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Annual Groundwater Monitoring Report, January - December 2003

Indian Basin Remediation Project
Eddy County, New Mexico

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Executive Summary

The Indian Basin Gas Plant (site) is located approximately 20 miles northwest of Carlsbad in Eddy County, New Mexico. Remediation efforts at the site, collectively known as the Indian Basin Remediation Project (IBRP), were initiated in April 1991 to recover free-phase petroleum hydrocarbons related to the release of a liquid by-product of natural gas production known as "condensate". The subsurface at the site includes two distinct geologic zones referred to as the "Shallow Zone" and the "Lower Queen". Both of these zones contain saturated and unsaturated strata. Through February 2003, there were a total of 150 wells present at the site related to the IBRP. However, with New Mexico Oil Conservation District approval, thirty-nine Shallow Zone wells were plugged and abandoned in March 2003, reducing the well total to 111 wells. The remaining wells are used for a combination of groundwater monitoring, groundwater and condensate recovery, treated groundwater infiltration and condensate vapor extraction.

In order to determine and evaluate the groundwater flow conditions and separate-phase condensate occurrences, site-wide well gauging events were performed in April and October 2003. The liquid-level measurements obtained from each well and the surveyed well elevations were used to calculate groundwater elevations, with density corrections where condensate was present. The resulting elevation data were used to generate groundwater piezometric contour maps. Review of these maps and the elevation data indicate Shallow Zone and Lower Queen groundwater flow were consistent with patterns observed in previous years. Flow in the Shallow Zone is to the southeast at an approximate gradient of 0.014 feet/ft, and flow in the Lower Queen is generally in a northerly direction at an approximate gradient of 0.0005 feet/ft.

During each of the gauging events, groundwater samples were also collected from selected wells to evaluate groundwater quality at the site. In April 2003, the analytical suite primarily included benzene, toluene, ethylbenzene and xylene (BTEX). In October 2003, groundwater samples were analyzed for BTEX and total dissolved solids (TDS) and chlorides. The analytical results indicate that total BTEX concentrations in both water-bearing units remained consistent or declined slightly in most wells.

Remediation efforts completed at the site in 2003 included continued groundwater extraction and treatment (including dual pump recovery) in the Lower Queen for the first month and a half in 2003 and vapor extraction in the Shallow Zone and Lower Queen throughout the 2003 calendar year. The groundwater extraction and treatment remedy was operated to both recover and control potential migration of condensate in

both the liquid and dissolved phase. Recovered groundwater was treated and then infiltrated in upgradient wells. NMOCD conditional acceptance of a Marathon plan to use vapor extraction system (VES) to control condensate in groundwater extraction system wells was successfully implemented from March to the end of 2003.

During the calendar year, the VES used one blower per well to extract vapor. This operation allowed enhanced removal of condensate from the subsurface via both recovery in the vapor phase and aerobic biodegradation of condensate.

During 2003, approximately 1,620 barrels of condensate were recovered at the site, as follows:

- The equivalent of approximately 0.06 barrels of condensate was removed in the vapor phase by VES wells in the Shallow Zone;
- The equivalent of approximately 416 barrels of condensate was removed in the vapor phase by VES wells in the Lower Queen;
- The equivalent of approximately 1,204 barrels of condensate was removed by aerobic biodegradation enhanced by the use of vapor extraction within the Shallow Zone and Lower Queen; and
- No condensate was removed in the liquid phase through pump and treat efforts in the Lower Queen.

Cumulatively, from the initiation of remedial efforts in April 1991 through December 2003, a total of approximately 19,248 barrels of condensate has been removed.

Through the operation of the VES and groundwater recovery systems, Marathon has maintained hydraulic control of the condensate and separate-phase hydrocarbons in groundwater at the site. The operations of the groundwater extraction system between April 2000 and December 2002 have resulted in an asymptotic mass removal trend indicating an ineffective method of removing condensate from the site. In fact, no condensate was recovered by the groundwater extraction system during the calendar year 2002. However, the operations of the VES during the same time period have proven to be an effective and viable technology to enhance condensate mass removal. Remediation efforts in the year 2003 and beyond have or will include the following:

- Compliance monitoring and reporting, regular groundwater monitoring; and
- Continued operation of the VES, while continuing to evaluate and modify the wells that will be used for vapor extraction to maximize condensate removal.

As stated in a response by the OCD to the "Petition to Discontinue Groundwater Extraction Operations, Indian Basin Remediation Project" and the "Annual Groundwater Monitoring Report, January-December 2001", Marathon Oil Company discontinued the groundwater extraction system and abandoned 39 Shallow Zone monitoring wells that were approved by the OCD for abandonment. The OCD deferred comment on dismantling the groundwater extraction system until the OCD has the opportunity to evaluate the future performance of groundwater remediation activities.

The wells selected for abandonment in the Shallow Zone were based on historical gauging results and relative locations of these wells. Using the following criteria:

- Wells had been dry for at least three years;
- Wells had been determined to be redundant because of proximity of other wells;
- Wells did not monitor known groundwater areas of concern; and
- Wells did not provide pertinent information for defining the groundwater flow direction.

In addition to the abandonment of wells in the Shallow Zone, monitoring well MW-126, also completed in the Shallow Zone, was modified. The goal of this monitoring well modification was to enhance the ability of the well to remove hydrocarbons via vapor extraction in the future.

No changes to the current Groundwater Monitoring Plan are proposed for calendar year 2004. However, Marathon would like to implement the following groundwater monitoring plan beginning in 2005:

- Reduce Groundwater Sampling to a Single Annual Event – Based on historical sampling data collected through 2003, it is apparent that BTEX concentrations are significantly reduced in most wells included in the sampling program. In fact, most of the sampled wells today show very low or no BTEX concentrations above OCD regulatory limits. In addition, where BTEX is detected in monitored wells, there appears to be no seasonal variation in the concentrations. The proposed annual groundwater sampling event would be conducted in April of each calendar year. The event would include sampling the same constituent list as approved in the original OCD approved monitoring

plan. Table 14 provides a list of wells scheduled for sampling and a constituent list for the proposed annual sampling program. The purging and sampling techniques will be conducted using low-flow procedures that were approved and implemented in 2003. A copy of the March 1998 USEPA low-flow procedures is included in Appendix E.

- Measure Liquid Levels Semi-Annually - Marathon proposes to continue collecting semi-annual liquid levels from all existing site wells as approved in the original groundwater monitoring plan. This will also facilitate documentation of water level fluctuations and provide an early warning system for unexpected separate phase condensate movement. During each gauging event, liquid level measurements (depth to water and condensate thickness) will be collected from each accessible monitoring well.

1. Introduction

ARCADIS has prepared this Annual Groundwater Monitoring report on behalf of Marathon Oil Company (Marathon). This report presents the results of the remediation and monitoring activities conducted between January and December 2003 at the Indian Basin Gas Plant located in Eddy County, New Mexico. These activities are collectively known as the Indian Basin Remediation Project (IBRP). This report has been prepared in accordance with the groundwater monitoring work plan approved by the New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division (OCD) in correspondence to Marathon dated March 4, 1999.

The following section presents a brief summary of the project background. The remaining sections discuss activities conducted during 2003, including investigation activities, monitoring well gauging, groundwater sampling and operation and maintenance of the remediation system.

2. Background

The Indian Basin Gas Plant (site) and IBRP are located approximately 20 miles northwest of Carlsbad, New Mexico, as shown on Figure 1. The site is situated in Township 21 South, in Eddy County, and occupies portions of Range 23 East (Sections 13, 23, 24, 25, and 26) and Range 24 East (Sections 19 and 30). Remediation efforts at the site have been ongoing since April 1991 and are designed to remove separate-phase petroleum hydrocarbons present in the subsurface, primarily condensate, the liquid by-product of natural gas production.

The geology underlying the site is comprised of two distinct zones, both with saturated and unsaturated strata. The geologic units are referred to as the Shallow Zone and the Lower Queen. As of the end of 2003, there was a total of 38 monitoring wells and 1 infiltration well present in the Shallow Zone, and there was a total of 57 monitoring wells, 2 infiltration wells, 10 vapor extraction wells and 3 supply wells in the Lower Queen. A summary of the completion details regarding installation of these wells is provided in Table 1A and 1B. Figure 2 depicts the site layout, including the locations of each Shallow Zone and Lower Queen well. Additional details regarding local and regional geology and hydrogeology are presented in the report titled *Comprehensive Site Characterization Report for the IBRP*, submitted to the OCD on behalf of Marathon by IT Corporation in December 1998.

3. Groundwater and Condensate Gauging

In order to determine and evaluate the groundwater flow conditions and separate-phase condensate occurrences at the site as well as changes in these conditions, site-wide well gauging events were performed in April and October 2003. The gauging events consisted of collecting liquid-level measurements from both the Shallow Zone and Lower Queen. The results of the 2003 gauging events as well as precipitation recharge (rainfall) are discussed in the following sections. A summary of historical liquid-level measurement data for the site is presented in Appendix A.

3.1 Shallow Zone Aquifer

A total of 40 locations, consisting of 38 monitoring wells and 2 recovery sumps, completed in the Shallow Zone were gauged during both gauging events in 2003. The liquid-level measurements from each gauging event and the top of casing elevations for the wells were then used to calculate groundwater elevation at each well (density corrections were made as required where condensate was present).

As the data in Appendix A indicate, 6 of the locations completed in the Shallow Zone did not contain groundwater for one or both of the 2003 gauging events. Total fluctuations in groundwater elevation measured in the Shallow Zone Wells containing measurable fluids in 2003 ranged from 0.00 feet in Well MW-10 to 8.90 feet in Well MW-91, including density corrections for the presence of condensate, as indicated by the data presented in Appendix A.

Groundwater elevation contour maps were generated for each event, based on the groundwater elevation measurements from each gauging event. These maps are shown on Figures 3 and 4. As shown on the figures, the observed groundwater flow direction tends to be to the southeast at an approximate gradient of 0.014 feet/ft. The flow direction and gradient are consistent with patterns observed in previous years.

During 2003, a measurable thickness of condensate was detected in Shallow Zone Well MW-69 for both events and in Shallow Zone Well MW-126 for the April 2003 event. The condensate thickness measured in MW-69 was 0.10 feet in April 2003 and 1.29 feet in October 2003. The condensate thickness measured in MW-126 was 3.96 feet in April 2003 and no condensate was measured in October 2003. Figures 5 and 6 depict the observed condensate distribution for the Shallow Zone during each monitoring event.

3.2 Lower Queen Aquifer

A total of 70 locations completed in the Lower Queen, consisting of 67 monitoring wells, 2 plant water supply wells and 1 infiltration well, were gauged during both gauging events in 2003. The liquid-level measurements from each gauging event and the top of casing elevations for the wells were then used to calculate groundwater elevation at each well. Density corrections were made as required where condensate was present.

As the data in Appendix A indicate, wells VE-04 and VE-05 did not contain groundwater for any of the 2003 gauging events. Total fluctuations in groundwater elevation measured in the Lower Queen Wells containing measurable fluids in 2003 (pumping wells were not considered) ranged from 0.06 feet in VE-19 to 8.18 feet in monitor well MW-94.

Groundwater elevation contour maps were generated for each event, based on the groundwater elevation measurements from each gauging event. These maps are shown on Figures 7 and 8. As shown on the figures, the observed groundwater flow direction in the Lower Queen tends to be generally in a northerly direction at an approximate gradient of 0.0005 feet/ft. This flow direction and gradient are consistent with patterns observed in previous years.

During one or more of the gauging events in 2003, condensate was observed in Lower Queen wells MW-68, MW-72, MW-75, MW-82, MW-112, MW-113, MW-120, MW-121, MW-125, MW-129, MW-130, VE-16 and VE-19. Observed condensate thicknesses in these wells ranged from 0.01 feet in Well MW-120 in October 2003 to 3.31 feet in Well MW-129 in April 2003. Figures 9 and 10 depict the observed condensate distribution for the Lower Queen during each monitoring event.

3.3 Precipitation Recharge

The site has historically received the highest amounts of precipitation between the months of June and October. Precipitation at the site generally followed a similar trend during the 2003 calendar year. However, precipitation in April 2003 measured 2.56 inches, which was higher than normal. The average annual rainfall measured at the site over the past five years is approximately 8.6 inches. During 2003, the data collected using the rain gauge maintained at the site indicate that the highest amount of precipitation was received in April (2.56 inches) and September (1.2 inches) with a total of 9.9 inches for the year. This above average rainfall for 2003 caused a rise in groundwater elevations in both the Shallow Zone and Lower Queen. Table 2 summarizes monthly rainfall received at the site during 2003.

4. Groundwater Sampling and Analysis

ARCADIS personnel conducted two groundwater sampling events at the site in 2003. The sampling events were performed according to the modified Groundwater Monitoring Plan, as approved by the OCD in March 1999. The sampling involved the following:

- In April 2003, groundwater samples were collected from 14 Shallow Zone wells and 25 Lower Queen wells. These samples were submitted for BTEX analysis using USEPA Method 8260B; and
- In October 2003, groundwater samples were collected from 12 Shallow Zone and 25 Lower Queen wells. These samples were submitted for laboratory analysis and analyzed for BTEX, total dissolved solids (TDS) and chloride using USEPA Methods 8021B, 160.1, and 325.2, respectively.

In order to ensure the quality of the analytical data, trip and field blanks were collected for each event and submitted for analysis. Table 3 summarizes the BTEX analytical results for April 2003, and Table 4 summarizes the BTEX and general groundwater chemistry analytical results for October 2003. Summaries of historical BTEX and general chemistry analytical data are presented in Appendix B. The complete laboratory analytical reports for each groundwater sampling event in 2003 are presented on a CD-Rom inserted in Appendix C.

The OCD regulatory limits for the constituents sampled in 2003 are as follows:

- Benzene – 10 micrograms per liter (ug/L)
- Toluene – 750 ug/L
- Ethylbenzene – 750 ug/L
- Total Xylenes – 620 ug/L
- Chloride – 250 milligrams per liter (mg/L)
- TDS – 1,000 mg/L

The groundwater monitoring analytical results for both the Shallow Zone and Lower Queen are discussed in the following sections.

4.1 Shallow Zone Aquifer

4.1.1 BTEX Analysis

During 2003, groundwater samples were collected from a total of 14 different wells completed in the Shallow Zone in April and October 2003. The results of the BTEX laboratory analysis of these groundwater samples is summarized as follows:

- Of the 14 wells sampled, groundwater samples from 4 wells (MW-14, MW-49, MW-55 and MW-91) contained BTEX compounds at concentrations above the laboratory limits of detection for at least one of the two sampling events (April and October);
- Where detected, benzene concentrations ranged from 29 ug/L in MW-55 (April 2003) to 330 ug/L in MW-14 (October 2003);
- Toluene was only detected in MW-55 at 10 ug/L (April 2003);
- Ethylbenzene concentrations were not detected in either sampling events (April and October 2003); and
- Total xylene concentrations were not detected in either sampling events (April and October 2003).

Figures 5 and 6 illustrate the distribution of dissolved BTEX compounds in the Shallow Zone aquifer during 2003. As indicated by the historical data in Appendix B, BTEX concentrations in this water-bearing zone have generally remained stable or declined over time. Many of the wells that historically contained BTEX (including MW-46, MW-50, MW-54, MW-61, MW-65, MW-78, MW-79 and MW-90) have declined over time to the point that BTEX concentrations in these wells were consistently below OCD regulatory limits from April 2002 through October 2003.

4.1.2 Wet Chemistry Analysis

In addition to BTEX analysis in October 2003, groundwater samples were collected from 12 Shallow Zone wells and analyzed for wet chemistry. The wet chemistry analysis included TDS and chlorides. The results of the wet chemistry laboratory analysis of the 12 Shallow Zone wells in October 2003 are summarized as follows:

- TDS concentrations were detected above the OCD standard in a total of 7 wells (MW-14, MW-43, MW-49, MW-50, MW-54, MW-55, and MW-61). TDS concentrations ranged from 106 mg/L in MW-106 to 6,300 mg/L in MW-50; and

- Chloride concentrations were detected above the OCD standard in a total of 3 wells (MW-49, MW-50 and MW-61). Chloride concentrations ranged from 3.1 mg/L in MW-106 to 570 mg/L in MW-49.

A summary of the wet chemistry laboratory analysis is provided in Table 4. Copies of the analytical laboratory reports are inserted in Appendix C. Figure 6A indicates TDS and chlorides in sampled wells detected above the OCD cleanup goals/regulatory limits.

4.2 Lower Queen Aquifer

4.2.1 BTEX Analysis

During 2003, groundwater samples were collected from a total of 25 different Lower Queen wells. The laboratory analysis of these samples is summarized as follows:

- Of the 25 wells sampled, 2 wells (MW-62 and MW-111) contained at least one BTEX compound at concentrations above the laboratory limits of detection during the April sampling event;
- Benzene was detected in the sample from Well MW-62 at a concentration of 8 ug/L (April 2003);
- Toluene was not detected in either of the sampling events (April and October);
- Ethylbenzene was not detected in either of the two sampling events (April and October); and
- Total xylene concentrations were detected in the sample from Well MW-111 at a concentration of 6 ug/L (April 2003).

Figures 9 and 10 illustrate the distribution of dissolved BTEX compounds in the Lower Queen during 2003. Similar to that observed in the Shallow Zone, BTEX concentrations in this water-bearing zone have generally remained stable or declined over time as indicated by the data in Appendix B. In fact, (with the exception of MW-74 which contained condensate and was not sampled in October 2002), no Lower Queen wells sampled since April 2002 have contained BTEX compounds above OCD regulatory limits.

4.2.2 Wet Chemistry Analysis

In addition to BTEX analysis in October 2003, groundwater samples were collected from 25 Lower Queen wells and analyzed for wet chemistry. The wet chemistry

analysis included TDS and chlorides. The results of the wet chemistry laboratory analysis of the 25 Lower Queen wells are summarized as follows:

- Total dissolved solid concentrations were detected above the New Mexico standard of 1,000 mg/L in a total of 4 wells (MW-59, MW-71, MW-73 and MW-87A). Total dissolved solid concentrations ranged from 310 mg/L in MW-98 to 6,000 mg/l in MW-59; and

- Chlorides were detected above the New Mexico standard of 250 mg/L in two wells (MW-59 and MW-73). The chloride concentrations were 470 mg/L and 260 mg/L for MW-59 and MW-73 respectively.

A summary of the wet chemistry laboratory analysis is provided in Table 4. Copies of the analytical laboratory reports are inserted in Appendix C. Figure 9A indicates TDS and chlorides in sampled wells detected above the OCD cleanup goals/regulatory limits.

5. Remediation System Operation and Maintenance

Remediation efforts completed at the site as part of the IBRP from April 1991 through December 2003 have included emergency excavation work; pumping in Rocky Arroyo sumps, open excavations, and Shallow Zone wells; condensate recovery from Shallow Zone Well MW-69; groundwater and condensate recovery (and treatment) including dual pump recovery from the Lower Queen; and vapor extraction in both the Shallow Zone and Lower Queen. The following sections discuss remedial activities conducted at the site during 2003.

5.1 Groundwater Recovery and Infiltration

Groundwater and total fluids (condensate and groundwater) recovery wells that operated at the site from January 1, 2003 to February 13, 2003 included Lower Queen wells MW-58, MW-65A, MW-72, MW-75, MW-81, MW-83, MW-84, MW-85, MW-86 and MW-110. Recovered groundwater was treated and then infiltrated in upgradient wells IW-1 and IW-2 in the Lower Queen. During the 2003 calendar year, there was no active groundwater recovery from the Shallow Zone.

From February 14, 2003 through the end of the year 2003, the groundwater extraction system was inactive. However, vapor extraction remediation of selected wells that are a part of the groundwater extraction system was conducted as part of a plan proposed by Marathon to the NMOCD. The activities associated with the vapor extraction of the groundwater recovery system wells are discussed in Section 5.3.7.

During the period of groundwater and total fluids recovery in the early portion of 2003 (January to mid-February, approximately 188,224 barrels of total fluids were recovered from the Lower Queen and treated, with no measurable recovery of condensate in the liquid phase. Subsequently, approximately 117,802 barrels of treated water were infiltrated in Lower Queen Infiltration Wells IW-1 and IW-2, and 70,422 barrels of untreated water were sent to the gas plant for disposal in the Class II injection wells.

Operation of the recovery and infiltration wells is permitted by the New Mexico State Engineer's Office (NMSEO), which requires monthly reports of groundwater withdrawal and infiltration volumes. A summary of monthly and cumulative recovery and infiltration data for 2003 is presented in Table 5.

5.2 Groundwater Treatment

Historically, recovered groundwater at the site was treated by two air-strippers, designated "east" and "west". During the operation of the groundwater treatment system in the early portion of 2003, recovered groundwater at the site was treated only by the east air stripper. Marathon personnel collected monthly water samples from the influent and effluent of the east air stripper. The west air stripper was not operational during the 2003 calendar year. Therefore, no monthly water samples were collected for the west air stripper. The monthly sampling events were performed according to the Groundwater Discharge Plan GW-21. The monthly samples were submitted for BTEX analysis using USEPA Method 8260B. The complete laboratory analytical reports for each sampling event can be found electronically on a CD-Rom inserted in Appendix C. Tables 6 and 7 summarize the air stripper influent and effluent analytical data during the period of operation for the east and west air strippers, respectively. As the data presented in the tables indicate, the constituent concentrations in the effluent groundwater were consistently below the New Mexico Water Quality Control Commission groundwater quality standards.

5.3 Vapor Extraction

The following sections provide information regarding the initial startup of the vapor extraction system (VES), field testing and expansion of the VES, and the mass removal results of the VES during 2003.

5.3.1 Startup of Vapor Extraction System

The VES was first started at the site in March 1992, using Shallow Zone wells MW-19, MW-20, MW-21, MW-35 and MW-56. The Shallow Zone VES operated from 1992 through 1994, removing the equivalent of 135 barrels of condensate in the vapor

phase, as calculated from effluent vapor concentrations and vapor extraction flow rates. Vapor extraction in the Shallow Zone recommenced in August 1997, using wells MW-11, MW-19, MW-26 and MW-41.

VES was initiated in the Lower Queen in January 1997, using wells VE-1 through VE-5 and MW-61A. The system operated through June 1997, removing the equivalent of approximately 13 barrels of condensate in the vapor phase. Based on the low mass removal rates generated by this system, it was decided to discontinue VES operation in this location. Five new vapor extraction wells (VE-16 through VE-20) were installed in 1997, and the system was then relocated to these new wells in June 1997 and operated through the end of 1998.

5.3.2 VES Expansion Field Design Testing

Marathon undertook an extensive program of soil vapor extraction testing in 1999 via evaluating the operation of three VES blowers (VES-100, VES-200, and VES-300). The goal of this testing was two-fold; 1) to maximize recovery of condensate in the vapor phase; and 2) to evaluate the feasibility of using VES as a means to increase the rates of condensate recovery and in turn speed completion of the IBRP. The soil vapor extraction testing continued in 2000 with 19 short term vapor extraction tests (14 to 30 days) being conducted using five VES blowers (VES-100, VES-200, VES-300, VES-400 and VES-500). In addition during 2000, Marathon modified the construction of various Lower Queen monitoring and recovery wells to isolate the zones in which condensate was present. The goals of the well modifications were to allow more effective application of vapor extraction as a stand-alone method of recovering free product and to allow for successful execution of the proposed field design testing needed to help develop a full-scale system design.

Field testing was conducted with a single blower on individual wells to evaluate the flow and vacuum characteristics of each well. In addition, flow rate and hydrocarbon concentration data were used to calculate vapor phase condensate removal rates. Similarly, oxygen concentration readings and air flow rate were used to estimate the oxygen uptake due to microbial respiration in the subsurface, which in turn was used to estimate condensate mass removal via biodegradation.

Total condensate recovery achieved at each well during the field design testing varied across the site. However, with few exceptions the vapor extraction from the modified wells (i.e., discretely screened) yielded the best mass removal rates. Condensate recovery rates for the testing program ranged from approximately 1 barrel per month in well MW-104 to 67 barrels per month in well MW-110. The average removal rate was 23 barrels per month per well.

