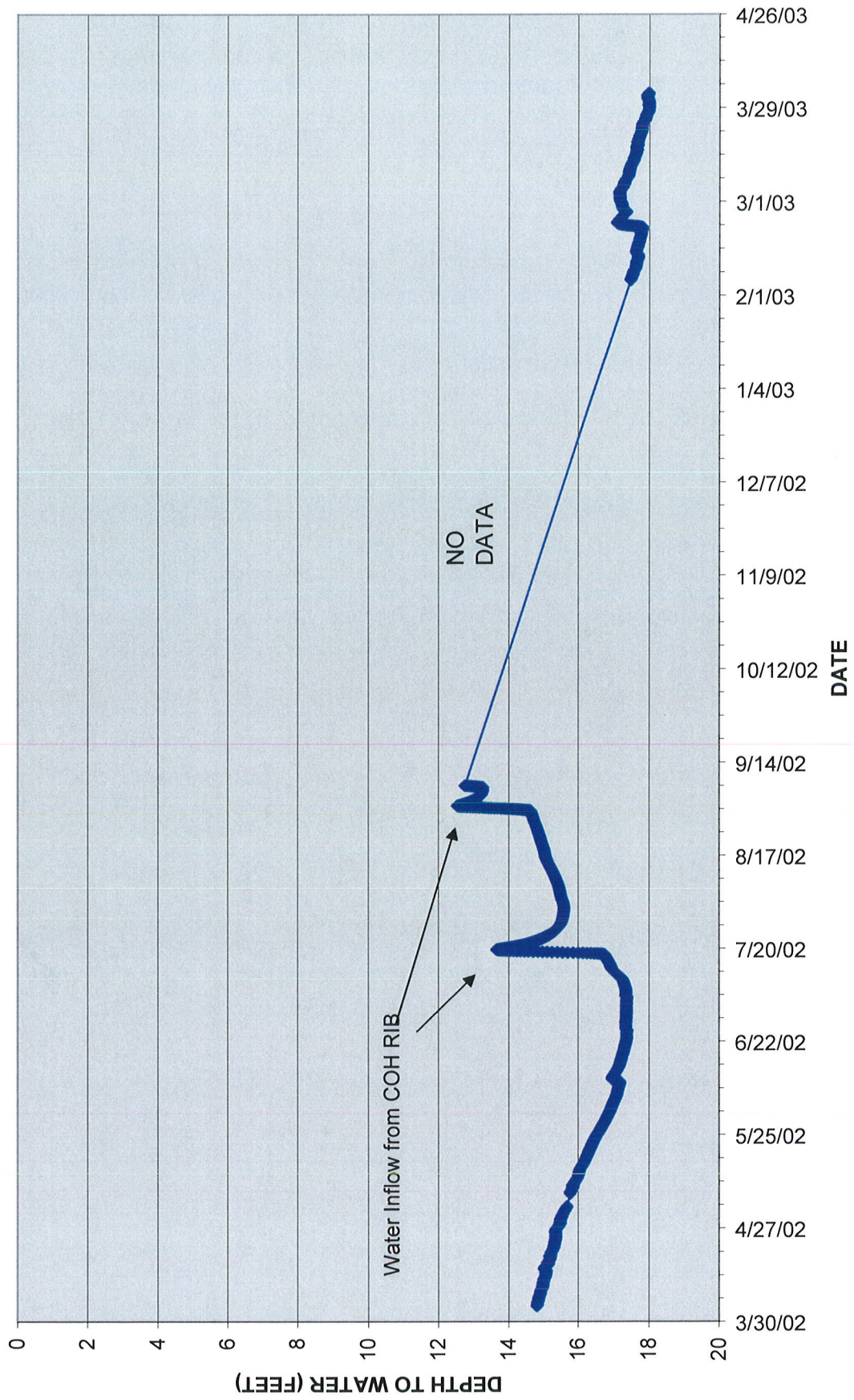


FIGURE 15: SEEP WELL FIELD SECTION GRAPH

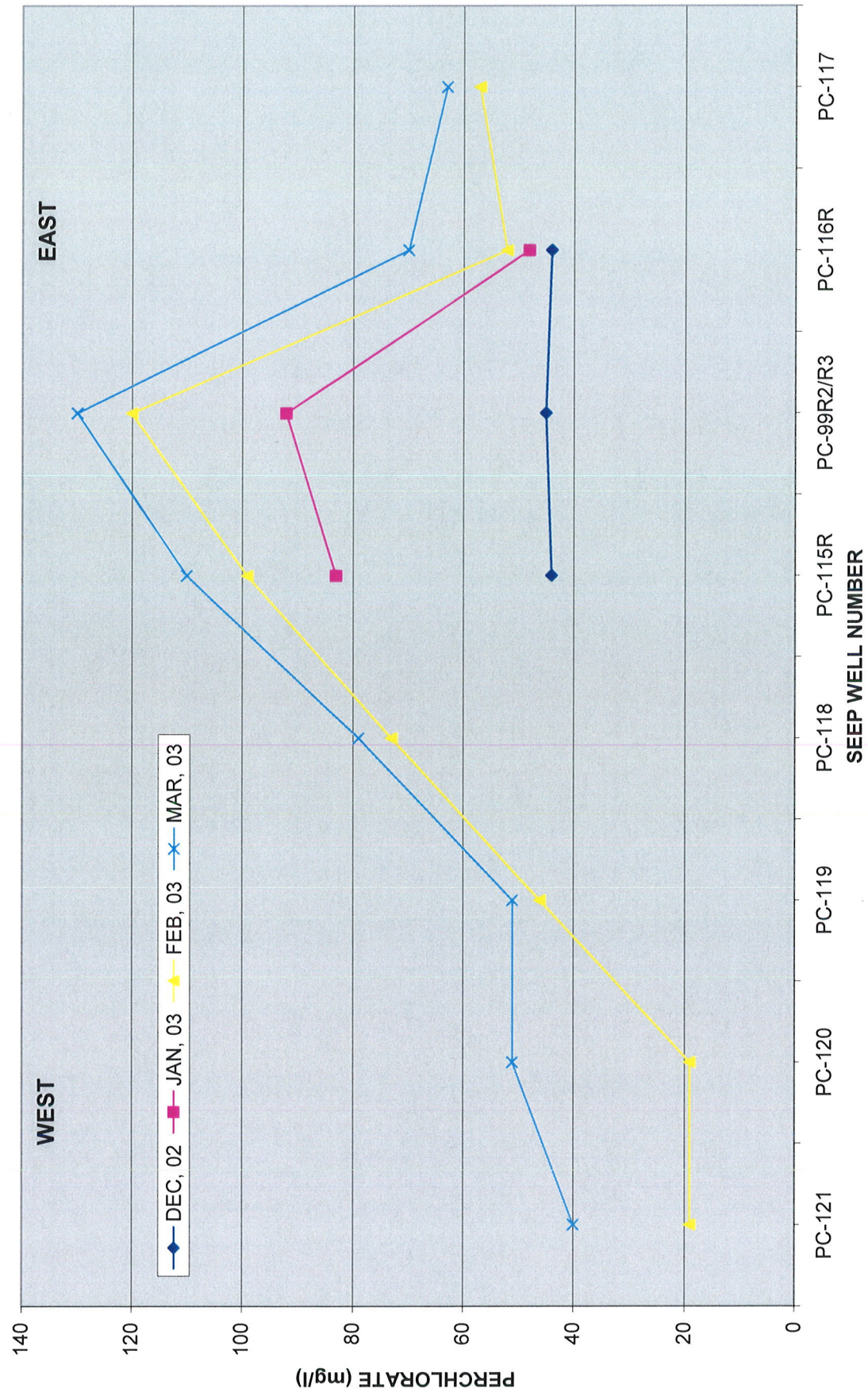


FIGURE 16: SEEP STREAM FLOW VS. PERCHLORATE CONCENTRATION, JAN, 2002 TO MAR, 2003

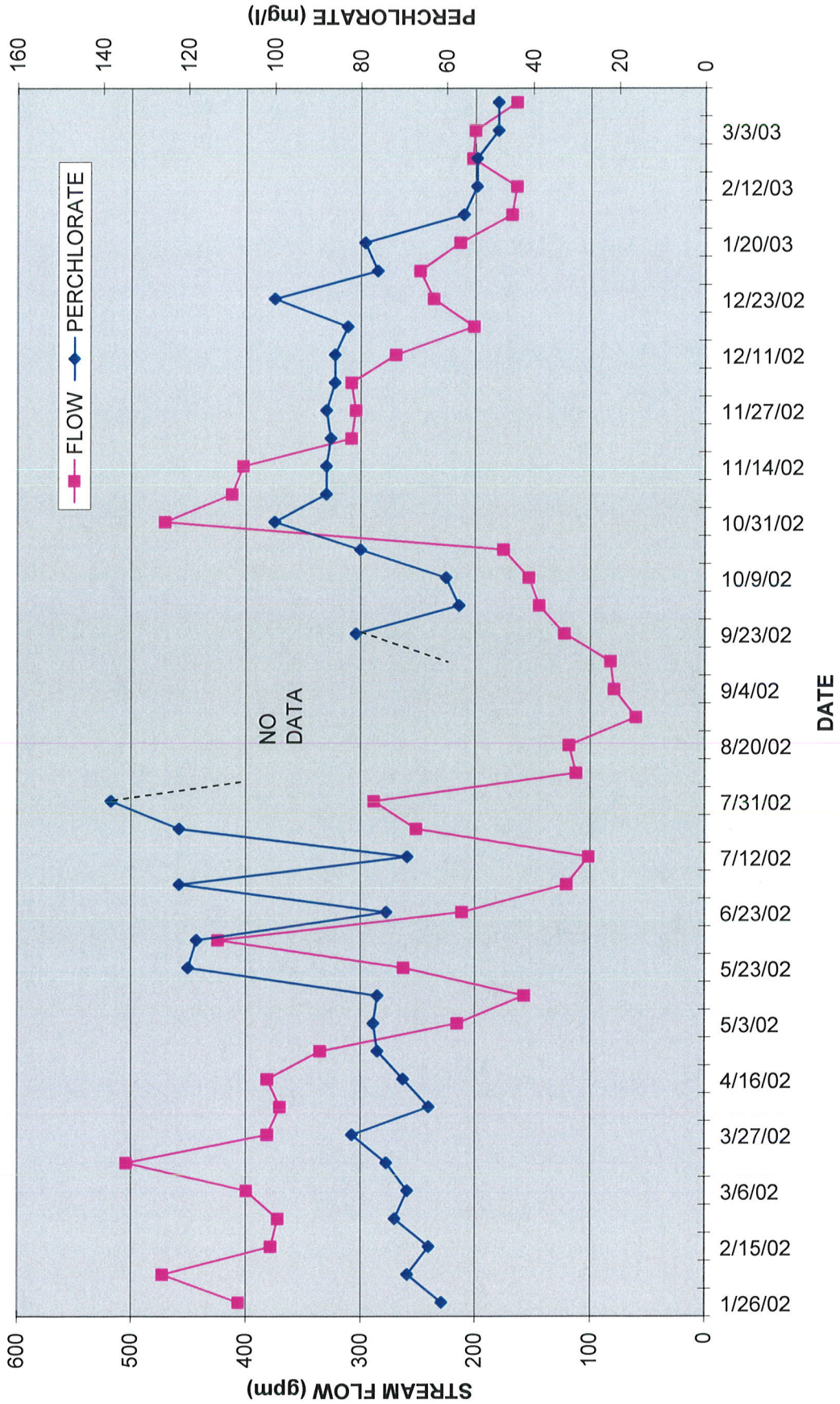


TABLE 1

PERCHLORATE (mg/l) IN SELECTED
ON-SITE WELLS NEAR THE INTERCEPTOR WELL FIELD
KMCLLC FACILITY, HENDERSON, NEVADA

WELL	SEPT, 2002	DEC, 2002	JAN, 2003
I-A-R	5700	5900	5900
I-B	1600	2000	2000
I-C	1800	1900	1700
I-D	940	1000	1000
I-E	1200	1200	1200
I-F	1600	1800	1500
I-G	2600	2900	2700
I-H	2600	2700	NS