Data from single well testing was also compared to data from multiple well testing to determine which scenario would provide the most efficient mass removal. During July and August, MW-110 was tested using blower VES-400 for 32 days. Over that time, approximately 47 barrels of condensate were removed. Following this, Wells MW-110 and MW-127 were tested simultaneously using blower VES-400. MW-110 and MW-127 were tested for 24 days removing approximately 19 barrels of condensate. The flow rates during both tests were similar at approximately 300 standard cubic feet per minute (scfm). The multiple well testing provided a condensate removal rate of 0.79 barrels per day, which was only 53 % of the condensate removal rate observed during the single well testing (1.47 barrels per day).

5.3.3 VES Full-Scale Expansion

Based upon the results of the vapor testing completed in 1999 and 2000, 6 blowers (VES-600, VES-700, VES-800, VES-900, VES-1000 and VES-1100) were added to the VES in 2001. Two of the existing blowers, VES-400 and VES-500, were equipped with thermal oxidizers; however, VOC control was no longer needed so these blowers were removed from the Site. Blowers VES-600 and VES-700 were added to the system in July 2001, and blowers VES-800, VES-900, VES-1000 and VES-1100 were added to the system in September 2001. The VES was configured so each blower was extracting vapor from only one well. This configuration allows for operation of a maximum of 9 blowers extracting from up to 9 wells at any one time. The operation of the nine blowers (VES-100, VES-200, VES-300, VES-600, VES-700, VES-800, VES-900, VES-1000 and VES-1100) continued at the site through 2003. A summary of VES operation at the site during 2003 is presented in Table 8.

VES emissions are regulated by the New Mexico Environment Department Bureau of Air Quality under Permit No. R2-176-R1 and operating permit P-176. The permit requires monthly sampling and quarterly reporting to track mass removal and emissions concentrations. A copy of the VES monthly air sampling data collected during 2003 is provided in Appendix D. The following sections discuss VES performance in both hydrogeologic zones at the site during 2003.

5.3.4 Shallow Zone Vapor Extraction

Vapor extraction in the Shallow Zone was conducted on Well MW-126 from April 3 to July 30, 2003. For the year, the total equivalent of approximately 0.06 barrels of condensate was removed from the Shallow Zone in the vapor phase. A summary of the VES operations, vapor-phase mass removal and aerobic biodegradation is provided in Table 8.

5.3.5 Lower Queen Vapor Extraction

During 2003, vapor extraction in the Lower Queen primarily included wells MW-65A, MW-68, MW-72, MW-74, MW-85, MW-110, MW-112, MW-113, MW-120, MW-121, MW-123, MW-124, MW-125, MW-129 and MW-130. The combined vapor extraction in 2003 ranged from the equivalent of 0 barrels of condensate in MW-110 to the equivalent of 68.16 barrels of condensate in MW-113. For the year, a total equivalent of approximately 416.24 barrels of condensate was removed from the Lower Queen in the vapor phase. A summary of the VES operations, vapor-phase mass removal and aerobic biodegradation is provided in Table 8.

5.3.6 Aerobic Biodegradation

As previously mentioned, there has been evidence that a significant amount of aerobic biodegradation of condensate is occurring in the site subsurface. In fact, data suggests that the mass destruction due to aerobic biodegradation may be limited by a lack of sufficient oxygen in the subsurface to support the aerobic respiration. These data indicate that more extensive use of vapor extraction at the site would not only increase vapor-phase mass recovery, but would also increase aerobic biodegradation by adding oxygen to the subsurface.

When oxygen levels measured in soil gas are less than normal atmospheric oxygen levels, the observed reduction can be attributed to microbial aerobic respiration. Thus, aerobic biodegradation of hydrocarbons can be estimated by using the stoichiometry of hydrocarbon oxidation (*Test Plan and Technical Protocol for a Field Treatability Test for Bioventing*, Air Force Center for Environmental Excellence, May 1992) as follows:

$$C_6H_{14} + 9.5O_2 \rightarrow 6CO_2 + 7H_2O$$

This equation uses hexane as a representative hydrocarbon. Using the above equation, it takes approximately three and a half pounds of oxygen to degrade one pound of hydrocarbons. Assuming that some oxygen is utilized in reactions not associated with the degradation of hydrocarbons, it was assumed that five pounds of oxygen would be required to degrade one pound of hydrocarbons.

Table 8 presents a summary of estimated aerobic biodegradation of condensate at the site in 2003. As the data in Table 8 shows, it has been estimated that approximately 1204 barrels of condensate were degraded in 2003.

5.3.7 Ground Water Extraction System VES Operations

As a portion of the 2003 remediation program for the site, Marathon proposed to the NMOCD the removal of the ineffective groundwater extraction system (GWES) and its replacement with vapor extraction remedial technology (VES). VES has been demonstrated to be more effective at the site in the removal of hydrocarbons than the GWES. The revised plan requested approval to use the appropriate placement of vapor extraction systems applied to wells which were already a part of the GWES. The GWES included eleven monitoring/groundwater extraction wells; MW-58, MW-65A, MW -72, MW-75, MW-81, MW-82, MW-83, MW-84, MW-85, MW-86 AND MW-110. The modification of the remedial systems was proposed by Marathon in a December 4, 2002 letter to the NMOCD. The proposal was conditionally accepted by the NMOCD for 2003 remedial activities in a letter dated February 3, 2003 by Mr. William C. Olson.

The elements of the revised remediation plan for the GWES were:

1. Deactivate the GWES and monitor groundwater/condensate thicknesses in the Lower Queen groundwater extraction wells on a monthly basis for three months. (*this methodology was applied by beginning each three month observation period upon the first detection of PSH and observing PSH thicknesses over the subsequent three monthly sampling events*)

2. If condensate thickness levels remain consistent during this time period then the groundwater extraction system shall remain off-line.

3. If the condensate thickness levels increase in select wells, the VES will be configured to operate on these wells to ensure removal of condensate mass. If VES is unable to reduce condensate thickness by 50% in three months, the groundwater extraction system will be reactivated for these wells.

4. After two semi-annual monitoring events, free product thickness and dissolved phase condensate concentrations will be evaluated to demonstrate no adverse impact has occurred regarding plume geometry or migration. At this time Marathon Oil Company will petition to dismantle the groundwater extraction portion of the remedial system.

The conditional approval of the NMOCD had the following conditions:

1. Marathon shall not plug and abandon shallow zone monitoring wells MW-17, MW-32 and MW-47, and

2. The OCD defers comment on the dismantling the groundwater extraction system until the OCD has the opportunity to evaluate the future performance of the ground water remediation activities.

In mid-February 2003 following the receipt of the NMOCD approval, Marathon suspended the operation of the GWES and began monitoring the eleven extraction wells for condensate thicknesses. As proposed, Marathon would conduct no further actions on extraction wells in which the condensate thicknesses did not increase. For extraction wells in which the condensate thickness increased over a three-month period, Marathon placed a vapor extraction system in the well. Monitoring of the condensate thicknesses in extraction wells was performed in every month of 2003. The results of that gauging activity are found in Table 9 and Appendix A.

Table 9 presents the monthly records of depth to product (condensate) and depth to water measurements from each extraction well during 2003. The table also includes the summaries of the calculated product thickness and the change in product thickness from the previous month's gauging. The thickness and change in thickness entries are color coded. No color indicates no product detected or no change in product thickness. The pale red color indicates product detected. The deep red color indicates an increasing product thickness from the previous month, while the pale blue color indicates a decreasing product thickness from the previous month's measurements. Using the color coded entries, it is possible to determine the need, if any, for remediation using a VES.

During 2003, Marathon conducted observations of the former GWES, applied remedial activities and achieved remedial results in compliance with the proposed plan.

A summary of the monthly observations for 2003 follows:

1. For six extraction wells MW-58, MW-81, MW-83, MW-84, MW-86 and MW-110, there was no product detected during the year. Therefore, for these wells there was consistency in the product thicknesses (no product) and the groundwater extraction system could remain offline.

2. Five extraction wells detected product during the year. These wells with detected product included extraction wells MW-65A, MW -72, MW-75, MW-82 and MW-85. The status of each of these wells was compared to the criteria for remediation below.

    - Monitor Well MW-65A detected product during a five-month period beginning in May 2003. In August 2003 after three months of variable

PSH thicknesses, a VES was placed on the well. At that time, the thickness of PSH was 0.42 feet. Within two months (October 2003), the product thickness was reduced to 0.00 and remained undetected in November and December 2003. This program of observation, criteria for remedial action and results is consistent with Marathon's proposed plan and for dismantling the groundwater extraction system.

- Monitor Well MW-72 detected product in February 2003 the thickness of which more than doubled in March but decreased slightly by April. A VES was installed on the well in May 2003. The April PSH thickness was 0.70 feet. By June no PSH was detected in the well. The VES remained on the well through October 2003. Some variability in the thickness of PSH occurred during the remainder of the year. In July a PSH thickness of 0.25 feet was measured. This decreased to non detected PSH until November 2003 when 0.01 feet of PSH was measured. In December 2003 no PSH was detected. This program of observations, criteria for remedial action and results is consistent with Marathon's proposed plan and for dismantling the groundwater extraction system.

- Monitor Well MW-75 did not detect any PSH during the year until September 2003. During September the thickness of PSH was measured at 0.02 feet. In October no PSH was detected; however, in November 0.09 feet of PSH was detected which became an undetected thickness in December. Over the three-month period, September to December, the PSH thickness varied but did not increase. No remedial action was taken in 2003 for this well. This program of observations, criteria for remedial action and results is consistent with Marathon's proposed plan and for dismantling the groundwater extraction system.

- Monitor well MW-82 did not detect any PSH until April. At that time 1.65 feet of PSH was measured. This detection disappeared the following month and remained undetected until September. In September 0.83 feet was measured. The thickness of PSH decreased to 0.67, 0.63 and 0.00 feet in subsequent monthly samples ending in the December sampling event. The decrease in the thickness over the three-month period to non detected PSH did not require any remedial action. This program of observations, criteria for remedial action and results is consistent with Marathon's proposed plan and for dismantling the groundwater extraction system.

- Monitor well MW-85 did not detect any PSH prior to March 2003. At that time 0.12 feet of PSH was measured. This detection disappeared the

following month and remained at non detect until September 2003 when 0.02 feet of PSH was measured. Once again the product decreased to non detects for the remainder of the year. A VES has been active on this well since September 2002 and remained in use for the entire year of 2003. However, the VES was not operational during August. This event likely caused the detection of 0.02 feet of PSH in September. This program of observations, criteria for remedial action and results is consistent with Marathons proposed plan and for dismantling the groundwater extraction system.

5.3.8 VES Enhancement and Air Bubbling

The efficiency of each remedial system has been evaluated on a monthly basis and modifications to the remedial approach and equipment have been made to optimize the recovery of hydrocarbons. Both vapor concentrations in the VES off-gas and condensate thicknesses are measured monthly from each well that is a part of a VES. In most cases, VES has provided very good results in the recovery of condensate from site wells. In some cases, however, apparent formation low permeability has resulted in poor vapor recovery and stagnant condensate thicknesses in wells. This phenomenon occurs because there is insufficient air flow from the formation in the low permeability wells to stimulate biological activity or vaporize the condensate in the wellbore.

During the second half of 2003, Marathon tested the use of low flow air sparging in wells with low vapor concentrations and stagnant condensate thicknesses as a remedial method in concert with VES. The purpose of the low flow sparging or "bubbling" is to introduce clean air in the well immediately below the product thickness on the groundwater. The air is generated by a compressor into a thin drop tube that enters the well through the sealed wellhead. The base of the air tube is placed below the product thickness in the well. The air exiting at the air tube's base bubbles through the condensate in the well casing. This action promotes volatilization of the condensate.

Bubbling was tested in a total of nine wells in 2003. The wells using bubblers included MW-65A, MW-68, MW-69, MW-72, MW-75, MW-82, MW-85, MW-126 and MW-129. In some wells, the VES remained in use during the test, in other wells, no VES was used, and the off-gas was vented to the atmosphere. Wells with VES were field measured for hydrocarbon emissions.

The majority of these test periods occurred during the last quarter of 2003. Table 10 provides data for wells in which air bubbling was tested, the period of time in which the test was conducted, the condensate thicknesses monitored during the testing and

hydrocarbon emissions in pounds per hour, if measured. Results from the bubbler testing have varied. Two ways to evaluate the results of bubbling include the change in condensate thickness and/or the change in hydrocarbon emissions. A reduction in either condensate thickness or an increase in hydrocarbon production (in pounds per hour of emissions) when using the bubbler is considered to be a successful use of the technology.

The initial bubbling test was conducted on monitor well MW-126 in July 2003. MW-126 is a shallow zone monitor well in which condensate has been reported for 27 months prior to the initial testing. A VES had been placed on MW-126 on three earlier occasions with the following results:

- 10/17/01 to 12/19/01 with 0.0 barrels vapor removal rate per day;
- 4/13/02 to 12/8/02 with a 0.03 barrel per day removal rate; and
- 4/3/03 to 7/01/03 with a removal rate of 0.0 barrels per day.

During these periods, no significant vapor condensate removal was observed and condensate thickness was generally increasing.

On July 2, 2003, the well was equipped with a bubbler and continued on VES. At that time, the well had a condensate thickness of approximately 3.12 feet. On July 15, 2003, 13 days later, there was no condensate measured in the well. The bubbler and VES were subsequently removed on July 30, 2003 for use on Monitor Well MW-68. No condensate was measured in the well during the August monitoring but was recorded at 1.04 feet in September. However, no condensate was detected in October, November or December 2003 in this well.

Results of the bubbler system on the eight other wells in which it was used are summarized below:

- MW-65A – use of the bubbler system aided in removing condensate from the well during its use in late September through November 18, 2003;
- MW-68 – use of the bubbler system beginning in late August and continuing to the end of the year reduced condensate thickness to zero;
- MW-69 – a bubbler system was installed in this well on December 18, 2003. No conclusions can be drawn from the time the bubbler system was installed and the end of the year;

- MW-72 – a bubbler system was installed on this well on August 20 and removed on September 17, 2003. An increase in volatilization and a reduction in condensate thickness resulted during the initial test period. The bubbler was reintroduced into the well in late October but without the VES. It remained on the well through the end of the year. During this period condensate thickness was again reduced;

- MW-75- a bubbler system was installed in November and remained on the well throughout December 2003. The bubbler was effective in removing condensate thickness;

- MW-82 – A bubbler system was installed in mid November and remained for the rest of the year. It was effective in reducing condensate thickness in the well;

- MW-85 – The bubbler system installed in late August was on the well throughout the remainder of the year. The system aided in the removal of condensate thickness but had no apparent increase on volatilization; and

- MW-129 – The bubbler system was installed on September 19 and was on the well throughout the remainder of the year. The bubbler reduced condensate thickness to zero and increased the rate of volatilization.

Based on the above results, the compressed air bubbling program will continue to be applied at the site in 2004.

5.4 VES Optimization Strategy

During 2003, a strategy was developed to optimize the placement and utilization of VES blowers and compressed air bubbling systems to maximize hydrocarbon recovery. The overall strategy included collecting fluid level measurements on all former groundwater recovery system wells and those selected wells that historically contained condensate on a monthly basis. In addition, vapor phase recovery was determined from monthly air sampling, and anaerobic degradation was calculated. Generally, the VES strategy involved reviewing the fluid level data and vapor recovery data on a monthly basis and applying the following criteria:

- If recovery of less than one barrel per month is noted, consider relocating the blower to another well;

- If there is no condensate thickness recorded during the month, consider relocating the blower to another well;
- Compare results for all blowers with a rolling three-month data set to evaluate trends; and
- Based on results from the above three criteria, relocated blowers as appropriate.

It is important to note, that the condensate observed in former groundwater recovery wells follows a different set of criteria that was previously discussed, and may override the above criteria.

In addition to the VES operation, bubbling of compressed air proved beneficial during 2003 in circumstances where the formation has low permeability, which inhibits good air transfer by VES only. The results from bubbling air were previously discussed. Going forward, air bubbling will be utilized based on the following criteria:

- Condensate thickness in wells utilizing VES is not decreasing over time; and
- Vapor phase recovery from wells utilizing VES is not significant, but condensate is present in the well.

The above optimization efforts will continue in 2004.

6. Summary and Action Plan

6.1 Condensate Mass Removal

During 2003, a total of approximately 1,620 barrels of condensate were removed at the site. Of the total recovery, approximately 416 barrels of condensate were removed in the vapor phase by VES efforts in the Shallow Zone and Lower Queen. In addition to the vapor phase recovery, it is estimated that an additional 1203 barrels of condensate were removed via enhanced aerobic degradation in the subsurface. There was no significant amount of condensate removed in the liquid phase through pump and treat efforts from January 1 to February 13, 2003 at the site.

The 2003 vapor phase condensate recovery of 416 barrels is 26% greater than the 330 barrels of vapor phase condensate recovered in 2002. Overall, the total condensate removed at the site in 2003 represents a slight decrease of 7% (123 barrels), as compared to that achieved in 2002. This overall decrease is a result of the lower

calculated aerobic degradation in 2003 versus that calculated in 2002 (1203 barrels in 2003; 1410 barrels in 2002; a difference of 14.6% less in 2003). The reduction in aerobic degradation could be influenced by the amount of down-time for blowers during the year and the wells the blowers operated on during the year. For example, if a blower operated on a well located in a portion of the formation with low permeability, the aerobic degradation could be significantly less than if it operated on a well located in a portion of the formation with higher permeability.

The 2003 removal results indicate a substantial trend in greater recovery of hydrocarbons compared to the condensate removed in 1997 and 1998. A chart comparing the mass removal in the liquid phase, vapor phase, and through aerobic degradation for the period of 1997 through 2003 is included as Figure 11. As shown on Figure 11, there was a significant increase of condensate removed both via vapor phase extraction and enhanced aerobic degradation. The decrease in condensate recovery in the liquid phase was initially observed during the second half of 2000 and remained relatively insignificant through the end of 2001. No measurable condensate was recovered in the liquid phase during the period of groundwater and total fluids recovery operations in early 2003.

The significant increase in condensate removal from the VES can be attributed to the following three items:

- Focusing vapor extraction in discrete zones from the well modifications;
- Increasing the scale of the VES through the addition of six blowers in 2001 for a total of nine blowers; and
- Operating one blower per extraction well, thus increasing the maximum attainable flow rate.

Cumulatively, from the initiation of remedial efforts in April 1991 through December 2003, a total of approximately 19,248 barrels of condensate have been recovered. Of the 19,248 barrels of condensate recovered to date, approximately 3,006 barrels have been removed in the liquid phase from recovery wells and sumps, and the equivalent of approximately 16,242 barrels has been removed or degraded in the vapor phase by VES operation. A summary of monthly and cumulative condensate removed from May 1991 through December 2003 is presented in Table 11.

A technical review of the data collected since April 1991 was performed to determine if the groundwater extraction system is a viable means for removing condensate and controlling condensate migration from the Lower Queen. The lines of evidence suggest that the groundwater extraction system successfully reduced the volume and

mobility of the separate-phase condensate plume. Continued operation of the groundwater extraction system between April 2000 and mid-February 2003 has resulted in an asymptotic mass removal trend, indicative of the technologies inability to sustain long-term mass removal. Subsequently, Marathon has implemented vapor extraction as a viable technology to enhance condensate mass removal. With the VES in place, the residual stabilized condensate plume can be effectively remediated without the aid of continued groundwater extraction. Based on this information, Marathon was granted permission to discontinue the groundwater extraction system by the OCD (with conditions) in a correspondence dated February 3, 2003. The OCD has approved Marathon's request with the condition that "the OCD defers comment on dismantling the groundwater extraction system until the OCD has the opportunity to evaluate the future performance of ground water remediation activities" as stated in the OCD's correspondence to the petition. A copy of the correspondence is provided in Appendix F. Details of the request are discussed in the next section.

6.2 Performed Activities

The following sections summarize the activities that were completed in 2003.

6.2.1 Discontinued Operations of the Groundwater Extraction System

Marathon proposed to the NMOCD the removal of the ineffective GWES and its replacement with VES technology. The revised plan requested approval to use the appropriate placement of vapor extraction systems applied to wells which were already a part of the GWES. The modification of the remedial systems was proposed by Marathon in a December 4, 2002 letter to the NMOCD. The proposal was conditionally accepted by the NMOCD for Y2003 remedial activities in a letter dated February 3, 2003 by Mr. William C. Olson.

From February 13 through the end of 2003 (when the GWES was shut down) , the VES plan for the GWES was successfully implemented as proposed by Marathon.

6.2.2 Shallow Zone Well Abandonment

The Shallow Zone Well Abandonment was approved by the OCD (with condition) in correspondence with Marathon date February 3, 2003. A copy of the correspondence is provided in Appendix F. The request to plug and abandon 42 Shallow Zone Wells mentioned in the "Annual Groundwater Report, January-December 2002" was approved with the condition that 3 Shallow Zone Wells (MW-17, MW-32 and MW-47) not be plugged and abandoned. These wells are summarized on Table 12 and depicted on Figure 12. The wells were selected based on historical gauging results and

their location. Of these wells, 24 wells were selected because they have been dry for at least 3 years. In addition, 15 wells were determined to be redundant because they are located relatively close to other wells, did not monitor known areas of groundwater concern or did not provide pertinent information in defining the groundwater flow direction. The wells were grouted in-place using a cement grout consisting of two to eight percent bentonite. The cement was delivered to the bottom of the well by means of a grout pump and tremie pipe. The well surface completions were removed, and at the NMOCD's request, attempts were made to remove the monitoring well casings. However, attempts to remove casings for the most part were unsuccessful. If the well casing could not be removed, it was cut off one foot below existing grade. Finally, a 4' x 4' x 6' concrete pad was installed at the surface. Copies of the State of New Mexico well plugging reports are provided in Appendix G.

6.2.3 Monitoring Well (MW-126) Modification

The monitoring well modification to MW-126 consisted of the installation of 25 feet of 4-inch diameter, 0.04-inch slot poly-vinyl chloride (PVC) screen and 45 feet of 4-inch diameter PVC casing in the open borehole of well MW-126. The total depth of the well is 70 feet below the top of the 7-inch diameter steel surface casing. Gravel pack (size 4/10 Brady gravel) was placed in the annulus of the well from the bottom of the well to 10 feet above the top of the PVC screen. The remainder of the annulus was filled with bentonite pellets to the top of the PVC casing. A copy of the report regarding the modification to MW-126 including a well construction log for MW-126 is provided in Appendix H. The objective of this modification was to target the intervals of the open borehole of the well containing separate-phase condensate and enhance the ability to achieve hydrocarbon mass removal into the Shallow Zone via vapor extraction.

6.3 Planned Activities

6.3.1 Continue Operations of the Vapor Extraction System (VES)

The operation of the VES and groundwater recovery systems suggests lines of evidence that Marathon has provided hydraulic control of condensate and separate-phase hydrocarbons in groundwater at the site (as demonstrated by continual gauging and sampling data).). In addition, the total recovery of all hydrocarbons, i.e. vapor phase hydrocarbons and aerobic degradation of hydrocarbons (Figure 11) in 2003, is less than that observed in the remediation results of 2002. The rigorous application of the VES technology during 2003 resulted in an increase of annual condensate recovered in the vapor phase versus that recovered in 2002. However, the decrease in the aerobic degradation was greater than the vapor phase increase resulting in an

overall decrease in condensate removal. This may be significant because a concerted effort was made during 2003 to maximize recoveries using the VES including the GWES wells in the VES program. If this trend of reducing hydrocarbon recovery continues in future years, it may indicate that potential closure of the site will be warranted in the foreseeable future.

The ongoing remediation efforts in the year 2004 and beyond will include the following:

- Semi-annual groundwater monitoring;
- Compliance monitoring and reporting; and
- Continued operation of the VES while continuing to evaluate the wells that will be used for vapor extraction. The current system has the capacity for nine blowers and nine wells and allows for the flexibility to change which wells are used for vapor extraction.
- The GWES will remain idled but the program of evaluating separate-phase conductor in GWES wells and the use of VES for recovery of these hydrocarbons in selected wells will continue.

6.4 Groundwater Monitoring Plan

The current groundwater monitoring plan was approved by the OCD (with conditions) in correspondence with Marathon dated March 4, 1999. Table 13 shows the wells included in the currently approved groundwater sampling plan. No changes to the current Groundwater Monitoring Plan are proposed for calendar year 2004. However, Marathon would like to implement the following groundwater monitoring plan beginning in 2005:

- Reduce Groundwater Sampling to a Single Annual Event – Based on historical sampling data collected through 2003, it is apparent that BTEX concentrations are significantly reduced in most wells included in the sampling program. In fact, most of the sampled wells today show very low or no BTEX concentrations above OCD regulatory limits. In addition, where BTEX is detected in monitored wells, there appears to be no seasonal variation in the concentrations. The proposed annual groundwater sampling event would be conducted in April of each calendar year. The event would include sampling the same constituent list as approved in the original OCD approved monitoring plan. Table 14 provides a list of wells scheduled for sampling and a

constituent list for the proposed annual sampling program. The purging and sampling techniques will be conducted using low-flow procedures that were approved and implemented in 2003. A copy of the March 1998 USEPA low-flow procedures is included in Appendix E.

- Measure Liquid Levels Semi-Annually - Marathon proposes to continue collecting semi-annual liquid levels from all existing site wells as approved in the original groundwater monitoring plan. This will also facilitate documentation of water level fluctuations and provide an early warning system for unexpected separate phase condensate movement. During each gauging event, liquid level measurements (depth to water and condensate thickness) will be collected from each accessible monitoring well.

6.5 Proposed Site Closure Plan

Based on a review of the data collected through 2003, Marathon proposes the following plan to ultimately achieve site closure:

- The groundwater monitoring program will continue as specified in Section 6.4;

- The VES remediation program will continue to be implemented in a manner that will optimize removal of condensate and enhance natural biological degradation. The optimization will include bubbling compressed air into wells containing condensate to enhance the removal of condensate as necessary. In addition, the VES remediation program will be operated in a manner to ensure compliance with the approved plan to shut down the GWES system;

- When it can be determined through monitoring that a portion of the site no longer has evidence of condensate or dissolved BTEX constituents exceeding OCD regulatory limits, that portion of the site will be monitored for two years. If at the end of the two-year period, no condensate occurs, and samples collected from the wells in the area do not show dissolved BTEX above OCD regulatory limits, Marathon would petition the OCD to remove the wells in that portion of the site from the monitoring program. In this manner, Marathon intends to begin closing portions of the site showing no further impacts and focusing remediation and monitoring efforts on those portions of the site that still contain hydrocarbon impacts; and

- An evaluation of WQCC metals, PAHs and wet chemistry data will be completed for the site to document compliance with OCD regulatory limits. If results from this evaluation are favorable, Marathon intends to petition the OCD to reduce or discontinue sampling for these constituents.

Table 1A. Shallow Zone Monitoring Well Construction Details
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well ID	Well Type	Measuring Point Elevation (feet amsl)	Total Depth (feet btoc)	Top of Screen/ OpenHole Interval (feet btoc)	Screen/Open Hole Depth (feet)	Casing Diameter (inches)
MW-1	monitoring	3792.50	15.00	9.00	6.00	2
MW-2	monitoring	3788.72	14.00	4.00	10.00	2
MW-3	monitoring	3787.50	15.00	5.00	10.00	2
MW-4	monitoring	3785.88	17.00	8.00	9.00	2
MW-5	monitoring	3801.69	11.00	6.00	5.00	2
MW-6	monitoring	3785.17	12.00	7.00	5.00	2
MW-7	monitoring	3784.46	16.00	6.00	10.00	2
MW-8	monitoring	3795.04	15.50	5.00	10.50	2
MW-9	monitoring	3807.85	11.00	6.00	5.00	2
MW-10	monitoring	3790.78	17.00	7.00	10.00	4
MW-11	monitoring	3806.96	22.00	12.00	10.00	4
MW-12	monitoring	3809.86	23.00	13.00	10.00	2
MW-13	monitoring	3801.58	20.00	10.00	10.00	2
MW-14	monitoring	3803.61	22.00	12.00	10.00	4
MW-15	monitoring	3803.59	17.00	7.00	10.00	2
MW-16	monitoring	3801.04	20.00	10.00	10.00	4
MW-17	monitoring	3799.55	18.00	8.00	10.00	2
MW-18	monitoring	3795.82	15.00	5.00	10.00	4
MW-19	monitoring	3797.21	17.00	7.00	10.00	4
MW-20	monitoring	3797.59	14.00	4.00	10.00	2
MW-21	monitoring	3798.21	21.00	11.00	10.00	2
MW-22	monitoring	3799.20	16.00	6.00	10.00	2
MW-23	monitoring	3794.48	10.00	5.00	5.00	2
MW-24	monitoring	3794.09	11.00	6.00	5.00	2
MW-25	monitoring	3786.97	8.00	3.00	5.00	2
MW-26	monitoring	3793.01	19.00	9.00	10.00	2
MW-27	monitoring	3790.93	15.00	10.00	5.00	2
MW-28	monitoring	3797.03	16.00	6.00	10.00	2
MW-29	monitoring	3794.06	12.00	7.00	5.00	2
MW-30	monitoring	3788.30	12.00	7.00	5.00	2
MW-31	monitoring	3791.15	16.50	7.00	9.50	4
MW-32	monitoring	3797.47	14.00	9.00	5.00	2
MW-33	monitoring	3802.48	18.00	9.00	9.00	4
MW-34	monitoring	3806.00	17.00	8.00	9.00	2
MW-35	monitoring	3800.81	19.00	14.00	5.00	4
MW-36	monitoring	3792.94	7.00	5.00	2.00	2
MW-37	monitoring	3795.03	19.00	9.00	10.00	4
MW-38	monitoring	3797.32	19.00	9.00	10.00	4
MW-39	monitoring	3796.20	19.00	9.00	10.00	4
MW-40	monitoring	3803.12	12.00	7.00	5.00	2
MW-41	monitoring	3799.04	22.00	12.00	10.00	4
MW-42	monitoring	3804.73	22.00	12.00	10.00	2
MW-43	monitoring	3802.05	22.00	12.00	10.00	4
MW-44	monitoring	3804.14	22.00	12.00	10.00	4
MW-45	monitoring	3808.68	24.00	9.50	14.50	2

Table 1A. Shallow Zone Monitoring Well Construction Details
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well ID	Well Type	Measuring Point Elevation (feet amsl)	Total Depth (feet btoc)	Top of Screen/ OpenHole Interval (feet btoc)	Screen/Open Hole Depth (feet)	Casing Diameter (inches)
MW-46	monitoring	3805.54	18.00	8.00	10.00	4
MW-47	monitoring	3805.09	19.00	9.00	10.00	2
MW-48	monitoring	3806.18	18.00	8.00	10.00	2
MW-49	monitoring	3805.61	24.00	14.00	10.00	2
MW-50	monitoring	3813.35	35.00	20.00	15.00	2
MW-51	infiltration	3810.86	18.00	8.00	10.00	2
MW-52	monitoring	3817.49	19.00	9.00	10.00	2
MW-53	monitoring	3809.92	13.00	6.00	7.00	2
MW-54	monitoring	3823.86	76.00	41.00	35.00	4
MW-55	monitoring	3794.40	65.00	20.00	45.00	4
MW-56	monitoring	3782.45	42.00	27.00	15.00	4
MW-61	monitoring	3816.20	55.00	45.00	10.00	4
MW-65	monitoring	3763.31	55.00	35.00	20.00	4
MW-69	recovery	3805.11	48.00	13.00	35.00	4
MW-77	monitoring	3775.48	80.00	17.50	62.50	8
MW-78	monitoring	3785.82	85.00	13.00	72.00	8
MW-79	monitoring	3788.39	80.00	8.00	72.00	8
MW-80	monitoring	3821.64	90.00	19.00	71.00	8
MW-90	monitoring	3781.73	60.00	12.50	47.50	4
MW-91	monitoring	3783.07	70.00	12.50	57.50	4
MW-92	monitoring	3785.29	70.00	12.50	57.50	4
MW-93	monitoring	3817.50	70.00	12.50	57.50	4
MW-99	monitoring	3770.05	70.00	12.50	57.50	4
MW-100	monitoring	3773.31	70.00	12.50	57.50	4
MW-101	monitoring	3762.71	70.00	12.50	57.50	4
MW-102	monitoring	3753.69	80.00	12.50	67.50	4
MW-103	monitoring	3743.14	70.00	12.50	57.50	4
MW-105	monitoring	3736.93	80.00	12.50	67.5	4
MW-106	monitoring	3721.97	92.00	12.50	79.5	4
MW-107	monitoring	3726.27	70.00	12.50	57.5	4
MW-109	monitoring	3809.53	--	--	--	--
MW-117	phase II infill	3807.86	47.00	17.00	30.00	4
MW-126	phase II infill	3795.58	70.00	30.00	40.00	7
Sump A10	monitoring	3800.99	--	--	--	--
Sump 16A	monitoring	3785.14	--	--	--	--

Notes:
feet amsl Feet above mean sea level
feet btoc Feet below top of casing
-- Data not available
Wells were plugged and abandoned in March 2003

Table 1B. Lower Queen Monitoring Well Construction Details
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well ID	Well Type	Measuring Point Elevation (feet amsl)	Total Depth (feet btoc)	Top of Screen/ OpenHole Interval (feet btoc)	Screen/Open Hole Depth (feet)	Casing Diameter (inches)
MW-57	monitoring	3787.70	175.00	155.00	20.00	4
MW-58	recovery	3824.07	216.00	191.00	25.00	4
MW-59	monitoring	3819.59	--	--	--	--
MW-60	monitoring	3815.28	220.00	170.00	50.00	4
MW-61A	monitoring	3819.97	214.00	173.50	40.50	4
MW-62	monitoring	3819.90	223.00	177.00	46.00	4
MW-63	monitoring	3826.16	220.00	174.00	46.00	4
MW-64	monitoring	3798.57	200.00	154.00	46.00	4
MW-65A	recovery	3763.26	166.00	115.00	51.00	4
MW-66	monitoring	3828.98	232.50	182.00	50.50	4
MW-67	monitoring	3765.87	163.00	112.00	51.00	4
MW-68	recovery	3797.83	200.00	149.00	51.00	4
MW-70	monitoring	3822.57	222.00	172.00	50.00	4
MW-71	monitoring	3778.05	233.00	165.00	68.00	4
MW-72	dual recovery	3819.32	241.50	181.50	60.00	6
MW-73	monitoring	3820.09	220.00	10.00	210.00	8
MW-74	monitoring	3820.82	220.00	170.00	50.00	6
MW-75	dual recovery	3816.12	220.00	170.00	50.00	6
MW-76	recovery	3796.01	220.00	9.00	211.00	8
MW-81	dual recovery	3817.03	225.00	71.00	154.00	8
MW-82	recovery	3825.07	250.00	67.50	182.50	6
MW-83	recovery	3794.12	202.00	152.00	50.00	6
MW-84	recovery	3759.60	170.00	120.00	50.00	6
MW-85	dual recovery	3824.93	235.00	162.00	73.00	6
MW-86	recovery	3823.99	225.00	185.00	40.00	6
MW-87	monitoring	3740.50	170.00	145.00	25.00	4
MW-87A	monitoring	3739.53	130.00	10.00	120.00	8
MW-88	monitoring	3789.7	175.00	142.50	32.50	8
MW-89	monitoring	3827.68	232.00	188.50	43.50	4
MW-94	recovery	3821.48	230.00	65.00	165.00	8
MW-95	monitoring	3746.26	145.00	111.00	34.00	4
MW-96	monitoring	3739.80	135.00	97.50	37.50	4
MW-97	monitoring	3750.16	148.00	107.50	40.50	4
MW-98	monitoring	3770.15	165.00	127.50	37.50	4
MW-104	monitoring	3793.64	220.00	145.00	75.00	6
MW-108	monitoring	3747.13	--	--	--	--
MW-110	recovery	3812.61	235.00	175.00	60.00	6
MW-111	monitoring	3824.44	230.00	190.00	40.00	4
MW-112	phase I infill	3780.11	211.00	140.00	71.00	6
MW-113*	phase I infill	3772.67	200.00	125.00	75.00	6
MW-114	phase I infill	3805.32	220.00	111.00	109.00	8
MW-115	phase I infill	3804.69	224.00	35.00	189.00	8
MW-116	phase I infill	3792.11	220.00	150.00	70.00	6
MW-117A	phase II infill	3808.24	225.00	46.00	179.00	8
MW-118	phase II infill	3762.88	202.00	112.00	90.00	4
MW-119	phase II infill	3824.74	245.00	185.00	60.00	4

Table 1B. Lower Queen Monitoring Well Construction Details
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well ID	Well Type	Measuring Point Elevation (feet amsl)	Total Depth (feet btoc)	Top of Screen/ OpenHole Interval (feet btoc)	Screen/Open Hole Depth (feet)	Casing Diameter (inches)
MW-120	phase II infill	3820.65	240.00	180.00	60.00	4
MW-121	phase II infill	3820.88	225.00	175.00	50.00	4
MW-122	phase II infill	3822.79	225.00	36.00	189.00	7
MW-123	phase II infill	3768.77	225.00	125.00	100.00	4
MW-124	phase II infill	3777.83	225.00	17.00	208.00	7
MW-125	phase II infill	3790.61	225.00	130.00	95.00	4
MW-127	phase II infill	3825.17	245.00	195.00	50.00	4
MW-128	phase II infill	3786.08	225.00	37.50	187.50	7
MW-129	phase II infill	3800.82	245.00	155.00	90.00	4
MW-130	phase II infill	3775.54	225.00	145.00	80.00	4
MW-131	phase II infill	3784.23	245.00	145.00	100.00	4
IW-1	infiltration	3808.55	230.00	73.00	157.00	12
IW-2	infiltration	3835.86	300.00	159.00	141.00	12
SW-1	monitoring	3808.19	--	--	--	--
SW-2	monitoring	3808.79	--	--	--	--
SW-3	monitoring	3842.29	230.00	81.50	148.50	8
VE-1	vapor extraction	--	214.00	80.00	134.00	8
VE-2	vapor extraction	--	210.00	75.00	135.00	8
VE-3	vapor extraction	--	202.00	75.00	127.00	8
VE-4	vapor extraction	--	183.00	60.00	123.00	8
VE-5	vapor extraction	--	168.00	60.00	108.00	8
VE-16	vapor extraction	3750.96	150.00	42.50	107.50	8
VE-17	vapor extraction	3756.73	130.00	40.00	90.00	8
VE-18	vapor extraction	3756.82	163.00	37.50	125.50	8
VE-19	vapor extraction	3761.18	150.00	115.00	35.00	6
VE-20	vapor extraction	3768.41	160.00	37.50	122.50	8

Notes:
feet amsl Feet above mean sea level
feet btoc Feet below top of casing
-- Data not available
* Construction details not available, modification details are estimated

Table 2. Summary of Historical Rainfall with Monthly Rainfall During 2003
Marathon Oil Company, Indian Basin Remediation Project
Eddy County, New Mexico.

Historical Rainfall

Year	Rainfall (inches)
1994	9.31
1995	7.84
1996	16.60
1997	10.65
1998	3.95
1999	4.70
2000	9.75
2001	6.02
2002	12.70

Monthly Rainfall During 2003

Month	Rainfall (inches)
January	0.06
February	1.01
March	0.34
April	2.56
May	0.38
June	0.84
July	1.40
August	0.40
September	1.21
October	0.55
November	0.28
December	0.87
2003 Annual Total	9.9

Source: Rain gauge at Indian Basin Gas Plant

Table 3. Summary of BTEX Analytical Results, April 2003 Semi-Annual Groundwater Sampling Event, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well ID	Sample Date	Analytical Parameters				
		Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Total BTEX (ug/L)
Shallow Zone Wells						
MW-14	4/9/2003	<5	<5	<5	<5	0
MW-14 (DUP 1)	4/9/2003	<5	<5	<5	<5	0
MW-39	---	Well was plugged and abandoned				
MW-43	4/8/2003	<5	<5	<5	<5	0
MW-46	4/9/2003	<5	<5	<5	<5	0
MW-49	4/8/2003	71	<5	<5	<5	71
MW-50	4/9/2003	<5	<5	<5	<5	0
MW-54	4/7/2003	<5	<5	<5	<5	0
MW-55	4/9/2003	29	10	<5	<5	39
MW-61	4/8/2003	<5	<5	<5	<5	0
MW-65	4/11/2003	<5	<5	<5	<5	0
MW-69	---	Not Sampled - Condensate present				
MW-77	4/10/2003	<5	<5	<5	<5	0
MW-78	4/10/2003	<5	<5	<5	<5	0
MW-79	---	Not Sampled - Not enough water				
MW-90	4/6/2003	<5	<5	<5	<5	0
MW-91	4/10/2003	59	<5	<5	<5	59
MW-105	---	Not Sampled - Well Dry				
MW-106	4/9/2003	<5	<5	<5	<5	0
Lower Queen Wells						
MW-57	4/10/2003	<5	<5	<5	<5	0
MW-59	4/9/2003	<5	<5	<5	<5	0
MW-59 (DUP -2)	4/9/2003	<5	<5	<5	<5	0
MW-60	4/8/2003	<5	<5	<5	<5	0
MW-61A	4/8/2003	<5	<5	<5	<5	0
MW-62	4/10/2003	8	<5	<5	<5	8
MW-63	4/10/2003	<5	<5	<5	<5	0
MW-64	4/8/2003	<5	<5	<5	<5	0
MW-66	4/8/2003	<5	<5	<5	<5	0
MW-67	4/11/2003	<5	<5	<5	<5	0
MW-70	4/6/2003	<5	<5	<5	<5	0
MW-71	4/8/2003	<5	<5	<5	<5	0
MW-73	4/9/2003	<5	<5	<5	<5	0
MW-74	4/10/2003	<5	<5	<5	<5	0
MW-87	4/8/2003	<5	<5	<5	<5	0
MW-87A	4/8/2003	<5	<5	<5	<5	0
MW-88	4/8/2003	<5	<5	<5	<5	0
MW-89	4/7/2003	<5	<5	<5	<5	0
MW-94	4/7/2003	<5	<5	<5	<5	0
MW-95	4/9/2003	<5	<5	<5	<5	0
MW-96	4/10/2003	<5	<5	<5	<5	0
MW-97	4/9/2003	<5	<5	<5	<5	0
MW-98	4/9/2003	<5	<5	<5	<5	0
MW-104	4/11/2003	<5	<5	<5	<5	0
MW-108	4/11/2003	<5	<5	<5	<5	0
MW-111	4/7/2003	<5	<5	<5	6	6

Notes:

ug/L	Micrograms per liter
<5	Compound detected below the detection limit - limit indicated
---	Not Sampled
6	Indicates result above the detection limit and below the OCD standard
16	Indicates result at/above OCD standard

OCD Cleanup Goals/Regulatory Limits

Benzene	10 ug/L
Toluene	750 ug/L
Ethylbenzene	750 ug/L
Total Xylenes	620 ug/L

Table 4. Summary of BTEX and Wet Chemistry Analytical Results, October 2003 Semi-Annual Groundwater Sampling Event, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well ID	Sample Date	Analytical Parameters						
		Wet Chemistry		BTEX				
		Total Dissolved Solids (mg/L)	Chlorides (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Total BTEX (ug/L)
Shallow Zone Wells								
MW-14	10/24/2003	1100	150.0	330	<50	<50	<50	330
MW-14 (DUP 1)	10/24/2003	1000	140.0	310	<50	<50	<50	310
MW-39	--	Well was plugged and abandoned				Well was plugged and abandoned		
MW-43	10/28/2003	1300	140.0	<5	<5	<5	<5	0
MW-46	--	Not Sampled - Dry				Not Sampled - Dry		
MW-49	10/28/2003	2900	570.0	97	<5	<5	<5	97
MW-50	10/22/2003	6300	300.0	<5	<5	<5	<5	0
MW-54	10/27/2003	4900	180.0	<5	<5	<5	<5	0
MW-55	10/24/2003	1300	190.0	33	<5	<5	<5	33
MW-61	10/22/2003	3300	440.0	<5	<5	<5	<5	0
MW-65	--	Not Sampled - Dry				Not Sampled - Dry		
MW-69	--	Not Sampled - PSH				Not Sampled - PSH		
MW-77	10/24/2003	590	57.0	<5	<5	<5	<5	0
MW-78	10/24/2003	440	22.0	<5	<5	<5	<5	0
MW-79	--	Not Sampled - Dry				Not Sampled - Dry		
MW-90	10/23/2003	450	20.0	<5	<5	<5	<5	0
MW-91	10/23/2003	450	49.0	<5	<5	<5	<5	0
MW-105	--	Not Sampled - Dry				Not Sampled - Dry		
MW-106	10/21/2003	350	3.1	<5	<5	<5	<5	0
Lower Queen Wells								
MW-57	10/28/2003	430	37.0			Not Sampled		
MW-59	10/24/2003	6000	420.0			Not Sampled		
MW-59 (DUP -2)	10/24/2003	6100	420.0			Not Sampled		
MW-60	10/23/2003	640	12.0	<5	<5	<5	<5	0
MW-61A	10/22/2003	730	10.0	<5	<5	<5	<5	0
MW-62	10/27/2003	610	82.0			Not Sampled		
MW-63	10/24/2003	370	8.2			Not Sampled		
MW-64	10/22/2003	580	13.0	<5	<5	<5	<5	0
MW-66	10/22/2003	770	8.4	<5	<5	<5	<5	0
MW-67	10/22/2003	400	4.7	<5	<5	<5	<5	0
MW-70	10/23/2003	350	10.0			Not Sampled		
MW-71	10/21/2003	1100	77.0	<5	<5	<5	<5	0
MW-73	10/24/2003	3200	260.0	<5	<5	<5	<5	0
MW-74	10/23/2003	840	170.0	<5	<5	<5	<5	0
MW-87	10/23/2003	600	14	<5	<5	<5	<5	0
MW-87A	10/23/2003	3500	120.0	<5	<5	<5	<5	0
MW-88	10/21/2003	810	22.0	<5	<5	<5	<5	0
MW-89	10/22/2003	770	50.0	<5	<5	<5	<5	0
MW-94	10/27/2003	580	27.0			Not Sampled		
MW-95	10/23/2003	410	2.8	<5	<5	<5	<5	0
MW-96	10/22/2003	560	12.0	<5	<5	<5	<5	0
MW-97	10/21/2003	440	4.1	<5	<5	<5	<5	0
MW-98	10/23/2003	310	14.0	<5	<5	<5	<5	0
MW-104	10/22/2003	580	13.0	<5	<5	<5	<5	0
MW-108	10/22/2003	330	2.6	<5	<5	<5	<5	0
MW-111	10/22/2003	800	98.0	<5	<5	<5	<5	0

Notes:

ug/L	Micrograms per liter
mg/l	Milligrams per liter
<5	Compound detected below the detection limit - limit indicated
---	Not Sampled
8	Indicates result above the detection limit and below the OCD standard
16	Indicates result at/above OCD standard

OCD Cleanup Goals/Regulatory Limits

Benzene	10 ug/L
Toluene	750 ug/L
Ethylbenzene	750 ug/L
Total Xylenes	620 ug/L
Total Dissolved Solids	1,000 mg/l
Chlorides	250 mg/l

Table 5. Summary of 2003 Groundwater Recovery and Infiltration Data, Marathon Oil Company, Indian Basin Remediation Project Eddy County, New Mexico.