I-I	800	830	88
I-J	320	360	38
I-K	73	96	8.5
I-L	3200	3600	2900
I-M	900	920	884
I-N	1300	1300	1200
I-O	2300	2400	2300
I-P	2300	2500	2700
I-Q	2100	2300	2200
I-R	3700	4600	4600
I-S	2200	1900	2100
I-T	2700	2600	2700
I-U	2600	2600	2700
I-V	1200	1300	NS
M-14	NS	28	26
M-19	NS	NS	NS
M-22A	NS	2800	2900
M-25	570	840	NS
M-27	170	8.4	0.8
M-36	1500	2400	2600
M-37	6400	5800	7000
M-38	1500	1400	1500
M-39	NS	750	460
M-57	NS	25	21
M-64	NS	NS	NS
M-65	NS	NS	NS
M-66	NS	NS	NS
M-67	NS	NS	NS
M-68	NS	NS	NS
M-69	350	560	430
M-70	930	1000	NS

TABLE 1

PERCHLORATE (mg/l) IN SELECTED
ON-SITE WELLS NEAR THE INTERCEPTOR WELL FIELD
KMCLLC FACILITY, HENDERSON, NEVADA

WELL	SEPT, 2002	DEC, 2002	JAN, 2003
M-71	NS	1900	NS
M-72	NS	2500	NS
M-73	NS	93	70
M-74	NS	60	73
M-79	2600	380	110
M-80	NS	NS	NS
M-81A	NS	NS	NS
M-83	NS	97	110
M-84	210	77	76
M-85	NS	2.4	3.3
M-86	NS	130	120
M-87	NS	1800	1900
M-88	NS	60	41
M-89	1300	3000	1300

NS = Not Sampled
NA = Not Available

TABLE 2
PERCHLORATE (mg/l) IN
SELECTED OFF-SITE MONITOR WELLS
HENDERSON, NEVADA

WELL	JAN, 2003	FEB, 2003	MAR, 2003
ARP-1	0.10	0.23	0.10
ARP-2	6.9	5.2	2.9
ARP-3	660	430	440
ARP-4	110	110	120
ARP-5	350	200	220
ARP-6	26	13	12
ARP-7	8.6	6	6.8
ART-1	6	3.8	2.1
ART-2	340	300	240
ART-3	590	460	440
ART-4	169	310	280
ART-5	192	150	170
ART-6	330	240	250
ART-7	120	80	98
ART-8	570	420	420
L635	0.14	0.3	0.26
L637	0.29	0.26	0.02
MW-K2	NS	NS	NS
MW-K4	430	300	370
MW-K5	160	10	100
PC10	2.4	4.2	4
PC101R	680	420	430
PC103	15	2	1.3
PC115R	45	99	110
PC116R	48	52	70
PC12	290	67	180
PC17	870	490	490
PC18	660	440	430
PC19	0.19	1.0	3
PC53	4.8	4.7	4.7
PC86	69	51	34
PC89	85	29	85
PC91	40	26	30
PC95	67	49	68
PC97	120	86	50
PC98R	71	10.1	NS
PC99R2/R3	54	100	130

NS = Not Sampled