Month	Lower Queen Recovery	Infiltration (IW-1 & IW-2)
January	113,354	79,554
February	54,693	38,214
March	20,177	34
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Totals	188,224	117,802

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 6. Summary of 2003 Analytical Results, East Air Stripper, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

	WQCC Standards	01/22/03 Influent	01/22/03 Effluent	02/10/03 Influent	02/10/03 Effluent	02/13/03 **East Stripper was NOT operational for the remainder of the year**
VOCs (ug/L):						
Benzene	10	<5	<5	<5	<5	
Toluene	750	<5	<5	<5	<5	
Ethylbenzene	750	<5	<5	<5	<5	
Total Xylenes	620	<10	<10	<10	<10	
PAHs (ug/L):						
Acenaphthene	NS	--	--	--	<5	
Acenaphthylene	NS	--	--	--	<5	
Anthracene	NS	--	--	--	<1	
Benzo(b)fluoranthene	NS	--	--	--	<0.1	
Benzo(k)fluoranthene	NS	--	--	--	<0.1	
Benzo(a)anthracene	NS	--	--	--	<0.1	
Benzo(a)pyrene	0.7	--	--	--	<0.1	
Benzo(ghi)perylene	NS	--	--	--	<0.1	
Chrysene	NS	--	--	--	<1	
Dibenzo(ah)anthracene	NS	--	--	--	<0.1	
Fluoranthene	NS	--	--	--	<1	
Fluorene	NS	--	--	--	<1	
Indeno(1,2,3-cd)pyrene	NS	--	--	--	<0.1	
Naphthalene	NS	--	--	--	<5	
Phenanthrene	NS	--	--	--	<1	
Pyrene	NS	--	--	--	<1	
Total Naphthalene plus monomethylnaphthalene	30	--	--	--	ND	
General Chemistry (mg/L):						
Bromide	NS	--	--	--	<0.50	
Chloride	250	--	--	--	44	
Fluoride	1.6	--	--	--	0.87	
Sulfate	600	--	--	--	180	
Metals (mg/L):						
Calcium	NS	--	--	--	113	
Magnesium	NS	--	--	--	59.6	
Potassium	NS	--	--	--	1.6	
Sodium	NS	--	--	--	32.8	

Notes:

mg/L	Milligrams per liter, equivalent to parts per million.
ug/L	Micrograms per liter, equivalent to parts per billion.
<10	Indicates that the parameter was not identified above the noted laboratory detection limit.
--	Indicates that analysis was not performed for the given parameter.
ND	Indicates that no such parameters were detected
WQCC	New Mexico Water Quality Control Commission.
NS	Indicates that no standard has been published.

Table 7. Summary of 2003 Analytical Results, West Air Stripper, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

	WQCC Standards	01/22/03 02/10/03 **West Stripper was NOT operational for the remainder of the year**
VOCs (ug/L):		
Benzene	10	
Toluene	750	
Ethylbenzene	750	
Total Xylenes	620	
PAHs (ug/L):		
Acenaphthene	NS	
Acenaphthylene	NS	
Anthracene	NS	
Benzo(b)fluoranthene	NS	
Benzo(k)fluoranthene	NS	
Benzo(a)anthracene	NS	
Benzo(a)pyrene	0.7	
Benzo(ghi)perylene	NS	
Chrysene	NS	
Dibenzo(ah)anthracene	NS	
Fluoranthene	NS	
Fluorene	NS	
Indeno(1,2,3-cd)pyrene	NS	
Naphthalene	NS	
Phenanthrene	NS	
Pyrene	NS	
Total Naphthalene plus monomethylnaphthalene	30	
General Chemistry (mg/L):		
Bromide	NS	
Chloride	250	
Fluoride	1.6	
Sulfate	600	
Metals (mg/L):		
Calcium	NS	
Magnesium	NS	
Potassium	NS	
Sodium	NS	

Notes:

mg/L	Milligrams per liter, equivalent to parts per million.
ug/L	Micrograms per liter, equivalent to parts per billion.
<10	Indicates that the parameter was not identified above the noted laboratory detection limit.
--	Indicates that analysis was not performed for the given parameter.
ND	Indicates that no such parameters were detected
WQCC	New Mexico Water Quality Control Commission.
NS	Indicates that no standard has been published.

Table 8. Summary of SVE Operation, Vapor-Phase Mass Removal, and Aerobic Biodegradation, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

VES-100

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-123	Lower Queen	0.29	5.33
February	MW-123	Lower Queen	0.31	4.22
March 1-5	MW-123	Lower Queen	0.12	0.96
March 6-31	VE-19	Lower Queen	1.83	2.01
1st Quarter 2003 Estimated Subtotal			2.55	12.52
April	VE-19	Lower Queen	5.90	3.31
May	VE-19	Lower Queen	2.20	2.16
June	VE-19	Lower Queen	6.39	3.23
2nd Quarter 2003 Estimated Subtotal			14.49	8.70
July	VE-19	Lower Queen	4.11	3.74
August	VE-19	Lower Queen	4.55	2.17
September	VE-19	Lower Queen	2.38	2.68
3rd Quarter 2003 Estimated Subtotal			11.04	8.59
October	VE-19	Lower Queen	3.38	5.08
November	VE-19	Lower Queen	3.28	5.99
December	VE-19	Lower Queen	2.80	2.80
4th Quarter 2003 Estimated Subtotal			9.46	13.87
2003 Subtotal, VES-100			37.54	43.68

VES-300

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-85	Lower Queen	0.66	2.48
February	MW-85	Lower Queen	1.08	3.74
March	MW-85	Lower Queen	0.70	1.61
1st Quarter 2003 Estimated Subtotal			2.44	7.83
April	MW-85	Lower Queen	2.42	3.89
May	MW-85	Lower Queen	2.33	5.18
June	MW-85	Lower Queen	3.21	9.08
2nd Quarter 2003 Estimated Subtotal			7.96	18.15
July	MW-85	Lower Queen	3.16	10.92
August	MW-85	Lower Queen	0.00	0.00
September	MW-85	Lower Queen	1.41	5.62
3rd Quarter 2003 Estimated Subtotal			4.57	16.54
October	MW-85	Lower Queen	0.69	2.38
November	MW-85	Lower Queen	0.41	2.97
December	MW-85	Lower Queen	0.36	2.53
4th Quarter 2003 Estimated Subtotal			1.46	7.88
2003 Subtotal, VES-300			16.43	50.40

VES-200

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-68	Lower Queen	0.20	0.66
February	MW-68	Lower Queen	0.39	1.93
March	MW-68	Lower Queen	0.32	3.01
1st Quarter 2003 Estimated Subtotal			0.91	5.60
April 1-2	MW-68	Lower Queen	0.02	0.14
April 3-30	MW-126	Shallow Zone	0.00	0.25
May	MW-126	Shallow Zone	0.00	0.04
June	MW-126	Shallow Zone	0.00	0.50
2nd Quarter 2003 Estimated Subtotal			0.02	0.93
July 1-30	MW-126	Shallow Zone	0.06	2.08
July 31-August 31	MW-68	Lower Queen	0.86	0.28
September	MW-68	Lower Queen	0.84	0.41
3rd Quarter 2003 Estimated Subtotal			1.76	2.77
October	MW-68	Lower Queen	2.36	1.63
November	MW-68	Lower Queen	1.63	1.70
December	MW-68	Lower Queen	0.80	1.40
4th Quarter 2003 Estimated Subtotal			4.79	4.73
2003 Subtotal, VES-200			7.48	14.03

VES-400

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	NR	--	--	--
February	NR	--	--	--
March	NR	--	--	--
1st Quarter 2003 Estimated Subtotal			0.00	0.00
April	NR	--	--	--
May	NR	--	--	--
June	NR	--	--	--
2nd Quarter 2003 Estimated Subtotal			0.00	0.00
July	NR	--	--	--
August	NR	--	--	--
September	NR	--	--	--
3rd Quarter 2003 Estimated Subtotal			0.00	0.00
October	NR	--	--	--
November	NR	--	--	--
December	NR	--	--	--
4th Quarter 2003 Estimated Subtotal			0.00	0.00
2003 Subtotal, VES-400			0.00	0.00

Table 8. Summary of SVE Operation, Vapor-Phase Mass Removal, and Aerobic Biodegradation, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

VES-500

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	NR	--	--	--
February	NR	--	--	--
March	NR	--	--	--
1st Quarter 2003 Estimated Subtotal			0.00	0.00
April	NR	--	--	--
May	NR	--	--	--
June	NR	--	--	--
2nd Quarter 2003 Estimated Subtotal			0.00	0.00
July	NR	--	--	--
August	NR	--	--	--
September	NR	--	--	--
3rd Quarter 2003 Estimated Subtotal			0.00	0.00
October	NR	--	--	--
November	NR	--	--	--
December	NR	--	--	--
4th Quarter 2003 Estimated Subtotal			0.00	0.00
2003 Subtotal, VES-500			0.00	0.00

VES-700

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-74	Lower Queen	3.27	8.44
February	MW-74	Lower Queen	2.13	6.00
March	MW-74	Lower Queen	1.07	5.03
1st Quarter 2003 Estimated Subtotal			6.47	19.47
April	MW-74	Lower Queen	3.45	8.12
May 1- 8	MW-74	Lower Queen	1.25	2.83
May 9 - 31	MW-72	Lower Queen	0.18	0.69
June	MW-72	Lower Queen	0.00	0.00
2nd Quarter 2003 Estimated Subtotal			4.88	11.64
July	MW-72	Lower Queen	0.00	0.00
August	MW-72	Lower Queen	0.00	0.00
September	MW-72	Lower Queen	0.02	0.56
3rd Quarter 2003 Estimated Subtotal			0.02	0.56
October	MW-121	Lower Queen	0.16	1.05
November	MW-121	Lower Queen	0.04	0.35
December	MW-121	Lower Queen	0.00	0.00
4th Quarter 2003 Estimated Subtotal			0.20	1.40
2003 Subtotal, VES-700			11.57	33.07

VES-600

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-110	Lower Queen	5.28	21.29
February	MW-110	Lower Queen	2.75	14.44
March	MW-110	Lower Queen	2.69	10.12
1st Quarter 2003 Estimated Subtotal			10.72	45.85
April	MW-110	Lower Queen	6.14	28.5
May	MW-110	Lower Queen	5.88	27.65
June	MW-110	Lower Queen	9.86	43.61
2nd Quarter 2003 Estimated Subtotal			21.88	99.76
July	MW-110	Lower Queen	9.7	67.85
August	MW-110	Lower Queen	0	0
September	MW-110	Lower Queen	0	49.4
3rd Quarter 2003 Estimated Subtotal			9.70	117.25
October	MW-110	Lower Queen	15.25	74.27
November	MW-110	Lower Queen	9.9	68.58
December	MW-110	Lower Queen	13.36	71.6
4th Quarter 2003 Estimated Subtotal			38.51	214.45
2003 Subtotal, VES-600			80.81	477.31

VES-800

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-120	Lower Queen	4.60	6.81
February	MW-120	Lower Queen	1.93	7.62
March	MW-120	Lower Queen	2.17	4.52
1st Quarter 2003 Estimated Subtotal			8.70	18.95
April	MW-120	Lower Queen	3.59	5.13
May 1 - 19	MW-120	Lower Queen	2.49	6.01
May 20 - 31	MW-72	Lower Queen	0.06	0.11
June	MW-72	Lower Queen	0.04	1.06
2nd Quarter 2003 Estimated Subtotal			6.18	12.31
July	MW-72	Lower Queen	0.23	0.92
August	MW-72	Lower Queen	0.26	0.50
September 1- 16	MW-72	Lower Queen	0.05	0.00
September 17 - 30	MW-120	Lower Queen	1.48	3.87
3rd Quarter 2003 Estimated Subtotal			2.02	5.29
October	MW-120	Lower Queen	6.91	11.79
November	MW-120	Lower Queen	4.20	9.26
December	MW-120	Lower Queen	4.65	8.79
4th Quarter 2003 Estimated Subtotal			15.76	29.84
2003 Subtotal, VES-800			32.66	66.39

Table 8. Summary of SVE Operation, Vapor-Phase Mass Removal, and Aerobic Biodegradation, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

VES-900

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-124	Lower Queen	0.34	9.02
February	MW-124	Lower Queen	0.28	7.00
March	MW-124	Lower Queen	0.20	3.36
1st Quarter 2003 Estimated Subtotal			**0.82**	**19.38**
April	MW-124	Lower Queen	0.00	0.00
May 1-14	MW-124	Lower Queen	0.00	0.00
May 15-31	MW-113	Lower Queen	68.16	36.08
June	MW-113	Lower Queen	5.28	19.67
2nd Quarter 2003 Estimated Subtotal			**73.44**	**55.75**
July	MW-113	Lower Queen	7.00	46.12
August	MW-113	Lower Queen	7.29	38.09
September	MW-113	Lower Queen	8.12	33.22
3rd Quarter 2003 Estimated Subtotal			**22.41**	**117.43**
October	MW-113	Lower Queen	6.57	46.37
November	MW-113	Lower Queen	4.36	31.33
December	MW-113	Lower Queen	5.06	19.81
4th Quarter 2003 Estimated Subtotal			**15.99**	**97.51**
2003 Subtotal, VES-900			**112.66**	**290.07**

VES-1000

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-130	Lower Queen	0.35	7.96
February	MW-130	Lower Queen	0.39	9.35
March	MW-130	Lower Queen	1.54	8.40
1st Quarter 2003 Estimated Subtotal			**2.28**	**25.71**
April	MW-130	Lower Queen	2.24	20.26
May 1- 8	MW-130	Lower Queen	0.50	3.37
May 9- 31	MW-112	Lower Queen	2.52	9.01
June	MW-112	Lower Queen	5.54	8.11
2nd Quarter 2003 Estimated Subtotal			**10.80**	**40.75**
July	MW-112	Lower Queen	4.45	12.29
August 1 - 5	MW-112	Lower Queen	0.44	2.17
August 6 - 31	MW-65A	Lower Queen	2.07	7.53
September	MW-65A	Lower Queen	1.48	8.90
3rd Quarter 2003 Estimated Subtotal			**8.44**	**30.89**
October	MW-65A	Lower Queen	1.16	11.64
November 1 - Dec 1	MW-65A	Lower Queen	0.31	7.02
December 2 - 31	MW-112	Lower Queen	7.19	9.95
4th Quarter 2003 Estimated Subtotal			**8.66**	**28.61**
2003 Subtotal, VES-1000			**30.18**	**125.96**

VES-1100

Date	Well	Location	Vapor Phase Condensate Recovered (bbl)	Biodegradation Condensate Recovered (bbl)
January	MW-125	Lower Queen	1.10	1.62
February	MW-125	Lower Queen	0.28	4.60
March	MW-125	Lower Queen	0.31	4.07
1st Quarter 2003 Estimated Subtotal			**1.69**	**10.29**
April	MW-129	Lower Queen	6.71	5.50
May	MW-129	Lower Queen	7.45	8.08
June	MW-129	Lower Queen	15.03	12.48
2nd Quarter 2003 Estimated Subtotal			**29.19**	**26.06**
July	MW-129	Lower Queen	13.24	20.39
August	MW-129	Lower Queen	9.73	9.70
September	MW-129	Lower Queen	6.39	9.39
3rd Quarter 2003 Estimated Subtotal			**29.36**	**39.48**
October	MW-129	Lower Queen	15.12	15.06
November	MW-129	Lower Queen	8.94	9.41
December	MW-129	Lower Queen	2.67	2.52
4th Quarter 2003 Estimated Subtotal			**26.73**	**26.99**
2003 Subtotal, VES-1100			**86.97**	**102.82**

Summary of 2003 Condensate Recovery

	Vapor Phase	Biodegradation
Shallow Zone Wells	0.06	2.87
Lower Queen Wells	416.24	1200.86
Total	416.30	1203.73

Table 9. Groundwater Extraction System Operations - VES Program
Marathon Oil Company , Indian Basin Remediation Project, Eddy County, New Mexico

			01/13/03	02/13/03	03/10/03	04/02/03	05/15/03	06/05/03	06/24/03	07/15/03	07/31/03	08/06/03	08/08/03	09/10/03	09/12/03	10/12/03	11/07/03	12/04/03
MW-58	DTC	(feet)	0	201.08	202.20	201.17	201.82		201.71	202.89			201.98		202.20	202.19	202.29	202.26
	DTW	(feet)	201.08	201.08	202.20	201.17	201.82		201.71	202.89			201.98		202.20	202.19	202.29	202.26
PSH FT			201.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Δ				-201.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-65A	DTC	(feet)	0	139.74	140.22	139.05	139.68	139.62		139.74		139.80	139.79		140.01	140.09	140.29	140.25
	DTW	(feet)	139.74	139.74	140.22	139.05	140.03	140.00		140.16		140.22	140.19		140.10	140.09	140.29	140.25
PSH FT			139.74	0.00	0.00	0.00	0.35	0.38	0.00	0.42	0.00	0.42	0.40	0.00	0.09	0.00	0.00	0.00
Δ				-139.74	0.00	0.00	0.35	0.03	-0.38	0.42	-0.42	0.42	-0.02	-0.40	0.09	-0.09	0.00	0.00
VES												X	X	X	X	X	X	X
MW-72	DTC	(feet)	197.88	197.88	197.52	197.80	197.98		197.15	197.99			198.13		198.35	198.32	198.60	198.60
	DTW	(feet)	198.20	198.20	198.22	198.40	198.37		197.15	198.24			198.13		198.35	198.32	198.61	198.60
PSH FT			0.32	0.32	0.70	0.60	0.39	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Δ				0.00	0.38	-0.10	-0.21	-0.39	0.00	0.25	-0.25	0.00	0.00	0.00	0.00	0.00	0.01	-0.01
VES								X	X	X	X	X	X	X	X	X	X	
MW-75	DTC	(feet)	0	195.42	195.40	195.68	195.58	195.77		195.77			195.88		196.05	196.15	196.21	196.12
	DTW	(feet)	195.42	195.42	195.40	195.68	195.58	195.77		195.77			195.88		196.07	196.15	196.30	196.12
PSH FT			195.42	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.09	0.00
Δ				-195.42	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02	0.09	-0.09
MW-81	DTC	(feet)	0	193.13	193.10	193.41	194.15		193.92	194.14			194.20		194.43	194.42	194.42	194.49
	DTW	(feet)	193.13	193.13	193.10	193.41	194.15		193.92	194.14			194.20		194.43	194.42	194.42	194.49
PSH FT			193.13	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Δ				-193.13	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-82	DTC	(feet)	0	200.11	200.12	200.06	200.81	dry		200.90			200.96		201.15	201.30	201.35	202.10
	DTW	(feet)	200.11	200.11	200.12	201.71	200.81	dry		200.90			200.96		201.98	201.97	201.98	202.10
PSH FT			200.11	0	0	1.650	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.830	0.670	0.630	0.000
Δ				-200.11	0	1.650	-1.650		0.000	0.000	0.000	0.000	0.000	0.000	0.830	-0.160	-0.040	-0.630
MW-83	DTC	(feet)	0	170.40	171.20	169.32	169.78	169.74		169.82			169.91		170.05	170.19	170.27	170.24
	DTW	(feet)	170.4	170.40	171.20	169.32	169.78	169.74		169.82			169.91		170.05	170.19	170.27	170.24
PSH FT			170.4	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Δ				-170.4	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-84	DTC	(feet)	0	137.00	137.50	136.77	137.32	137.28		137.44			137.48		137.61	137.81	137.86	137.86
	DTW	(feet)	137	137.00	137.50	136.77	137.32	137.28		137.44			137.48		137.61	137.81	137.86	137.86
PSH FT			137	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Δ				-137	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-85	DTC	(feet)	0	200.58	201.50	201.28	201.98		202.02	202.11			202.15	202.29		202.46	202.53	202.54
	DTW	(feet)	200.58	200.58	201.62	201.28	201.98		202.02	202.11			202.15	202.31		202.46	202.53	202.54
PSH FT			200.58	0	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Δ				-200.58	0.12	-0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02	0.00	0.00	0.00

Table 9. Groundwater Extraction System Operations - VES Program
Marathon Oil Company , Indian Basin Remediation Project, Eddy County, New Mexico

VES			X	X	X	X	X	X	X	X	X			X	X	X	X	X
MW-86	DTC	(feet)	0	0.00	0.00	200.08	201.00		201.06	201.29			201.31		201.61	201.47	201.46	201.48
	DTW	(feet)	dry	dry	dry	200.08	201.00		201.06	201.29			201.31		201.61	201.47	201.46	201.48
PSH FT						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Δ						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MW-110	DTC	(feet)	0	188.92	186.58	189.53	190.05		189.78	190.25			190.69	190.57		190.62	190.60	190.55
	DTW	(feet)	188.92	188.92	186.58	189.53	190.05		189.78	190.25			190.69	190.57		190.62	190.60	190.55
PSH FT			188.92	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Δ				-188.92	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Explanation

DTC	(feet)	Depth to condensate in feet from the measuring point of a well
DTW	(feet)	Depth to water in feet from the measuring point of a well
PSH FT	0.12	Condensate detected and condensate thickness in feet
Δ	0.12	Change in (increase in) condensate thickness in feet from previous monthly sampling
Δ	-0.12	Change in (decrease in) condensate thickness in feet from previous monthly sampling
VES	X	Month in which a vapor extraction system (VES) was used to remediate condensate thickness

Table 10 Summary of Bubbler Application Data
Marathon Oil Company, Indian Basin Remediation Project
Eddy County, New Mexico

Well	MW-65A			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03			0.38	No VES
July 03			0.42	No VES
Aug 03	X		0.40	0.91
Sept 03	X	X	0.09	0.56
Oct 03	X	X	0.00	0.43
Nov 03	X	X	0.00	0.14
Dec 03			0.00	No VES

Well	MW-68			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03				No VES
July 03			0.15	No VES
Aug 03	X		0.30	0.38
Sept 03	X	X	0.04	0.32
Oct 03	X	X	0.03	0.87
Nov 03	X	X	0.00	0.62
Dec 03	X	X	0.00	0.29

Well	MW-69			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03			0.10	No VES
July 03			0.21	No VES
Aug 03			1.24	No VES
Sept 03			1.54	No VES
Oct 03			1.29	No VES
Nov 03			0.44	No VES
Dec 03		X	1.22	No VES

Well	MW-72			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03	X		0.00	0.04
July 03	X		0.25	0.06
Aug 03	X	X	0.00	0.1
Sept 03	X	X	0.00	0.58
Oct 03			0.10	No VES
Nov 03		X	0.01	No VES
Dec 03		X	0.00	No VES

Well	MW-75			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03			0.00	No VES
July 03			0.00	No VES
Aug 03			0.00	No VES
Sept 03			0.20	No VES
Oct 03			0.00	No VES
Nov 03		X	0.11	No VES
Dec 03		X	0.00	No VES

Table 10 Summary of Bubbler Application Data
Marathon Oil Company, Indian Basin Remediation Project
Eddy County, New Mexico

Well	MW-82			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03			dry	No VES
July 03			0.00	No VES
Aug 03			0.00	No VES
Sept 03			0.83	No VES
Oct 03			0.67	No VES
Nov 03		X	0.63	No VES
Dec 03		X	0.00	No VES

Well	MW-85			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03	X		0.00	1.22
July 03	X		0.00	1.18
Aug 03			0.00	No VES
Sept 03	X	X	0.02	0.74
Oct 03	X	X	0.00	0.25
Nov 03	X	X	0.00	0.16
Dec 03	X	X	0.00	0.13

Well	MW-126			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03	X		3.12	0.01
July 03	X	X	0.00	0.03
Aug 03			0.00	No VES
Sept 03			1.04	No VES
Oct 03			0.00	No VES
Nov 03			0.00	No VES
Dec 03			0.00	No VES

Well	MW-129			
Month	VES	Bubbler	Condensate Thick (Ft)	Volatilization Lbs/Hr
June 03	X		3.42	5.71
July 03	X		1.94	4.87
Aug 03	X		2.71	3.57
Sept 03	X	X	3.20	2.42
Oct 03	X	X	3.31	5.55
Nov 03	X	X	2.84	3.39
Dec 03	X	X	0.00	3.02

X = VES or Bubbler used during the month (may be a partial period)

Table 11. Summary of Historical Condensate Recovery Data, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Date	Emergency Reponse Pumping	Vacuum Truck Recovery	Open Pit Volatilization	Open Frac Tank Volatilization	Shallow Zone Sump 16A	Shallow Zone Sump A-11	Shallow Zone MW-69	Shallow Zone MW-86	Lower Queen Pump and Treat	Vapor Extraction Shallow Zone	Vapor Extraction Lower Queen	Aerobic Biodegradation	Total Condensate Recovery
Apr-91	717.3	33.0	465.0	4,447.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5,662.3
May-91	2,041.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2,041.0
Jun-91	714.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	714.0
Jul-91	220.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	220.0
Aug-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Oct-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nov-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.0	0.0	26.0
Dec-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	12.5
Subtotal 1991	3,692.3	33.0	465.0	4,447.0	0.0	0.0	0.0	0.0	38.5	0.0	0.0	0.0	8,675.8
Jan-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	13.0
Feb-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5
Mar-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.1	0.0	0.0	8.2
Apr-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.9	0.0	0.0	9.7
May-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.5	5.1	0.0	0.0	13.6
Jun-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	4.9	0.0	0.0	6.1
Jul-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3	5.1	0.0	0.0	12.4
Aug-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	5.1	0.0	0.0	13.0
Sep-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5
Oct-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	5.1	0.0	0.0	9.9
Nov-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	4.9	0.0	0.0	5.5
Dec-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	5.1	0.0	0.0	5.9
Subtotal 1992	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.5	45.8	0.0	0.0	99.3
Jan-93	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	4.2	0.0	0.0	5.4
Feb-93	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.3	0.0	0.0	0.0	2.9
Mar-93	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	1.9	0.0	0.0	0.0	4.7
Apr-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	3.7
May-93	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	1.1	5.1	0.0	0.0	9.6
Jun-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.6	0.0	0.0	5.4
Jul-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6
Aug-93	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	4.7	0.0	0.0	0.0	6.4
Sep-93	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	3.7	0.0	0.0	0.0	8.3
Oct-93	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.0	5.5	10.6	0.0	0.0	22.3
Nov-93	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	1.6	12.2	0.0	0.0	22.6
Dec-93	0.0	0.0	0.0	0.0	0.0	0.0	15.3	0.0	1.8	12.7	0.0	0.0	29.8
Subtotal 1993	0.0	0.0	0.0	0.0	3.4	6.6	36.7	0.0	22.9	53.1	0.0	0.0	122.7

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 11. Summary of Historical Condensate Recovery Data, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Date	Emergency Reponse Pumping	Vacuum Truck Recovery	Open Pit Volatilization	Open Frac Tank Volatilization	Shallow Zone Sump 16A	Shallow Zone Sump A-11	Shallow Zone MW-69	Shallow Zone MW-86	Lower Queen Pump and Treat	Vapor Extraction Shallow Zone	Vapor Extraction Lower Queen	Aerobic Biodegradation	Total Condensate Recovery
Jan-94	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	2.5	10.1	0.0	0.0	18.0
Feb-94	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	4.2	9.6	0.0	0.0	20.5
Mar-94	0.0	0.0	0.0	0.0	0.0	0.0	17.8	0.0	3.2	9.0	0.0	0.0	30.0
Apr-94	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0	2.3	8.0	0.0	0.0	21.1
May-94	0.0	0.0	0.0	0.0	0.0	0.0	30.1	0.0	2.6	0.0	0.0	0.0	32.7
Jun-94	0.0	0.0	0.0	0.0	0.0	0.0	23.8	0.0	2.9	0.0	0.0	0.0	26.7
Jul-94	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	4.1	0.0	0.0	0.0	11.0
Aug-94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9
Sep-94	0.0	0.0	0.0	0.0	0.0	0.0	6.1	0.0	1.6	0.0	0.0	0.0	7.7
Oct-94	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	1.5	0.0	0.0	0.0	4.6
Nov-94	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	3.9	0.0	0.0	0.0	7.0
Dec-94	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	3.8	0.0	0.0	0.0	4.5
Subtotal 1994	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**114.5**	**0.0**	**34.6**	**36.7**	**0.0**	**0.0**	**185.8**
Jan-95	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	5.1	0.0	0.0	0.0	6.2
Feb-95	0.0	0.0	0.0	0.0	0.0	0.0	7.6	0.0	2.6	0.0	0.0	0.0	10.2
Mar-95	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	2.1	0.0	0.0	0.0	7.1
Apr-95	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	5.3	0.0	0.0	0.0	6.8
May-95	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	2.5	0.0	0.0	0.0	4.1
Jun-95	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	2.3	0.0	0.0	0.0	3.8
Jul-95	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	4.1	0.0	0.0	0.0	5.1
Aug-95	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	9.9	0.0	0.0	0.0	10.9
Sep-95	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.9	0.0	0.0	0.0	4.0
Oct-95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	6.3
Nov-95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	5.3
Dec-95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0	0.0	0.0	8.8
Subtotal 1995	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**20.4**	**0.0**	**58.1**	**0.0**	**0.0**	**0.0**	**78.5**

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 11. Summary of Historical Condensate Recovery Data, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Date	Emergency Reponse Pumping	Vacuum Truck Recovery	Open Pit Volatilization	Open Frac Tank Volatilization	Shallow Zone Sump 16A	Shallow Zone Sump A-11	Shallow Zone MW-69	Shallow Zone MW-86	Lower Queen Pump and Treat	Vapor Extraction Shallow Zone	Vapor Extraction Lower Queen	Aerobic Biodegradation	Total Condensate Recovery
Jan-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**7.9**	0.0	0.0	0.0	**7.9**
Feb-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**65.9**	0.0	0.0	0.0	**65.9**
Mar-96	0.0	0.0	0.0	0.0	0.0	0.0	**1.2**	0.0	**56.0**	0.0	0.0	0.0	**57.2**
Apr-96	0.0	0.0	0.0	0.0	0.0	0.0	**7.9**	0.0	**45.5**	0.0	0.0	0.0	**53.4**
May-96	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**	0.0	**64.8**	0.0	0.0	0.0	**64.9**
Jun-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**139.0**	**49.0**	0.0	0.0	0.0	**188.0**
Jul-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**25.0**	**27.5**	0.0	0.0	0.0	**52.5**
Aug-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**22.3**	0.0	0.0	0.0	**22.3**
Sep-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**16.4**	0.0	0.0	0.0	**16.4**
Oct-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.7**	0.0	0.0	0.0	**0.7**
Nov-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**2.6**	0.0	0.0	0.0	**2.6**
Dec-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4.0**	0.0	0.0	0.0	**4.0**
Subtotal 1996	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**9.2**	**164.0**	**362.7**	**0.0**	**0.0**	**0.0**	**535.9**
Jan-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.2**	0.0	**0.1**	0.0	**1.3**
Feb-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**7.2**	0.0	**3.9**	0.0	**11.1**
Mar-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**32.2**	0.0	**2.1**	0.0	**34.3**
Apr-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**9.7**	0.0	**3.1**	0.0	**12.8**
May-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**37.8**	0.0	**2.4**	0.0	**40.2**
Jun-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**28.3**	0.0	**1.2**	0.0	**29.5**
Jul-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**44.0**	0.0	**0.3**	0.0	**44.3**
Aug-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**26.5**	**1.7**	**0.4**	0.0	**28.6**
Sep-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**	**0.2**	0.0	**0.3**
Oct-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**31.8**	0.0	**0.1**	0.0	**31.9**
Nov-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**20.5**	0.0	**0.1**	0.0	**20.6**
Dec-97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**26.4**	0.0	**0.1**	0.0	**26.5**
Subtotal 1997	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**265.6**	**1.9**	**14.0**	**0.0**	**281.5**

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 11. Summary of Historical Condensate Recovery Data, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Date	Emergency Reponse Pumping	Vacuum Truck Recovery	Open Pit Volatilization	Open Frac Tank Volatilization	Shallow Zone Sump 16A	Shallow Zone Sump A-11	Shallow Zone MW-69	Shallow Zone MW-86	Lower Queen Pump and Treat	Vapor Extraction Shallow Zone	Vapor Extraction Lower Queen	Aerobic Biodegradation	Total Condensate Recovery
Jan-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**23.5**	0.0	**0.3**	0.0	**23.8**
Feb-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**83.5**	0.0	**0.1**	0.0	**83.6**
Mar-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**37.7**	**0.1**	**0.4**	0.0	**38.2**
Apr-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**27.5**	**0.5**	**1.6**	0.0	**29.6**
May-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**38.4**	0.0	**1.3**	0.0	**39.7**
Jun-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**43.9**	**2.8**	**0.1**	0.0	**46.8**
Jul-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**17.7**	**8.7**	**16.6**	0.0	**43.0**
Aug-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**17.7**	**5.2**	**14.7**	0.0	**37.6**
Sep-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**72.1**	**5.5**	**10.2**	0.0	**87.8**
Oct-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**53.0**	**7.7**	**18.9**	0.0	**79.6**
Nov-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**42.0**	**10.8**	**12.5**	0.0	**65.3**
Dec-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**54.3**	**24.3**	**16.9**	0.0	**95.5**
Subtotal 1998	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**511.3**	**65.5**	**93.6**	**0.0**	**670.4**
Jan-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**32.1**	0.0	**27.2**	**28.0**	**87.3**
Feb-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**41.4**	0.0	**18.7**	**21.0**	**81.1**
Mar-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**39.0**	0.0	**29.8**	**147.0**	**215.8**
Apr-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**47.2**	0.0	**18.7**	**39.0**	**104.9**
May-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**18.7**	0.0	**40.2**	**28.0**	**86.9**
Jun-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**8.8**	0.0	**93.5**	**29.0**	**131.3**
Jul-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**8.6**	0.0	**15.7**	**70.0**	**94.3**
Aug-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**8.4**	0.0	**13.5**	**70.0**	**91.9**
Sep-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**76.2**	0.0	**24.3**	**53.0**	**153.5**
Oct-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**124.0**	0.0	**32.5**	**100.0**	**256.5**
Nov-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**107.6**	0.0	**44.9**	**110.0**	**262.5**
Dec-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**105.6**	0.0	**55.4**	**101.0**	**262.0**
Subtotal 1999	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**617.6**	**0.0**	**414.4**	**796.0**	**1,828.0**

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 11. Summary of Historical Condensate Recovery Data, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Date	Emergency Reponse Pumping	Vacuum Truck Recovery	Open Pit Volatilization	Open Frac Tank Volatilization	Shallow Zone Sump 16A	Shallow Zone Sump A-11	Shallow Zone MW-69	Shallow Zone MW-86	Lower Queen Pump and Treat	Vapor Extraction Shallow Zone	Vapor Extraction Lower Queen	Aerobic Biodegradation	Total Condensate Recovery
Jan-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**110.8**	0.0	**61.8**	**33.5**	**206.1**
Feb-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**114.4**	0.0	**33.5**	**40.1**	**188.0**
Mar-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**146.0**	0.0	**32.7**	**51.7**	**230.5**
Apr-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**38.9**	0.0	**51.4**	**97.7**	**188.0**
May-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**92.1**	0.0	**32.3**	**53.8**	**178.2**
Jun-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**77.4**	0.0	**21.5**	**81.9**	**180.8**
Jul-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**60.3**	0.0	**21.1**	**90.3**	**171.7**
Aug-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.9**	0.0	**16.0**	**73.3**	**91.2**
Sep-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.15**	0.0	**9.5**	**39.7**	**49.3**
Oct-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**24.1**	0.0	**15.5**	**25.7**	**65.2**
Nov-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.4**	0.0	**16.8**	**60.4**	**78.6**
Dec-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**24.3**	**59.4**	**83.8**
Subtotal 2000	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**667.4**	**0.0**	**336.5**	**707.4**	**1,711.3**
Jan-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**10.6**	**95.2**	**105.8**
Feb-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**4.1**	0.0	**13.7**	**105.5**	**123.2**
Mar-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**11.7**	**71.2**	**82.8**
Apr-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**7.0**	**52.1**	**59.2**
May-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.0**	0.0	**12.3**	**87.6**	**100.9**
Jun-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**11.2**	**73.2**	**84.4**
Jul-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**31.3**	**101.9**	**133.2**
Aug-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	**31.2**	**67.9**	**99.0**
Sep-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**6.6**	**1.1**	**59.1**	**192.4**	**259.1**
Oct-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**1.5**	**48.5**	**153.6**	**203.6**
Nov-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**7.6**	**0.1**	**43.5**	**148.9**	**200.1**
Dec-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	**2.1**	**50.4**	**194.7**	**247.2**
Subtotal 2001	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**19.3**	**4.73**	**330.47**	**1,344.0**	**1,698.5**

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 11. Summary of Historical Condensate Recovery Data, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Date	Emergency Reponse Pumping	Vacuum Truck Recovery	Open Pit Volatilization	Open Frac Tank Volatilization	Shallow Zone Sump 16A	Shallow Zone Sump A-11	Shallow Zone MW-69	Shallow Zone MW-86	Lower Queen Pump and Treat	Vapor Extraction Shallow Zone	Vapor Extraction Lower Queen	Aerobic Biodegradation	Total Condensate Recovery
Jan-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	2.1	54.0	**213.3**	**269.3**
Feb-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	2.7	45.3	**141.8**	**189.8**
Mar-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	2.8	34.2	**159.8**	**196.8**
Apr-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	3.3	30.1	**133.9**	**167.3**
May-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	5.3	36.1	**98.6**	**140.0**
Jun-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	1.7	19.6	**112.4**	**133.6**
Jul-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.9	21.0	**119.2**	**141.1**
Aug-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	1.2	11.3	**147.4**	**159.9**
Sep-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	13.6	**96.1**	**109.7**
Oct-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.1	15.2	**79.5**	**94.8**
Nov-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	18.3	**58.0**	**76.2**
Dec-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.4	11.1	**50.4**	**61.8**
Subtotal 2002	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.00**	**20.25**	**309.54**	**1,410.42**	**1,740.2**
Jan-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	16.09	**63.61**	**79.7**
Feb-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	9.54	**58.90**	**68.4**
Mar-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	10.95	**43.09**	**54.0**
Apr-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.00	30.47	**75.10**	**105.6**
May-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.00	93.02	**101.21**	**194.2**
Jun-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	45.35	**97.74**	**143.1**
Jul-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.06	41.89	**164.31**	**206.3**
Aug-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	25.20	**60.44**	**85.6**
Sep-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	22.17	**114.05**	**136.2**
Oct-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	51.60	**169.27**	**220.9**
Nov-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	33.07	**136.61**	**169.7**
Dec-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	36.89	**119.40**	**156.3**
Subtotal 2003	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.00**	**0.06**	**416.24**	**1,203.73**	**1,620.0**
TOTALS	**3,692.3**	**33.0**	**465.0**	**4,447.0**	**3.4**	**6.6**	**180.8**	**164.0**	**2,651.5**	**228.1**	**1,914.7**	**5,461.5**	**19,247.9**

Notes:
Amounts listed in barrels, one barrel is the equivalent of 42 gallons

Table 12. Summary of Shallow Zone Well Abandonment, Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Well Abandoned	Rationale (see below for definition)
MW-1	1
MW-2	2
MW-3	2
MW-5	2
MW-6	2
MW-7	2
MW-8	2
MW-9	2
MW-15	1
MW-18	2
MW-20	3
MW-21	1
MW-23	2
MW-25	2
MW-27	2
MW-28	1
MW-29	2
MW-30	2
MW-31	1
MW-33	1
MW-34	1
MW-35	1
MW-36	2
MW-37	1
MW-38	1
MW-39	3
MW-40	2
MW-42	1
MW-44	1
MW-52	2
MW-53	2
MW-80	2
MW-92	1
MW-93	2
MW-99	2
MW-101	2
MW-102	1
MW-103	1
MW-107	2

Key to Rationale

[1] Area near well was monitored by other well/wells

[2] Well was dry for four or more years

[3] Well was dry for three years

Table 13. Groundwater Monitoring Plan
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Shallow Zone

	Sampling Schedule					
	Month	Analytical Paramenters			Month	Analytical Paramenters
Well ID	April	semi-annual	annual	e/o year	October	semi-annual
MW-14	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-39	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-43	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-46	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-49	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-50	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-54	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-55	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-61	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-65	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-69	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-77	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-78	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-79	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-90	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-91	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-105	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-106	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX

Lower Queen

	Sampling Schedule					
	Month	Analytical Paramenters			Month	Analytical Paramenters
Well ID	April	semi-annual	annual	e/o year	October	semi-annual
MW-57	X	BTEX	Chloride, TDS	SVOCs, WQCC metals		BTEX
MW-59	X	BTEX	Chloride, TDS	SVOCs, WQCC metals		BTEX
MW-60	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-61A	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-62	X	BTEX	Chloride, TDS	SVOCs, WQCC metals		BTEX
MW-63	X	BTEX	Chloride, TDS	SVOCs, WQCC metals		BTEX
MW-64	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-66	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-67	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-70	X	BTEX	Chloride, TDS	SVOCs, WQCC metals		BTEX
MW-71	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-73	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-74	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-87	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-87A	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-88	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-89	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-94	X	BTEX	Chloride, TDS	SVOCs, WQCC metals		BTEX
MW-95	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-96	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-97	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-98	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-104	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-108	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX
MW-111	X	BTEX	Chloride, TDS	SVOCs, WQCC metals	X	BTEX

Notes:
SVOC and WQCC metals analysis will fall on even years (i.e., 2002, 2004, etc.)

SVOCs	Semi-Volatile Organic Compounds via Method 8310
WQCC metals	New Mexico Water Quality Control Commission metals (dissolved only for arsenic, lead, selenium, aluminum, barium, boron, cadmium, chromium, cobalt, copper, iron, manganese, moybdenum, nickel, silver, and zinc)
TDS	Total Dissolved Solids
e/o year	Every other year
	Well was plugged and abandoned in March 2003

Table 14. Proposed Groundwater Monitoring Plan to be Implemented in 2005
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico.

Shallow Zone

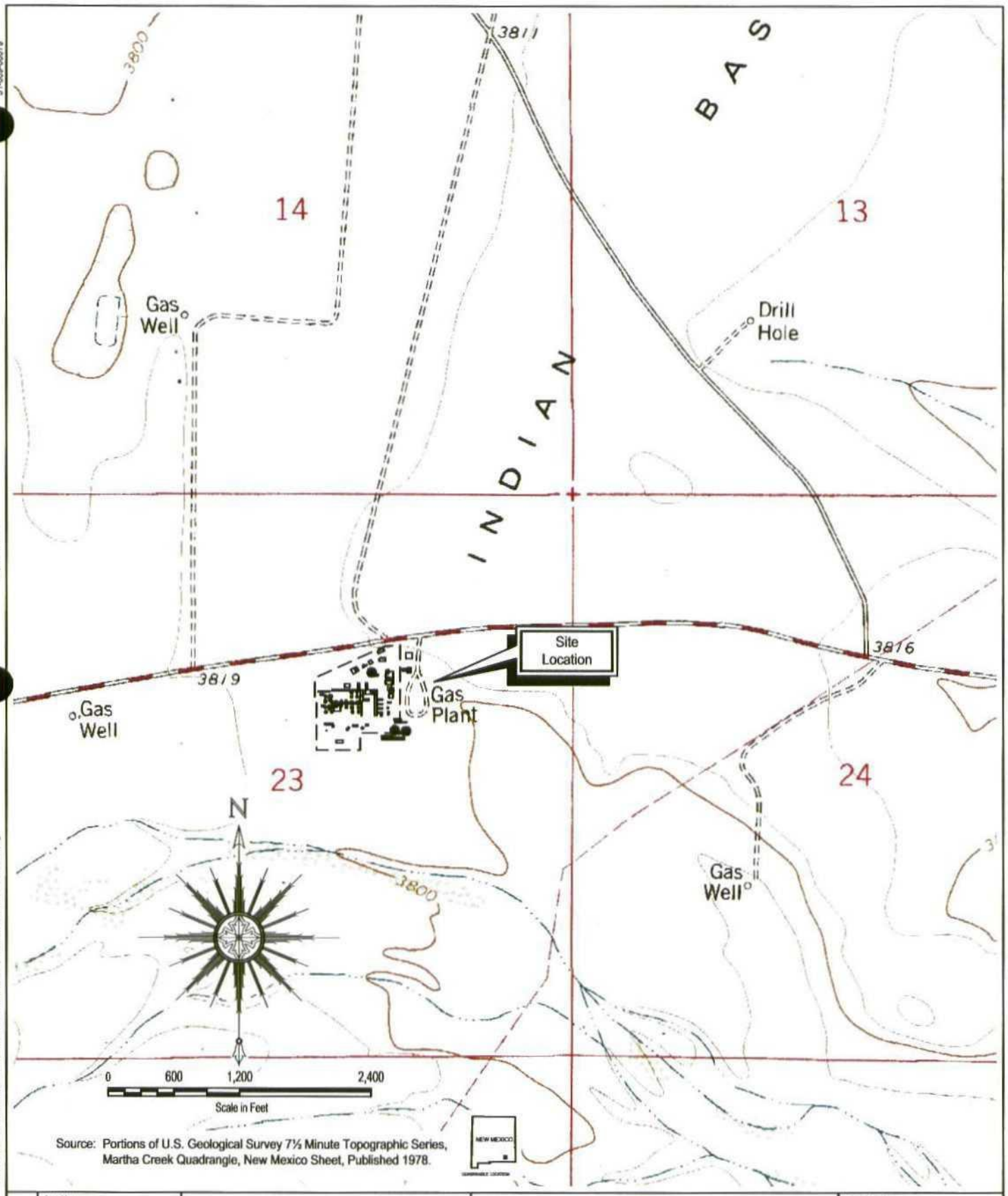
	Sampling Schedule			
	Month	Analytical Paramenters		
Well ID	April	annual	annual	e/o year
MW-14	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-43	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-46	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-49	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-50	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-54	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-55	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-61	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-65	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-69	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-77	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-78	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-79	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-90	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-91	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-105	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-106	X	BTEX	Chloride, TDS	PAHs, WQCC metals

Lower Queen

	Sampling Schedule			
	Month	Analytical Paramenters		
Well ID	April	annual	annual	e/o year
MW-57	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-59	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-60	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-61A	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-62	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-63	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-64	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-66	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-67	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-70	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-71	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-73	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-74	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-87	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-87A	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-88	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-89	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-94	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-95	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-96	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-97	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-98	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-104	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-108	X	BTEX	Chloride, TDS	PAHs, WQCC metals
MW-111	X	BTEX	Chloride, TDS	PAHs, WQCC metals

Notes:
SVOC and WQCC metals analysis will fall on even years (i.e., 2006, 2008, etc.)

PAHs	PAHs via Method 8310
WQCC metals	New Mexico Water Quality Control Commission metals (dissolved only for arsenic, lead, selenium, a barium, boron, cadmium, chromium, cobalt, copper, iron, manganese, moybdenum, nickel, silver, an
TDS	Total Dissolved Solids
e/o year	Every other year



Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

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Marathon Oil Company
Indian Basin Remediation Project

Site Location

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	1

31-009-00079
Current Plotstyle: ByColor
Layout Tab: AV
Date/Time: Wed, 24 Mar 2004 - 10:53am
Path Name: C:\AutoCAD DWG\Marathon Oil\Indian Basin\MT000830.0001\MT830101.dwg
Acad Version: R16.0
User Name: gshick

T - 21 S
R - 23 E

T - 21
R - 24 E

23

24

19

26

25

30

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- Color Denotes Well Completion As Indicated Below:
  - Green Completed In Shallow Zone
  - Purple Completed In Lower Queen

N

0 600 1,200 2,400

Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

QUADRANGLE LOCATION

Date\Time : Wed, 24 Mar 2004 - 10:38am
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Current Plotstyle : ByColor
Layout Tab: BH
Acad Version : R16.0
User Name : gahlick

31-009-00080

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Marathon Oil Company
Indian Basin Remediation Project

Site Layout

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	2

T - 21 - S
R - 23 - E

T - 21 - S
R - 24 - E

23

24

19

26

25

30

3,790.00'

3,780.00'

3,770.00'

3,760.00'

3,750.00'

3,740.00'

3,730.00'

3,720.00'

3,710.00'

3,700.00'

3,690.00'

3,680.00'

3,670.00'

3,660.00'

3,650.00'

3,640.00'

NR
MW-051

3,787.32'
MW-045

MW-050
3,786.66'

MW-117

MW-048
3,783.53'

MW-042

MW-046
3,786.16'

MW-044

MW-054
3,777.73'

MW-105
3,792.54'

MW-047
DRY

MW-043
3,781.01'

3,779.56'
MW-041

MW-040

MW-038

3,786.49'
MW-048

MW-052

MW-036
3,731.58'

MW-037

MW-001

MW-005

MW-035

MW-055
3,765.63'

MW-002

MW-030

MW-004

MW-031

MW-027

MW-025
DRY

MW-203

MW-056
3,738.98'

MW-015
3,778.34'

MW-014
3,780.74'

MW-017

MW-019

MW-018

MW-024
3,781.08'

MW-026
3,772.95'

MW-029

MW-023

MW-028

MW-221

MW-022

MW-020

MW-021

MW-034

MW-012
3,784.75'

3,781.74'

Sump-A11

Sump-A10
DRY

3,783.33'

MW-011

3,781.95'

MW-010

MW-033

Sump-TH9

Sump-TH01A
3,778.61'

Sump-TH01

3,781.92'

Sump-TH03

3,780.57'

Sump-TH07

MW-053

Sump-TH18

Sump-TH16

Sump-TH05A
DRY

MW-069
3,772.09'

MW-008

MW-009

MW-006

MW-005

MW-092

MW-091

MW-090
3,721.13'
3,737.68'

MW-078
3,701.32'

MW-077
3,705.53'

MW-007

MW-079
3,706.70'

MW-093

MW-095

MW-085
3,707.08'

MW-096
DRY

MW-102

MW-101

MW-103

MW-104
DRY

MW-106
3,633.06'

MW-107

N

0 600 1,200 2,400

Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- 3,633.06' — Groundwater Elevation In Feet Above Mean Sea Level
- DRY — Indicates Well Was Dry At Time Of Gauging
- 3,640.00' — Groundwater Elevation Contour Line
- Groundwater Flow Direction
- Rocky Arroyo

31-009-00081

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Marathon Oil Company
Indian Basin Remediation Project

Groundwater Elevation Contours
Shallow Zone - April, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	3

T - 21 - S
R - 23 - E

T - 21 - S
R - 24 - E

23

24

19

26

25

30

3,790.00'
3,780.00'
3,770.00'
3,760.00'
3,750.00'
3,740.00'
3,730.00'
3,720.00'
3,710.00'
3,700.00'
3,690.00'
3,680.00'
3,670.00'
3,660.00'
3,650.00'
3,640.00'

NR MW-051
3,787.33' MW-045
MW-050 3,786.18'
MW-117
MW-049 3,783.09'
MW-042
MW-046 3,785.92'
MW-044
MW-054 3,777.17'
MW-109 3,791.99'
MW-047 3,783.41'
MW-043 3,780.37'
3,777.80' MW-041
MW-040
MW-038
MW-005
3,796.48' MW-048
MW-052
MW-039 3,728.27'
MW-037
MW-001
MW-036
MW-055 3,762.63'
MW-015 3,778.29'
MW-019 3,778.29'
MW-018
MW-024 3,781.19'
3,784.74' MW-012
3,781.42'
MW-014
MW-034
MW-017 3,780.42'
MW-020
3,771.94' MW-026
MW-035 3,772.87'
MW-062
MW-030
Sump-TH5
Sump-A11
3,783.22'
MW-021 3,781.63'
MW-013
MW-033
MW-031
MW-027
MW-004
Sump-A10 DRY
Sump-TH9
Sump-TH14
3,778.60'
Sump-TH15
MW-016
3,781.95'
MW-028
MW-025
DRY
Sump-TH19
MW-022
3,781.76'
MW-023
MW-053
Sump-TH19
Sump-TH17
MW-032
MW-029
Sump-TH18B
Sump-TH18
Sump-TH16
DRY
MW-033
MW-006
DRY
MW-069 3,770.57'
MW-009
MW-008
MW-006
MW-002
MW-077 3,701.50'
MW-078 3,707.96'
MW-091 3,712.23'
MW-007
MW-079 3,706.80'
MW-093
3,733.57'
MW-099
MW-080
MW-085 3,706.23'
MW-100 DRY
MW-102
MW-101
MW-103
MW-105 3,654.38'
MW-106 3,632.03'
MW-107
MW-061 3,778.40'

N

0 600 1,200 2,400
Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- 3,632.03' Groundwater Elevation In Feet Above Mean Sea Level
- DRY Indicates Well Was Dry At Time Of Gauging
- 3,640.00' Groundwater Elevation Contour Line
- Groundwater Flow Direction
- Rocky Arroyo

31-009-00082

Current Plotstyle : ByColor
Layout Tab: BH

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Marathon Oil Company
Indian Basin Remediation Project

Groundwater Elevation Contours
Shallow Zone - October, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	4

T - 21 - S
R - 23 - E

23 24 19 26 25 30

MW-046	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-043	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-050	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-049	
Benzene	71
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-054	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-055	
Benzene	29
Toluene	10
Ethylbenzene	<5
Total Xylenes	<5

MW-061	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-014	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-078	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-077	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-065	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-090	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-091	
Benzene	59
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-106	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-051 MW-045 MW-050 MW-117 MW-046 MW-049 MW-043 MW-041 MW-105 MW-047 DRY MW-048 MW-119 3.96 MW-019 MW-024 MW-026 MW-010 MW-004 DRY MW-056 MW-014 MW-012 MW-211 MW-017 MW-018 MW-213 MW-021 MW-022 MW-032 MW-016 MW-054 MW-055 MW-061 MW-078 MW-077 MW-079 MW-091 MW-090 MW-100 DRY MW-065 MW-106 DRY

Sump-TH6 Sump-A11 Sump-A10 DRY Sump-TH8 Sump-TH21A Sump-TH10 Sump-TH19 Sump-TH17D DRY Sump-TH16B Sump-TH16 Sump-TH16A Sump-TH19

N

0 600 1,200 2,400
Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO QUADRANGLE LOCATION

Explanation

- Monitoring Well
- Plugged And Abandoned Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- 3.96 Thickness Of Separate-Phase Condensate In Feet
- DRY Indicates Well Was Dry At Time Of Gauging
- NM Well Not Gauged; Not Accessible
- Rocky Arroyo

MW-050	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<1

- Well ID
- Red Indicates BTEX Constituents Present At Concentrations Above Regulatory Limits.
- Indicates Constituent Not Detected Above Noted Laboratory Detection Limit (With Limit Shown).
- Concentration (µg/L)
- Constituent

OCD Cleanup Goals/Regulatory Limits

Benzene	10 µg/L
Toluene	750 µg/L
Ethylbenzene	750 µg/L
Total Xylenes	620 µg/L

Notes:

OCD New Mexico Energy, Minerals And Natural Resources Department, Oil Conservation Division

µg/L Micrograms Per Liter

mg/L Milligrams Per Liter

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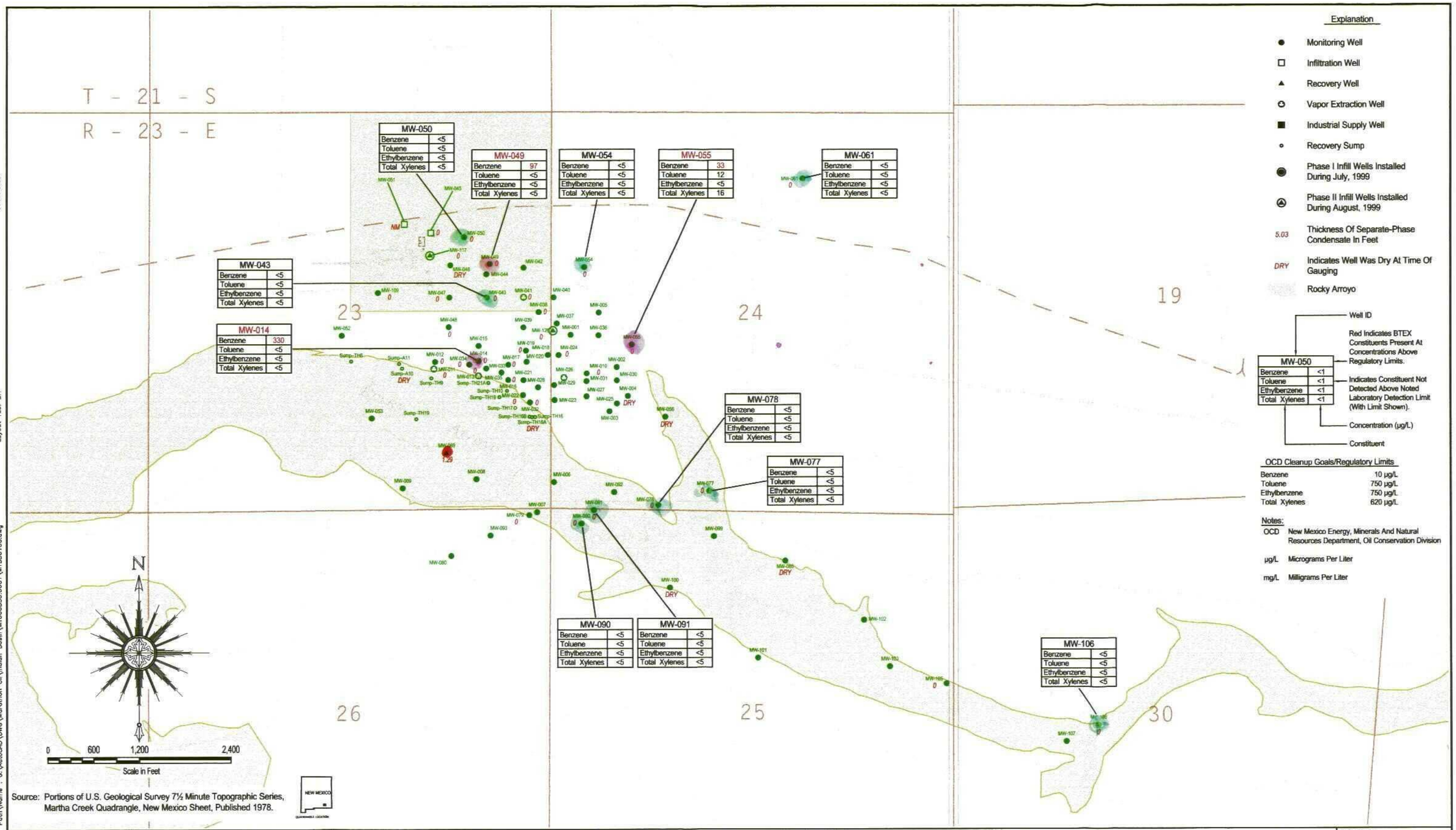
Marathon Oil Company
Indian Basin Remediation Project

BTEX And Separate-Phase Condensate Distribution
Shallow Zone - April, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	5



Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- 5.03 Thickness Of Separate-Phase Condensate In Feet
- DRY Indicates Well Was Dry At Time Of Gauging
- Rocky Arroyo

Well ID

Red Indicates BTEX Constituents Present At Concentrations Above Regulatory Limits.

MW-050	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<1

Indicates Constituent Not Detected Above Noted Laboratory Detection Limit (With Limit Shown).

Concentration (µg/L)

Constituent

OCD Cleanup Goals/Regulatory Limits

Benzene	10 µg/L
Toluene	750 µg/L
Ethylbenzene	750 µg/L
Total Xylenes	620 µg/L

Notes:

- OCD New Mexico Energy, Minerals And Natural Resources Department, Oil Conservation Division
- µg/L Micrograms Per Liter
- mg/L Milligrams Per Liter

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Marathon Oil Company
Indian Basin Remediation Project

BTEX And Separate-Phase Condensate Distribution Shallow Zone - October, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	6

T - 21 - S
R - 23 - E

MW-049	
Total Dissolved Solids	2,900
Chlorides	570

MW-050	
Total Dissolved Solids	6,300
Chlorides	300

MW-054	
Total Dissolved Solids	4,900
Chlorides	180

MW-061	
Total Dissolved Solids	3,300
Chlorides	440

MW-043	
Total Dissolved Solids	1,300
Chlorides	140

MW-014	
Total Dissolved Solids	1,100
Chlorides	150

MW-055	
Total Dissolved Solids	1,300
Chlorides	190

MW-078	
Total Dissolved Solids	440
Chlorides	22

MW-077	
Total Dissolved Solids	590
Chlorides	57

MW-090	
Total Dissolved Solids	450
Chlorides	20

MW-091	
Total Dissolved Solids	450
Chlorides	49

MW-106	
Total Dissolved Solids	350
Chlorides	3.1

23 24 19 26 25 30

N

0 600 1,200 2,400
Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- Rocky Arroyo

Well ID
MW-050 (Total Dissolved Solids 6,900; Chlorides 360) — See Note 1. — See Note 2.
Concentration (mg/L)
Constituent

OCD Cleanup Goals/Regulatory Limits

Wet Chemistry
Total Dissolved Solids 1,000 mg/L
Chlorides 250 mg/L

Notes:

OCD New Mexico Energy, Minerals And Natural Resources Department, Oil Conservation Division

mg/L Milligrams Per Liter

Note 1: Red Indicates TDS Or Chlorides Constituents Present At Concentrations Above Regulatory Limits.

Note 2: Indicates Constituent Concentration.

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Marathon Oil Company
Indian Basin Remediation Project

Wet Chemistry Constituents Shallow Zone - October, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	6A

31-009-00085
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T - 21 - S
R - 23 - E

T - 21 - S
R - 24 - E

23

24

19

26

25

30

3,626.00'
3,625.00'
3,624.00'
3,623.00'
3,622.00'
3,621.00'
3,620.00'

MW-111 3,623.23'
MW-110 3,623.08'
MW-127 3,622.67'
MW-086 3,623.91'
MW-115 3,623.61'
MW-129 3,623.51'
MW-068 3,623.81'
MW-062 3,625.50'
MW-134 3,623.80'
MW-125 3,623.67'
MW-131 3,624.28'
MW-057 3,624.52'
MW-112 3,624.10'
MW-124 3,624.39'
MW-070 3,624.45'
NW-01 3,624.86'
NW-02 NM
MW-123 3,624.52'
MW-133 3,624.37'
MW-085 3,623.50'
MW-066 3,623.59'
MW-119 3,623.87'
MW-122 3,624.03'
MW-074 3,624.10'
MW-073 3,624.30'
MW-072 3,621.36'
MW-075 3,620.44'
MW-094 3,624.10'
MW-121 3,623.61'
MW-098 3,619.91'
MW-116 3,624.07'
MW-128 3,623.98'
MW-082 3,624.57'
MW-062 3,619.41'
MW-130 3,624.55'
MW-083 3,624.80'
MW-064 3,624.35'
MW-104 3,624.03'
MW-060 3,624.18'
MW-066 3,623.72'
MW-071 3,623.03'
MW-096 3,624.60'
MW-097 3,624.71'
MW-106 3,624.71'
MW-095 3,625.00'
MW-067 3,624.53'
MW-087 MW-087A 3,622.49' (3,631.54')
MW-061A 3,627.52'
MW-258 3,622.90'
MW-081 3,623.62'
MW-120 3,623.50'
MW-085 3,623.65'
VE-01 3,623.92'
VE-02 3,624.28'
VE-03 3,624.29'
VE-04 DRY
VE-05 DRY
VE-20 3,624.72'
VE-19 3,624.77'
MW-085A 3,624.21'
VE-18 3,624.73'
MW-135 3,624.06'
3,622.83'
MW-084
(3,638.32')
VE-17 3,624.74'
3,623.00'
MW-058 3,625.73'
SW-01 3,622.09'
SW-02 3,622.93'
SW-03 3,622.89'
MW-117A 3,622.49'

N

0 600 1,200 2,400
Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- NM — Well Not Gauged – Not Accessible, Or Not Part Of Gauging Plan
- ( ) — Data Not Used In Contour Interpolation
- 3,622.55' — Groundwater Elevation In Feet Above Mean Sea Level
- DRY — Indicates Well Was Dry At Time Of Gauging
- NR — No Reading
- 3,623.00' — Groundwater Elevation Contour Line
- Rocky Arroyo

31-009-00086

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Marathon Oil Company
Indian Basin Remediation Project

Groundwater Elevation Contours
Lower Queen - April, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	7

T - 21 - S
R - 23 - E

T - 21 - S
R - 24 - E

23 24 19 26 25 30

3,623.00'
3,622.00'
3,625.00'
3,624.00'
3,626.00'

MW-111 3,621.94'
3,621.90'
SW-02
SW-01
MW-110 3,621.99'
MW-117A 3,621.62'
MW-127 3,622.18'
MW-086 3,622.52'
SW-03 3,622.07'
MW-115 3,622.45'
MW-063 3,624.26'
MW-129 3,622.32'
MW-088 3,623.14'
MW-114 3,622.68'
MW-089 3,622.33'
MW-066 3,622.57'
VE-01 3,622.95'
VE-02 3,623.15'
VE-03 3,623.30'
VE-04 DRY
MW-088 3,622.81'
MW-061A 3,626.55'
VE-05 DRY
MW-058 3,621.88'
MW-081 3,622.61'
MW-085 3,622.47'
MW-119 3,622.71'
MW-125 3,623.13'
MW-122 3,622.83'
MW-072 3,620.97'
MW-074 3,623.22'
MW-073 3,623.23'
MW-075 3,619.97'
MW-094 3,632.99'
MW-121 3,623.13'
MW-059 3,622.43'
MW-060 3,623.11'
MW-116 3,622.95'
MW-125 3,622.89'
MW-076 NM
MW-128 3,623.23'
MW-082 3,623.59'
MW-131 3,623.17'
MW-112 3,578.63'
MW-057 3,623.46'
MW-062 3,623.19'
MW-064 3,623.32'
MW-130 3,623.49'
MW-083 3,623.93'
MW-104 3,623.55'
MW-124 3,623.38'
MW-070 3,623.43'
IW-01
VE-20
MW-123 3,623.60'
3,623.41'
VE-19
MW-065A 3,624.83'
3,623.17'
MW-113 3,623.58'
VE-18 3,623.67'
3,623.00'
3,622.00'
3,621.00'
MW-118 3,623.02'
MW-084 3,621.79'
(3,638.54')
VE-16 3,623.70'
MW-087 3,623.46'
MW-096 3,624.69'
MW-108 3,623.71'
MW-095 3,624.00'
IW-02 DRY
MW-071 3,622.20'
MW-087 MW-087A 3,623.74' (3,632.41')
MW-096 3,623.58'
MW-097 3,623.67'

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- NM — Well Not Gauged – Not Accessible, Or Not Part Of Gauging Plan
- ( ) — Data Not Used In Contour Interpolation
- 3,622.55' — Groundwater Elevation In Feet Above Mean Sea Level
- DRY — Indicates Well Was Dry At Time Of Gauging
- NR — No Reading
- 3,623.00' — Groundwater Elevation Contour Line
- Rocky Arroyo

N

0 600 1,200 2,400
Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Quadrangle Location

Area Manager: A. Schmidt
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Marathon Oil Company
Indian Basin Remediation Project

Groundwater Elevation Contours
Lower Queen - October, 2003

Eddy County, New Mexico

Project Number: MT000830.0001
Drawing Date: 16 March 2004
Figure: 8

31-009-00987
Current Plotstyle : ByColor
Layout Tab: BH
Date\Time : Wed, 24 Mar 2004 - 2:46pm
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Acad Version : R16.0
User Name : gahick

T - 21 - S
R - 23 - E

23 24 19 26 25 30

MW-111
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	6

MW-089
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-066
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-061A
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-088
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-074
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-071
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-073
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-094
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-059
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-063
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-060
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-087
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-087A
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-062
Benzene	8
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-064
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-057
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-104
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-096
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-070
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-067
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-108
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-097
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-098
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-095
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- 2.67 — Thickness Of Separate-Phase Condensate In Feet
- DRY — Indicates Well Was Dry At Time Of Gauging
- NM — Well Not Gauged; Not Accessible, Or Not Part Of Gauging Plan
- Rocky Arroyo

MW-059
Benzene	29
Toluene	<1
Ethylbenzene	130
Total Xylenes	405

- Well ID
- Red Indicates BTEX Constituents Present At Concentrations Above Regulatory Limits.
- Indicates Constituent Not Detected Above Noted Laboratory Detection Limit (With Limit Shown).
- Concentration (µg/L)
- Constituent

OCD Cleanup Goals/Regulatory Limits

Benzene	10 µg/L
Toluene	750 µg/L
Ethylbenzene	750 µg/L
Total Xylenes	620 µg/L

Notes:

OCD New Mexico Energy, Minerals And Natural Resources Department, Oil Conservation Division

µg/L Micrograms Per Liter

N

0 600 1,200 2,400
Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Area Manager: A. Schmidt
Project Manager: A. J. Reed, Jr.
Task Manager: J. Ornelas
Technical Review: S. Tischer

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Marathon Oil Company
Indian Basin Remediation Project

BTEX And Separate-Phase Condensate Distribution
Lower Queen - April, 2003

Eddy County, New Mexico

Project Number: MT000830.0001
Drawing Date: 16 March 2004
Figure: 9

Current Plotstyle : ByColor
Layout Tab: BH
Date\Time : Thu, 25 Mar 2004 – 9:48am
Path\Name : G:\AutoCAD\DWG\Marathon Oil\Indian Basin\MT000830.0001\MT830110.dwg
Acad Version : R16.0
User Name : gatlick
31-009-00088

T - 21 - S
R - 23 - E

23 24 19 26 25 30

MW-089	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-066	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-061A	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-088	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-111	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-074	
Benzene	7
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-073	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-071	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-060	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-087	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-087A	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-064	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-104	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-096	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-067	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-108	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-097	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-098	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

MW-095	
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Total Xylenes	<5

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- 2.67 Thickness Of Separate-Phase Condensate In Feet
- DRY Indicates Well Was Dry At Time Of Gauging
- NM Well Not Gauged; Not Accessible, Or Not Part Of Gauging Plan
- Rocky Arroyo

MW-059	
Benzene	29
Toluene	<1
Ethylbenzene	130
Total Xylenes	405

Well ID

Red Indicates BTEX Constituents Present At Concentrations Above Regulatory Limits.

Indicates Constituent Not Detected Above Noted Laboratory Detection Limit (With Limit Shown).

Concentration (µg/L)

Constituent

OCD Cleanup Goals/Regulatory Limits

Benzene	10 µg/L
Toluene	750 µg/L
Ethylbenzene	750 µg/L
Total Xylenes	620 µg/L

Notes:

OCD New Mexico Energy, Minerals And Natural Resources Department, Oil Conservation Division

µg/L Micrograms Per Liter

N

0 600 1,200 2,400

Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Area Manager: A. Schmidt
Project Manager: A. J. Reed, Jr.
Task Manager: J. Ornelas
Technical Review: S. Tischer

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Marathon Oil Company
Indian Basin Remediation Project

BTEX And Separate-Phase Condensate Distribution Lower Queen - October 2003

Eddy County, New Mexico

Project Number: MT000830.0001
Drawing Date: 16 March 2004
Figure: 10

Acad Version : R16.0
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Date\Time : Thu, 25 Mar 2004 - 9:55am
Path\Name : G:\AutoCAD\DWG\Marathon Oil\Indian Basin\MT000830.0001\MT830112.dwg
Current Plotstyle : ByColor
Layout Tab: BH
31-009-00090

T - 21 - S
R - 23 - E

23 24 19 26 25 30

MW-089	
Total Dissolved Solids	770
Chlorides	50

MW-111	
Total Dissolved Solids	800
Chlorides	98

MW-066	
Total Dissolved Solids	770
Chlorides	8.4

MW-088	
Total Dissolved Solids	810
Chlorides	22

MW-073	
Total Dissolved Solids	3,200
Chlorides	260

MW-071	
Total Dissolved Solids	1,100
Chlorides	77

MW-061A	
Total Dissolved Solids	730
Chlorides	10

MW-094	
Total Dissolved Solids	580
Chlorides	27

MW-074	
Total Dissolved Solids	840
Chlorides	170

MW-063	
Total Dissolved Solids	370
Chlorides	8.2

MW-059	
Total Dissolved Solids	6,000
Chlorides	420

MW-060	
Total Dissolved Solids	640
Chlorides	12

MW-087	
Total Dissolved Solids	600
Chlorides	14

MW-087A	
Total Dissolved Solids	3,500
Chlorides	120

MW-062	
Total Dissolved Solids	610
Chlorides	82

MW-064	
Total Dissolved Solids	580
Chlorides	13

MW-057	
Total Dissolved Solids	430
Chlorides	37

MW-104	
Total Dissolved Solids	580
Chlorides	13

MW-096	
Total Dissolved Solids	560
Chlorides	12

MW-070	
Total Dissolved Solids	350
Chlorides	10

MW-067	
Total Dissolved Solids	400
Chlorides	4.7

MW-098	
Total Dissolved Solids	310
Chlorides	14

MW-097	
Total Dissolved Solids	440
Chlorides	4.1

MW-108	
Total Dissolved Solids	330
Chlorides	2.8

MW-095	
Total Dissolved Solids	410
Chlorides	2.8

N

0 600 1,200 2,400

Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

QUADRANGLE LOCATION

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- Rocky Arroyo

Well ID
MW-066 (Total Dissolved Solids 710; Chlorides 8.4) — See Note 1. — See Note 2.
Concentration (mg/L)
Constituent

OCD Cleanup Goals/Regulatory Limits

Wet Chemistry

Total Dissolved Solids	1,000 mg/L
Chlorides	250 mg/L

Notes:

OCD — New Mexico Energy, Minerals And Natural Resources Department, Oil Conservation Division

mg/L — Milligrams Per Liter

Note 1: Red Indicates TDS Or Chlorides Constituents Present At Concentrations Above Regulatory Limits.

Note 2: Indicates Constituent Concentration.

31-009-00089

Current Plotstyle : ByColor
Layout Tab: BH

Date\Time : Thu, 25 Mar 2004 - 9:49am
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Acad Version : R16.0
User Name : gehlick

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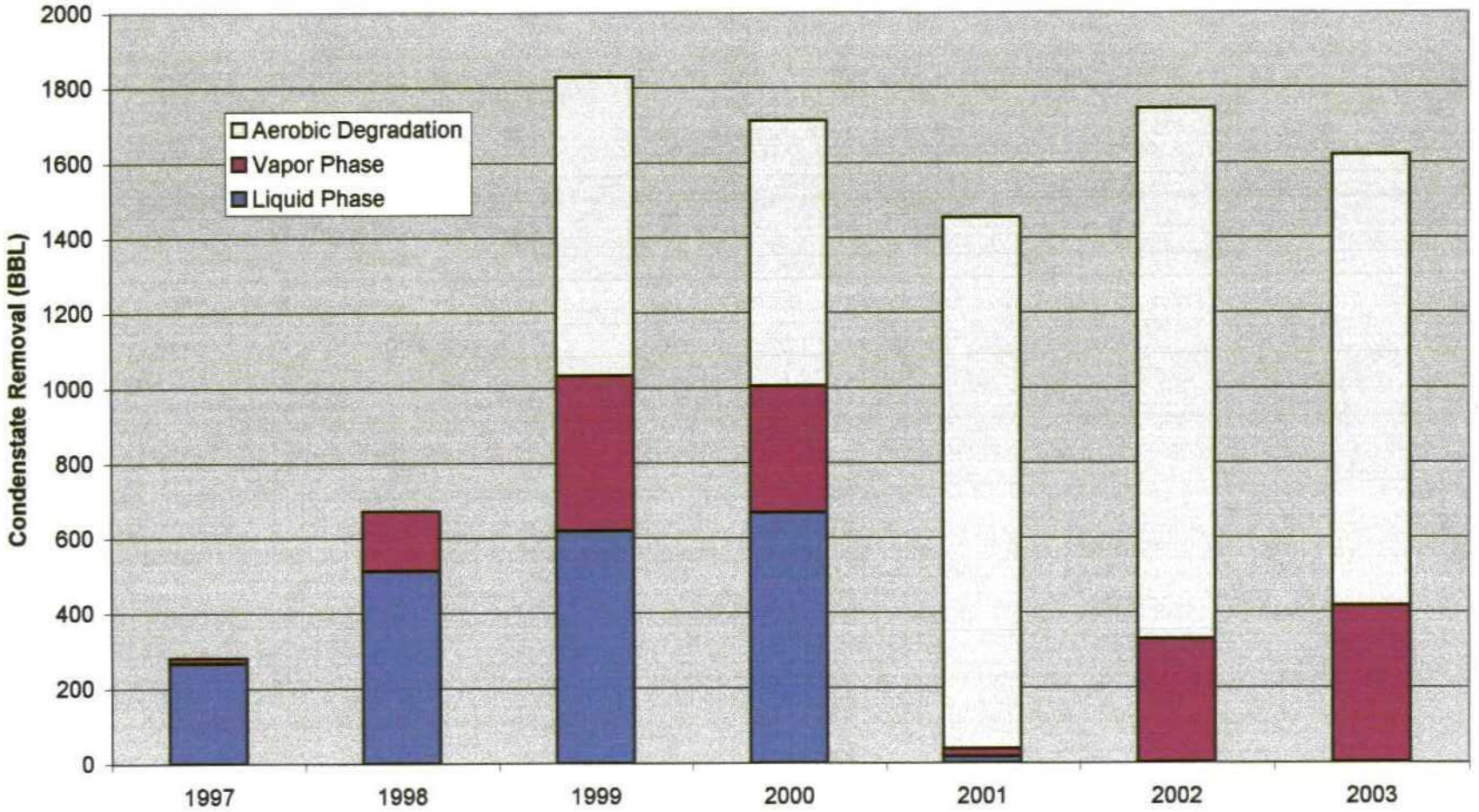
Marathon Oil Company
Indian Basin Remediation Project

Wet Chemistry Constituents Lower Queen - October, 2003

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	10A

Figure 11 - Estimated Yearly Condensate Removal (1997 - 2003)
Marathon Oil Company
Indian Basin Remediation Project
Eddy County, New Mexico



T - 21 - S
R - 23 - E

T - 21 - S
R - 24 - E

23

24

19

26

25

30

Explanation

- Monitoring Well
- Infiltration Well
- Recovery Well
- Vapor Extraction Well
- Industrial Supply Well
- Recovery Sump
- Phase I Infill Wells Installed During July, 1999
- Phase II Infill Wells Installed During August, 1999
- Well Is Redundant Based On Location Relative To Other Wells
- Well Has Been Dry For 3 Years
- Well Has Been Dry For 4 Or More Years
- Shallow Completions To Remain
- Rocky Arroyo

N

0 600 1,200 2,400

Scale in Feet

Source: Portions of U.S. Geological Survey 7½ Minute Topographic Series, Martha Creek Quadrangle, New Mexico Sheet, Published 1978.

NEW MEXICO

Area Manager	A. Schmidt
Project Manager	A. J. Reed, Jr.
Task Manager	J. Ornelas
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Marathon Oil Company
Indian Basin Remediation Project

Well Abandonment Plan
Shallow Zone

Eddy County, New Mexico

Project Number	MT000830.0001
Drawing Date	16 March 2004
Figure	12

Date\Time : Thu, 25 Mar 2004 - 9:58am
Path\Name : G:\AutoCAD\DWG\Marathon Oil\Indian Basin\MT000830.0001\MT830113.dwg
Acad Version : R16.0
User Name : gahick
Current Plotstyle : ByColor
Layout Tab: BH
31-009-00091

Appendix A

Historical Fluid Level Data

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
Shallow Zone Wells					
MW-1	12/01/91	3792.50	9.68	0	3782.82
MW-1	04/01/96	3792.50	D	--	--
MW-1	01/27/98	3792.50	14.90	0	3777.60
MW-1	06/16/98	3792.50	D	--	--
MW-1	04/26/00	3792.50	14.98	0	3777.52
MW-1	09/27/00	3792.50	D	--	--
MW-1	04/16/01	3792.50	14.80	--	3777.70
MW-1	10/29/01	3792.50	D	--	--
MW-1	04/15/02	3792.50	D	--	--
MW-1	10/14/02	3792.50	D	--	--
MW-1	03/29/03	PLUGGED AND ABANDONED			
MW-2	01/28/98	3788.72	D	--	--
MW-2	06/16/98	3788.72	D	--	--
MW-2	01/16/96	3788.72	D	--	--
MW-2	04/26/00	3788.72	D	--	--
MW-2	09/27/00	3788.72	D	--	--
MW-2	04/16/01	3788.72	D	--	--
MW-2	10/29/01	3788.72	D	--	--
MW-2	04/15/02	3788.72	D	--	--
MW-2	10/14/02	3788.72	D	--	--
MW-2	03/29/03	PLUGGED AND ABANDONED			
MW-3	04/19/96	3787.50	D	--	--
MW-3	07/16/96	3787.50	D	--	--
MW-3	10/13/96	3787.50	D	--	--
MW-3	01/28/98	3787.50	D	--	--
MW-3	06/16/98	3787.50	D	--	--
MW-3	04/26/00	3787.50	D	--	--
MW-3	09/27/00	3787.50	D	--	--
MW-3	04/16/01	3787.50	D	--	--
MW-3	10/29/01	3787.50	D	--	--
MW-3	04/15/02	3787.50	D	--	--
MW-3	10/14/02	3787.50	D	--	--
MW-3	03/26/03	PLUGGED AND ABANDONED			
MW-4	04/15/92	3785.88	18.58	0	3767.30
MW-4	07/01/92	3785.88	17.74	0	3768.14
MW-4	10/01/92	3785.88	18.54	0	3767.34
MW-4	01/01/93	3785.88	18.57	0	3767.31
MW-4	04/01/93	3785.88	18.57	0	3767.31
MW-4	01/28/98	3785.88	D	--	--
MW-4	06/16/98	3785.88	D	--	--
MW-4	01/05/00	3785.88	18.78	0	3767.10
MW-4	04/26/00	3785.88	D	--	--
MW-4	09/27/00	3785.88	D	--	--
MW-4	04/16/01	3785.88	D	--	--
MW-4	10/29/01	3785.88	D	--	--
MW-4	04/15/02	3785.88	D	--	--
MW-4	10/14/02	3785.88	D	--	--
MW-4	4/15/03	3785.88	D	--	--
MW-4	10/14/03	3785.88	D	--	--
MW-5	01/16/96	3801.69	D	--	--
MW-5	04/19/96	3801.69	D	--	--
MW-5	07/15/96	3801.69	D	--	--
MW-5	10/13/96	3801.69	D	--	--
MW-5	01/27/98	3801.69	D	--	--
MW-5	06/16/98	3801.69	D	--	--
MW-5	04/26/00	3801.69	D	--	--
MW-5	09/27/00	3801.69	D	--	--
MW-5	04/16/01	3801.69	D	--	--
MW-5	10/29/01	3801.69	D	--	--
MW-5	04/15/02	3801.69	D	--	--
MW-5	10/14/02	3801.69	D	--	--
MW-5	03/29/03	PLUGGED AND ABANDONED			
MW-6	01/16/96	3785.17	D	--	--
MW-6	01/27/98	3785.17	D	--	--
MW-6	06/15/98	3785.17	D	--	--
MW-6	04/26/00	3785.17	D	--	--
MW-6	09/27/00	3785.17	D	--	--
MW-6	04/16/01	3785.17	D	--	--
MW-6	10/29/01	3785.17	D	--	--
MW-6	04/15/02	3785.17	D	--	--
MW-6	10/14/02	3785.17	D	--	--
MW-6	03/29/03	PLUGGED AND ABANDONED			
MW-7	01/16/96	3784.46	D	--	--
MW-7	04/17/96	3784.46	D	--	--
MW-7	07/15/96	3784.46	D	--	--
MW-7	10/13/96	3784.46	D	--	--

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-7	01/27/98	3784.46	D	--	--
MW-7	06/15/98	3784.46	D	--	--
MW-7	04/26/00	3784.46	D	--	--
MW-7	09/27/00	3784.46	D	--	--
MW-7	04/16/01	3784.46	D	--	--
MW-7	10/29/01	3784.46	D	--	--
MW-7	04/15/02	3784.46	D	--	--
MW-7	10/14/02	3784.46	D	--	--
MW-7	03/29/03	PLUGGED AND ABANDONED			
MW-8	01/16/96	3795.04	D	--	--
MW-8	04/17/96	3795.04	D	--	--
MW-8	10/13/96	3795.04	D	--	--
MW-8	01/27/98	3795.04	D	--	--
MW-8	06/15/98	3795.04	D	--	--
MW-8	04/26/00	3795.04	D	--	--
MW-8	09/27/00	3795.04	D	--	--
MW-8	04/16/01	3795.04	D	--	--
MW-8	10/29/01	3795.04	D	--	--
MW-8	04/15/02	3795.04	D	--	--
MW-8	10/14/02	3795.04	D	--	--
MW-8	03/29/03	PLUGGED AND ABANDONED			
MW-9	01/16/96	3807.85	D	--	--
MW-9	04/17/96	3807.85	D	--	--
MW-9	07/15/96	3807.85	D	--	--
MW-9	10/13/96	3807.85	D	--	--
MW-9	01/27/98	3807.85	D	--	--
MW-9	06/15/98	3807.85	D	--	--
MW-9	04/26/00	3807.85	D	--	--
MW-9	09/27/00	3807.85	D	--	--
MW-9	04/16/01	3807.85	D	--	--
MW-9	10/29/01	3807.85	D	--	--
MW-9	04/15/02	3807.85	D	--	--
MW-9	10/14/02	3807.85	D	--	--
MW-9	03/29/03	PLUGGED AND ABANDONED			
MW-10	12/01/91	3790.78	16.68	0	3774.10
MW-10	04/15/92	3790.78	16.70	0	3774.08
MW-10	07/01/92	3790.78	16.02	0	3774.76
MW-10	10/01/92	3790.78	16.97	0	3773.81
MW-10	01/01/93	3790.78	17.74	0	3773.04
MW-10	04/01/93	3790.78	18.31	0	3772.47
MW-10	01/01/94	3790.78	18.21	0	3772.57
MW-10	01/16/96	3790.78	D	--	--
MW-10	04/17/96	3790.78	D	--	--
MW-10	07/16/96	3790.78	D	--	--
MW-10	10/13/96	3790.78	17.00	0	3773.78
MW-10	02/04/97	3790.78	17.99	0	3772.79
MW-10	03/18/97	3790.78	17.88	0	3772.90
MW-10	04/29/97	3790.78	18.21	0	3772.57
MW-10	07/15/97	3790.78	18.20	0	3772.58
MW-10	10/14/97	3790.78	18.45	0	3772.33
MW-10	01/28/98	3790.78	18.20	0	3772.58
MW-10	04/27/98	3790.78	18.19	0	3772.59
MW-10	06/16/98	3790.78	D	--	--
MW-10	10/10/98	3790.78	18.96	0	3771.82
MW-10	01/27/99	3790.78	18.21	0	3772.57
MW-10	04/19/99	3790.78	18.20	0	3772.58
MW-10	01/05/00	3790.78	18.24	0	3772.54
MW-10	04/26/00	3790.78	18.20	0	3772.58
MW-10	09/27/00	3790.78	D	--	--
MW-10	04/16/01	3790.78	18.40	0	3772.38
MW-10	10/29/01	3790.78	D	--	--
MW-10	04/15/02	3790.78	D	--	--
MW-10	10/14/02	3790.78	D	--	--
MW-10	4/15/03	3790.78	17.91	--	3772.87
MW-10	10/14/03	3790.78	17.91	--	3772.87
MW-11	12/01/91	3806.96	22.08	0	3784.88
MW-11	04/15/92	3806.96	22.73	0	3784.23
MW-11	07/01/92	3806.96	18.00	0	3788.96
MW-11	10/01/92	3806.96	22.47	0	3784.49
MW-11	01/01/93	3806.96	24.03	0	3782.93
MW-11	04/01/93	3806.96	24.38	0	3782.58
MW-11	10/01/93	3806.96	24.43	0	3782.53
MW-11	01/01/94	3806.96	24.30	0	3782.66
MW-11	04/01/94	3806.96	24.38	0	3782.58
MW-11	07/01/94	3806.96	24.34	0	3782.62
MW-11	10/01/94	3806.96	22.23	0	3784.73
MW-11	04/01/95	3806.96	24.23	0	3782.73
MW-11	07/01/95	3806.96	23.80	0	3783.16
MW-11	10/01/95	3806.96	22.01	0	3784.95
MW-11	01/16/96	3806.96	23.91	0	3783.05

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-11	04/19/96	3806.96	23.97	0	3782.99
MW-11	07/15/96	3806.96	20.05	0	3786.91
MW-11	10/13/96	3806.96	20.46	0	3786.50
MW-11	02/04/97	3806.96	23.22	0	3783.74
MW-11	04/28/97	3806.96	23.40	0	3783.56
MW-11	06/17/98	3806.96	24.20	0	3782.76
MW-11	04/19/99	3806.96	D	--	--
MW-11	01/05/00	3806.96	24.30	0	3782.66
MW-11	04/26/00	3806.96	24.31	0	3782.65
MW-11	09/27/00	3806.96	24.28	0	3782.68
MW-11	04/16/01	3806.96	23.95	0	3783.01
MW-11	10/29/01	3806.96	23.45	0	3783.51
MW-11	04/15/02	3806.96	24.28	0	3782.68
MW-11	10/14/02	3806.96	18.13	0	3788.83
MW-11	4/15/03	3806.96	23.63	0	3783.33
MW-11	10/14/03	3806.96	23.74	0	3783.22
MW-12	01/27/98	3809.96	D	--	--
MW-12	06/16/98	3809.96	D	--	--
MW-12	04/26/00	3809.96	25.00	0	3784.96
MW-12	09/27/00	3809.96	D	--	--
MW-12	04/16/01	3809.96	25.00	0	3784.96
MW-12	10/29/01	3809.96	25.01	0	3784.95
MW-12	04/15/02	3809.96	24.98	0	3784.88
MW-12	10/14/02	3809.96	21.06	0	3788.80
MW-12	4/15/03	3809.86	25.11	0	3784.75
MW-12	10/14/03	3809.86	25.12	0	3784.74
MW-13	12/01/91	3801.58	18.14	0	3783.44
MW-13	04/15/92	3801.58	18.92	0	3782.66
MW-13	01/01/95	3801.58	19.76	0	3781.82
MW-13	04/01/95	3801.58	20.34	0	3781.24
MW-13	07/01/95	3801.58	20.36	0	3781.22
MW-13	10/01/95	3801.58	18.41	0	3783.17
MW-13	01/16/96	3801.58	19.83	0.08	3781.80
MW-13	04/19/96	3801.58	19.89	0.09	3781.75
MW-13	07/15/96	3801.58	17.15	0.08	3784.48
MW-13	10/13/96	3801.58	17.39	0	3784.19
MW-13	02/04/97	3801.58	19.15	0	3782.43
MW-13	03/18/97	3801.58	19.31	0	3782.27
MW-13	04/28/97	3801.58	19.34	0	3782.24
MW-13	06/17/98	3801.58	20.74	0	3780.84
MW-13	04/19/99	3801.58	21.52	0.27	3780.26
MW-13	01/05/00	3801.58	20.07	0	3781.51
MW-13	04/26/00	3801.58	20.64	0	3780.94
MW-13	09/27/00	3801.58	21.16	0	3780.42
MW-13	04/16/01	3801.58	19.96	0	3781.62
MW-13	10/29/01	3801.58	19.69	0	3781.89
MW-13	04/15/02	3801.58	20.62	0	3780.96
MW-13	10/14/02	3801.58	16.04	0	3785.54
MW-13	04/15/03	3801.58	19.63	0	3781.95
MW-13	10/14/03	3801.58	19.95	0	3781.63
MW-14	12/01/91	3803.61	9.68	0	3793.93
MW-14	10/01/93	3803.61	22.55	0	3781.06
MW-14	01/01/94	3803.61	22.78	0	3780.83
MW-14	01/27/98	3803.61	22.36	0	3781.25
MW-14	06/16/98	3803.61	22.88	0	3780.73
MW-14	04/19/99	3803.61	23.74	0.24	3780.05
MW-14	01/05/00	3803.61	22.22	0	3781.39
MW-14	04/26/00	3803.61	22.74	0.03	3780.89
MW-14	09/27/00	3803.61	23.40	0.09	3780.28
MW-14	04/16/01	3803.61	22.15	0.01	3781.47
MW-14	10/29/01	3803.61	21.98	0.08	3781.69
MW-14	04/15/02	3803.61	22.81	0	3780.80
MW-14	10/14/02	3803.61	18.17	0	3785.44
MW-14	04/15/03	3803.61	21.87	0	3781.74
MW-14	10/14/03	3803.61	22.19	0	3781.42
MW-15	12/01/91	3803.59	9.68	0	3793.91
MW-15	01/27/98	3803.59	19.28	0	3784.31
MW-15	06/16/98	3803.59	D	--	--
MW-15	01/05/00	3803.59	19.37	0	3784.22
MW-15	04/26/00	3803.59	19.30	0	3784.29
MW-15	09/27/00	3803.59	D	--	--
MW-15	04/16/01	3803.59	19.32	--	3784.27
MW-15	10/29/01	3803.59	19.36	--	3784.23
MW-15	04/15/02	3803.59	D	--	--
MW-15	10/14/02	3803.59	D	--	--
MW-15	03/29/03	PLUGGED AND ABANDONED			
MW-16	12/01/91	3801.04	9.68	0	3791.36
MW-16	04/01/93	3801.04	22.32	0	3778.72
MW-16	07/01/93	3801.04	22.25	0	3778.79

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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-16	01/27/98	3801.04	22.37	0	3778.67
MW-16	06/16/98	3801.04	D	--	--
MW-16	01/05/00	3801.04	22.38	0	3778.66
MW-16	04/26/00	3801.04	22.37	0	3778.67
MW-16	09/27/00	3801.04	22.42	0	3778.62
MW-16	04/16/01	3801.04	22.41	0	3778.63
MW-16	10/29/01	3801.04	22.33	0	3778.71
MW-16	04/15/02	3801.04	22.41	0	3778.63
MW-16	10/14/02	3801.04	18.41	0	3782.63
MW-16	04/15/03	3801.04	22.43	0	3778.61
MW-16	10/14/03	3801.04	22.44	0	3778.60
MW-17	12/01/91	3799.55	9.68	0	3789.87
MW-17	04/01/93	3799.55	18.68	0	3780.87
MW-17	07/01/93	3799.55	19.13	0	3780.42
MW-17	10/01/93	3799.55	19.11	0	3780.44
MW-17	01/01/94	3799.55	19.27	0	3780.28
MW-17	01/27/98	3799.55	19.20	0	3780.35
MW-17	06/17/98	3799.55	D	--	--
MW-17	01/05/00	3799.55	19.10	0	3780.45
MW-17	04/26/00	3799.55	19.54	0	3780.01
MW-17	09/27/00	3799.55	D	--	--
MW-17	04/16/01	3799.55	18.14	0	3781.41
MW-17	10/29/01	3799.55	18.61	0	3780.94
MW-17	04/15/02	3799.55	19.42	0	3780.13
MW-17	10/14/02	3799.55	16.49	0	3783.06
MW-17	04/15/03	3799.55	18.81	0	3780.74
MW-17	10/14/03	3799.55	19.13	0	3780.42
MW-18	12/01/91	3795.82	9.68	0	3786.14
MW-18	04/15/92	3795.82	15.25	0	3780.57
MW-18	07/01/92	3795.82	11.08	0	3784.74
MW-18	10/01/92	3795.82	15.89	0	3779.93
MW-18	01/01/93	3795.82	17.05	0	3778.77
MW-18	04/01/93	3795.82	17.13	0	3778.69
MW-18	01/27/98	3795.82	17.30	0	3778.52
MW-18	06/16/98	3795.82	D	--	--
MW-18	01/05/00	3795.82	D	--	--
MW-18	04/26/00	3795.82	D	--	--
MW-18	09/27/00	3795.82	D	--	--
MW-18	04/16/01	3795.82	D	--	--
MW-18	10/29/01	3795.82	D	--	--
MW-18	04/15/02	3795.82	D	--	--
MW-18	10/14/02	3795.82	D	--	--
MW-18	03/29/03	PLUGGED AND ABANDONED			
MW-19	04/15/92	3797.21	16.50	0	3780.71
MW-19	07/01/92	3797.21	12.15	0	3785.06
MW-19	10/01/92	3797.21	17.16	0	3780.05
MW-19	01/01/93	3797.21	18.85	0	3778.36
MW-19	04/01/93	3797.21	18.93	0	3778.28
MW-19	01/16/96	3797.21	19.04	0	3778.17
MW-19	04/19/96	3797.21	19.06	0	3778.15
MW-19	07/16/96	3797.21	19.04	0	3778.17
MW-19	10/13/96	3797.21	16.09	0	3781.12
MW-19	02/04/97	3797.21	18.34	0	3778.87
MW-19	03/18/97	3797.21	18.50	0	3778.71
MW-19	04/28/97	3797.21	18.84	0	3778.37
MW-19	06/17/98	3797.21	18.88	0	3778.33
MW-19	04/19/99	3797.21	18.80	0	3778.41
MW-19	01/05/00	3797.21	18.75	0	3778.46
MW-19	04/26/00	3797.21	18.81	0	3778.40
MW-19	09/27/00	3797.21	18.74	0	3778.47
MW-19	04/16/01	3797.21	18.60	0	3778.61
MW-19	10/29/01	3797.21	18.76	0	3778.45
MW-19	04/15/02	3797.21	18.83	0	3778.38
MW-19	10/14/02	3797.21	16.26	0	3780.95
MW-19	04/15/03	3797.21	18.87	0	3778.34
MW-19	10/14/03	3797.21	18.92	0	3778.29
MW-20	12/01/91	3797.59	9.68	0	3787.91
MW-20	01/27/98	3797.59	D	--	--
MW-20	06/17/98	3797.59	D	--	--
MW-20	01/05/00	3797.59	16.08	0	3781.51
MW-20	04/26/00	3797.59	D	--	--
MW-20	09/27/00	3797.59	D	--	--
MW-20	04/16/01	3797.59	D	--	--
MW-20	10/29/01	3797.59	D	--	--
MW-20	04/15/02	3797.59	D	--	--
MW-20	10/14/02	3797.59	D	--	--
MW-20	03/29/03	PLUGGED AND ABANDONED		--	--
MW-21	12/01/91	3798.21	9.68	0	3788.53
MW-21	04/01/93	3798.21	22.63	0	3775.58

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-21	07/01/93	3798.21	22.88	0	3775.33
MW-21	10/01/93	3798.21	23.13	0	3775.08
MW-21	01/27/98	3798.21	23.03	0	3775.18
MW-21	06/16/98	3798.21	D	--	--
MW-21	01/05/00	3798.21	22.89	0	3775.32
MW-21	04/26/00	3798.21	23.03	0	3775.18
MW-21	09/27/00	3798.21	23.04	0	3775.17
MW-21	04/16/01	3798.21	22.80	0	3775.41
MW-21	10/29/01	3798.21	22.31	0	3775.90
MW-21	04/15/02	3798.21	22.98	0	3775.23
MW-21	10/14/02	3798.21	16.02	0	3782.19
MW-21	03/29/03	PLUGGED AND ABANDONED			
MW-22	12/01/91	3799.20	9.68	0	3789.52
MW-22	04/15/92	3799.20	17.16	0	3782.04
MW-22	07/01/92	3799.20	17.07	0	3782.13
MW-22	10/01/92	3799.20	17.29	0	3781.91
MW-22	01/01/93	3799.20	17.29	0	3781.91
MW-22	04/01/93	3799.20	17.29	0	3781.91
MW-22	01/27/98	3799.20	17.20	0	3782.00
MW-22	06/16/98	3799.20	D	--	--
MW-22	01/05/00	3799.20	17.19	0	3782.01
MW-22	04/26/00	3799.20	17.32	0	3781.88
MW-22	09/27/00	3799.20	17.37	0	3781.83
MW-22	04/16/01	3799.20	17.40	0	3781.80
MW-22	10/29/01	3799.20	D	--	--
MW-22	04/15/02	3799.20	D	--	--
MW-22	10/14/02	3799.20	D	--	--
MW-22	04/15/03	3799.20	17.21	0	3781.99
MW-22	10/14/03	3799.20	17.25	0	3781.95
MW-23	01/28/98	3794.48	D	--	--
MW-23	06/16/98	3794.48	D	--	--
MW-23	04/26/00	3794.48	D	--	--
MW-23	09/27/00	3794.48	D	--	--
MW-23	04/16/01	3794.48	D	--	--
MW-23	10/29/01	3794.48	D	--	--
MW-23	04/15/02	3794.48	D	--	--
MW-23	10/14/02	3794.48	D	--	--
MW-23	03/29/03	PLUGGED AND ABANDONED			
MW-24	12/01/91	3794.09	9.68	0	3784.41
MW-24	04/15/92	3794.09	12.90	0	3781.19
MW-24	07/01/92	3794.09	14.09	0	3780.00
MW-24	10/01/92	3794.09	12.92	0	3781.17
MW-24	01/16/96	3794.09	D	--	--
MW-24	04/19/96	3794.09	D	--	--
MW-24	07/16/96	3794.09	D	--	--
MW-24	10/13/96	3794.09	D	--	--
MW-24	01/27/98	3794.09	12.92	0	3781.17
MW-24	06/16/98	3794.09	D	--	--
MW-24	04/26/00	3794.09	12.95	0	3781.14
MW-24	09/27/00	3794.09	12.93	0	3781.16
MW-24	04/16/01	3794.09	12.97	0	3781.12
MW-24	10/29/01	3794.09	12.94	0	3781.15
MW-24	04/15/02	3794.09	12.94	0	3781.15
MW-24	10/14/02	3794.09	13.03	0	3781.06
MW-24	04/15/03	3794.09	13.01	0	3781.08
MW-24	10/14/03	3794.09	12.90	0	3781.19
MW-25	01/28/98	3786.97	D	--	--
MW-25	06/16/98	3786.97	D	--	--
MW-25	04/26/00	3786.97	D	--	--
MW-25	09/27/00	3786.97	D	--	--
MW-25	04/16/01	3786.97	D	--	--
MW-25	10/29/01	3786.97	D	--	--
MW-25	04/15/02	3786.97	D	--	--
MW-25	10/14/02	3786.97	D	--	--
MW-25	03/29/03	PLUGGED AND ABANDONED			
MW-26	12/01/91	3793.01	9.68	0	3783.33
MW-26	07/01/92	3793.01	16.37	0	3776.64
MW-26	10/01/92	3793.01	19.66	0	3773.35
MW-26	01/01/93	3793.01	20.41	0	3772.60
MW-26	04/01/93	3793.01	20.72	0	3772.29
MW-26	07/01/93	3793.01	20.77	0	3772.24
MW-26	10/01/93	3793.01	20.78	0	3772.23
MW-26	01/01/94	3793.01	20.77	0	3772.24
MW-26	06/17/98	3793.01	D	--	--
MW-26	01/05/00	3793.01	20.77	0	3772.24
MW-26	04/26/00	3793.01	20.77	0	3772.24
MW-26	09/27/00	3793.01	20.80	0	3772.21
MW-26	04/16/01	3793.01	20.00	0	3773.01
MW-26	10/29/01	3793.01	21.06	0	3771.95

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-26	04/15/02	3793.01	D	--	--
MW-26	10/14/02	3793.01	D	--	--
MW-26	04/15/03	3793.01	20.05	0	3772.96
MW-26	10/14/03	3793.01	21.07	0	3771.94
MW-27	01/28/98	3790.93	D	--	--
MW-27	06/16/98	3790.93	D	--	--
MW-27	04/26/00	3790.93	D	--	--
MW-27	09/27/00	3790.93	D	--	--
MW-27	04/16/01	3790.93	D	--	--
MW-27	10/29/01	3790.93	D	--	--
MW-27	04/15/02	3790.93	D	--	--
MW-27	10/14/02	3790.93	D	--	--
MW-27	03/25/03	PLUGGED AND ABANDONED			
MW-28	12/01/91	3797.03	19.23	0	3777.80
MW-28	01/27/98	3797.03	18.48	0	3778.55
MW-28	06/16/98	3797.03	D	--	--
MW-28	01/05/00	3797.03	19.11	0	3777.92
MW-28	04/26/00	3797.03	19.09	0	3777.94
MW-28	09/27/00	3797.03	D	--	--
MW-28	04/16/01	3797.03	19.11		3777.92
MW-28	10/29/01	3797.03	D	--	--
MW-28	04/15/02	3797.03	D	--	--
MW-28	10/14/02	3797.03	D	--	--
MW-28	03/29/03	PLUGGED AND ABANDONED			
MW-29	01/16/96	3794.06	D	--	--
MW-29	04/19/96	3794.06	D	--	--
MW-29	07/16/96	3794.06	D	--	--
MW-29	10/13/96	3794.06	D	--	--
MW-29	01/28/98	3794.06	D	--	--
MW-29	06/16/98	3794.06	D	--	--
MW-29	04/26/00	3794.06	D	--	--
MW-29	09/27/00	3794.06	D	--	--
MW-29	04/16/01	3794.06	D	--	--
MW-29	10/29/01	3794.06	D	--	--
MW-29	04/15/02	3794.06	D	--	--
MW-29	10/14/02	3794.06	D	--	--
MW-29	03/29/03	PLUGGED AND ABANDONED			
MW-30	12/01/91	3788.30	14.75	0	3773.55
MW-30	01/28/98	3788.30	D	--	--
MW-30	06/16/98	3788.30	D	--	--
MW-30	04/26/00	3788.30	D	--	--
MW-30	09/27/00	3788.30	D	--	--
MW-30	04/16/01	3788.30	D	--	--
MW-30	10/29/01	3788.30	D	--	--
MW-30	04/15/02	3788.30	D	--	--
MW-30	10/14/02	3788.30	D	--	--
MW-30	03/29/03	PLUGGED AND ABANDONED			
MW-31	12/01/91	3791.15	18.85	0	3772.30
MW-31	04/15/92	3791.15	19.00	0	3772.15
MW-31	07/01/92	3791.15	18.50	0	3772.65
MW-31	10/01/92	3791.15	19.00	0	3772.15
MW-31	01/01/93	3791.15	19.44	0	3771.71
MW-31	04/01/93	3791.15	19.64	0	3771.51
MW-31	01/28/98	3791.15	19.03	0	3772.12
MW-31	06/16/98	3791.15	D	--	--
MW-31	01/05/00	3791.15	19.06	0	3772.09
MW-31	04/26/00	3791.15	19.03	0	3772.12
MW-31	09/27/00	3791.15	19.04	0	3772.11
MW-31	04/16/01	3791.15	19.04	0	3772.11
MW-31	10/29/01	3791.15	19.05	0	3772.10
MW-31	04/15/02	3791.15	18.98	0	3772.17
MW-31	10/14/02	3791.15	18.98	0	3772.17
MW-31	03/29/03	PLUGGED AND ABANDONED			
MW-32	07/01/92	3797.47	15.35	0	3782.12
MW-32	01/16/96	3797.47	D	--	--
MW-32	04/19/96	3797.47	D	--	--
MW-32	07/15/96	3797.47	D	--	--
MW-32	10/13/96	3797.47	D	--	--
MW-32	01/27/98	3797.47	15.70	0	3781.77
MW-32	06/16/98	3797.47	D	--	--
MW-32	04/26/00	3797.47	15.65	0	3781.82
MW-32	09/27/00	3797.47	D	--	--
MW-32	04/16/01	3797.47	15.69	0	3781.78
MW-32	10/29/01	3797.47	D	--	--
MW-32	04/15/02	3797.47	D	--	--
MW-32	10/14/02	3797.47	D	--	--
MW-32	04/15/03	3797.47	16.90	0	3780.57
MW-32	10/14/03	3797.47	15.71	0	3781.76

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-33	12/01/91	3802.48	19.02	0	3783.46
MW-33	01/01/93	3802.48	19.91	0	3782.57
MW-33	07/01/93	3802.48	19.91	0	3782.57
MW-33	01/27/98	3802.48	19.91	0	3782.57
MW-33	06/16/98	3802.48	19.97	0	3782.51
MW-33	01/05/00	3802.48	19.94	0	3782.54
MW-33	04/26/00	3802.48	19.92	0	3782.56
MW-33	09/27/00	3802.48	19.92	0	3782.56
MW-33	04/16/01	3802.48	19.92	0	3782.56
MW-33	10/29/01	3802.48	19.94	0	3782.54
MW-33	04/15/02	3802.48	19.98	0	3782.50
MW-33	10/15/02	3802.48	17.66	0	3784.82
MW-33	03/29/03	PLUGGED AND ABANDONED			
MW-34	12/01/91	3806.00	19.72	0	3786.28
MW-34	01/27/98	3806.00	D	--	--
MW-34	06/16/98	3806.00	D	--	--
MW-34	01/05/00	3806.00	19.81	0	3786.19
MW-34	04/26/00	3806.00	19.77	0	3786.23
MW-34	09/27/00	3806.00	D	--	--
MW-34	04/16/01	3806.00	19.80	0	3786.20
MW-34	10/29/01	3806.00	19.85	0	3786.15
MW-34	04/15/02	3806.00	19.81	0	3786.19
MW-34	10/14/02	3806.00	19.69	0	3786.31
MW-34	03/29/03	PLUGGED AND ABANDONED			
MW-35	12/01/91	3800.81	18.24	0	3782.57
MW-35	07/01/93	3800.81	19.77	0	3781.04
MW-35	10/01/93	3800.81	19.81	0	3781.00
MW-35	01/01/94	3800.81	20.09	0	3780.72
MW-35	01/27/98	3800.81	20.10	0	3780.71
MW-35	06/16/98	3800.81	20.57	0	3780.24
MW-35	01/05/00	3800.81	19.78	0	3781.03
MW-35	04/26/00	3800.81	20.23	0	3780.58
MW-35	09/27/00	3800.81	20.58	0	3780.23
MW-35	04/16/01	3800.81	19.75	0	3781.06
MW-35	10/29/01	3800.81	19.35	0	3781.46
MW-35	04/15/02	3800.81	20.25	0	3780.56
MW-35	10/14/02	3800.81	17.02	0	3783.79
MW-35	03/29/03	PLUGGED AND ABANDONED			
MW-36	01/27/98	3792.94	D	--	--
MW-36	06/16/98	3792.94	D	--	--
MW-36	01/05/00	3792.94	D	--	--
MW-36	04/26/00	3792.94	D	--	--
MW-36	09/27/00	3792.94	D	--	--
MW-36	04/16/01	3792.94	D	--	--
MW-36	10/29/01	3792.94	D	--	--
MW-36	04/15/02	3792.94	D	--	--
MW-36	10/15/02	3792.94	D	--	--
MW-36	03/29/03	PLUGGED AND ABANDONED			
MW-37	12/01/91	3795.03	11.72	0	3783.31
MW-37	04/01/93	3795.03	19.96	0	3775.07
MW-37	07/01/93	3795.03	20.11	0	3774.92
MW-37	10/01/93	3795.03	20.19	0	3774.84
MW-37	01/01/94	3795.03	20.21	0	3774.82
MW-37	01/27/98	3795.03	19.37	0	3775.66
MW-37	06/16/98	3795.03	19.82	0	3775.21
MW-37	01/05/00	3795.03	17.58	0	3777.45
MW-37	04/26/00	3795.03	18.29	0	3776.74
MW-37	09/27/00	3795.03	19.25	0	3775.78
MW-37	04/16/01	3795.03	17.30	0	3777.73
MW-37	10/29/01	3795.03	18.72	0	3776.31
MW-37	04/15/02	3795.03	17.72	0	3777.31
MW-37	10/14/02	3795.03	16.89	0	3778.14
MW-37	03/29/03	PLUGGED AND ABANDONED			
MW-38	12/01/91	3797.32	13.48	0	3783.84
MW-38	04/15/92	3797.32	16.54	0	3780.78
MW-38	07/01/92	3797.32	12.42	0	3784.90
MW-38	10/01/92	3797.32	17.66	0	3779.66
MW-38	01/01/93	3797.32	20.24	0	3777.08
MW-38	04/01/93	3797.32	20.42	0	3776.90
MW-38	07/01/93	3797.32	20.23	0	3777.09
MW-38	10/01/93	3797.32	20.30	0	3777.02
MW-38	01/16/96	3797.32	D	--	--
MW-38	04/19/96	3797.32	D	--	--
MW-38	07/15/96	3797.32	D	--	--
MW-38	10/13/96	3797.32	16.54	0	3780.78
MW-38	02/03/97	3797.32	19.96	0	3777.36
MW-38	04/28/97	3797.32	20.30	0	3777.02
MW-38	07/15/97	3797.32	20.38	0	3776.94

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-38	10/13/97	3797.32	20.22	0	3777.10
MW-38	01/27/98	3797.32	20.18	0	3777.14
MW-38	04/27/98	3797.32	20.32	0	3777.00
MW-38	06/16/98	3797.32	D	--	--
MW-38	10/09/98	3797.32	20.41	0	3776.91
MW-38	01/27/99	3797.32	19.78	0	3777.54
MW-38	04/19/99	3797.32	20.01	0	3777.31
MW-38	01/05/00	3797.32	19.41	0	3777.91
MW-38	04/26/00	3797.32	19.29	0	3778.03
MW-38	09/27/00	3797.32	20.31	0	3777.01
MW-38	04/16/01	3797.32	19.33	0	3777.99
MW-38	10/29/01	3797.32	20.26	0	3777.06
MW-38	04/15/02	3797.32	19.75	0	3777.57
MW-38	10/14/02	3797.32	19.08	0	3778.24
MW-38	03/29/03	PLUGGED AND ABANDONED			
MW-39	12/01/91	3796.20	13.05	0	3783.15
MW-39	01/01/93	3796.20	17.15	0	3779.05
MW-39	04/01/93	3796.20	22.32	0	3773.88
MW-39	07/01/93	3796.20	17.78	0	3778.42
MW-39	10/01/93	3796.20	18.10	0	3778.10
MW-39	01/01/94	3796.20	18.72	0	3777.48
MW-39	04/01/94	3796.20	19.07	0	3777.13
MW-39	07/01/94	3796.20	19.29	0	3776.91
MW-39	10/01/94	3796.20	19.23	0	3776.97
MW-39	01/01/95	3796.20	19.57	0	3776.63
MW-39	04/01/95	3796.20	19.84	0	3776.36
MW-39	07/01/95	3796.20	19.84	0	3776.36
MW-39	10/01/95	3796.20	20.03	0	3776.17
MW-39	01/16/96	3796.20	20.29	0	3775.91
MW-39	04/19/96	3796.20	20.32	0	3775.88
MW-39	07/15/96	3796.20	20.30	0	3775.90
MW-39	10/13/96	3796.20	15.70	0	3780.50
MW-39	02/03/97	3796.20	17.11	0	3779.09
MW-39	04/28/97	3796.20	17.44	0	3778.76
MW-39	07/14/97	3796.20	17.41	0	3778.79
MW-39	10/13/97	3796.20	18.60	0	3777.60
MW-39	01/27/98	3796.20	19.20	0	3777.00
MW-39	04/27/98	3796.20	19.25	0	3776.95
MW-39	06/16/98	3796.20	19.41	0	3776.79
MW-39	10/09/98	3796.20	20.04	0	3776.16
MW-39	01/27/99	3796.20	20.04	0	3776.16
MW-39	04/19/99	3796.20	20.03	0	3776.17
MW-39	01/05/00	3796.20	D	--	--
MW-39	04/26/00	3796.20	D	--	--
MW-39	09/27/00	3796.20	D	--	--
MW-39	04/16/01	3796.20	D	--	--
MW-39	10/29/01	3796.20	D	--	--
MW-39	04/15/02	3796.20	D	--	--
MW-39	10/14/02	3796.20	D	--	--
MW-39	03/29/03	PLUGGED AND ABANDONED			
MW-40	04/01/93	3803.12	18.68	0	3784.44
MW-40	01/27/98	3803.12	D	--	--
MW-40	06/16/98	3803.12	D	--	--
MW-40	04/26/00	3803.12	D	--	--
MW-40	09/27/00	3803.12	D	--	--
MW-40	04/16/01	3803.12	D	--	--
MW-40	10/29/01	3803.12	D	--	--
MW-40	04/15/02	3803.12	D	--	--
MW-40	10/14/02	3803.12	D	--	--
MW-40	03/29/03	PLUGGED AND ABANDONED			
MW-41	12/01/91	3799.04	14.61	0	3784.43
MW-41	01/01/93	3799.04	19.18	0	3779.86
MW-41	07/01/93	3799.04	19.28	0	3779.76
MW-41	10/01/93	3799.04	19.74	0	3779.30
MW-41	01/01/94	3799.04	19.82	0	3779.22
MW-41	04/01/94	3799.04	21.19	0	3777.85
MW-41	07/01/94	3799.04	20.52	0	3778.52
MW-41	10/01/94	3799.04	19.60	0	3779.44
MW-41	01/01/95	3799.04	19.87	0	3779.17
MW-41	04/01/95	3799.04	19.82	0	3779.22
MW-41	07/01/95	3799.04	19.82	0	3779.22
MW-41	10/01/95	3799.04	20.58	0	3778.46
MW-41	01/16/96	3799.04	20.06	0	3778.98
MW-41	04/19/96	3799.04	20.10	0	3778.94
MW-41	07/15/96	3799.04	20.06	0	3778.98
MW-41	10/13/96	3799.04	19.02	0	3780.02
MW-41	02/03/97	3799.04	18.98	0	3780.06
MW-41	03/18/97	3799.04	19.09	0	3779.95
MW-41	04/28/97	3799.04	18.98	0	3780.06
MW-41	07/14/97	3799.04	18.85	0	3780.19
MW-41	04/27/98	3799.04	19.26	0	3779.78

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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-41	06/17/98	3799.04	19.37	0	3779.67
MW-41	10/09/98	3799.04	19.18	0	3779.86
MW-41	01/27/99	3799.04	18.72	0	3780.32
MW-41	04/19/99	3799.04	18.81	0	3780.23
MW-41	01/05/00	3799.04	18.61	0	3780.43
MW-41	04/26/00	3799.04	18.72	0	3780.32
MW-41	09/27/00	3799.04	18.84	0	3780.20
MW-41	04/16/01	3799.04	18.55	0	3780.49
MW-41	10/29/01	3799.04	18.60	0	3780.44
MW-41	04/15/02	3799.04	18.38	0	3780.66
MW-41	10/14/02	3799.04	18.96	0	3780.08
MW-41	04/15/03	3799.04	19.48	0	3779.56
MW-41	10/14/03	3799.04	21.24	0	3777.80
MW-42	12/01/91	3804.73	19.98	0	3784.75
MW-42	07/01/93	3804.73	22.63	0	3782.10
MW-42	10/01/93	3804.73	22.89	0	3781.84
MW-42	01/01/94	3804.73	23.13	0	3781.60
MW-42	01/27/98	3804.73	21.94	0	3782.79
MW-42	06/16/98	3804.73	D	--	--
MW-42	01/05/00	3804.73	23.50	0	3781.23
MW-42	04/26/00	3804.73	D	--	--
MW-42	09/27/00	3804.73	D	--	--
MW-42	04/16/01	3804.73	D	--	--
MW-42	10/29/01	3804.73	D	--	--
MW-42	04/15/02	3804.73	D	--	--
MW-42	10/14/02	3804.73	D	--	--
MW-42	03/29/03	PLUGGED AND ABANDONED			
MW-43	12/01/91	3802.05	17.38	0	3784.67
MW-43	07/01/93	3802.05	21.33	0	3780.72
MW-43	10/01/93	3802.05	21.18	0	3780.87
MW-43	01/01/94	3802.05	21.27	0	3780.78
MW-43	04/01/94	3802.05	22.38	0	3779.67
MW-43	07/01/94	3802.05	21.41	0	3780.64
MW-43	10/01/94	3802.05	21.41	0	3780.64
MW-43	01/01/95	3802.05	21.44	0	3780.61
MW-43	04/01/95	3802.05	21.53	0	3780.52
MW-43	07/01/95	3802.05	21.53	0	3780.52
MW-43	10/01/95	3802.05	21.80	0	3780.25
MW-43	01/16/96	3802.05	21.75	0	3780.30
MW-43	04/19/96	3802.05	21.70	0	3780.35
MW-43	07/15/96	3802.05	21.44	0	3780.61
MW-43	10/13/96	3802.05	20.13	0	3781.92
MW-43	02/03/97	3802.05	20.71	0	3781.34
MW-43	04/28/97	3802.05	20.49	0	3781.56
MW-43	07/14/97	3802.05	20.39	0	3781.66
MW-43	10/13/97	3802.05	20.78	0	3781.27
MW-43	01/27/98	3802.05	20.55	0	3781.50
MW-43	04/27/98	3802.05	20.72	0	3781.33
MW-43	06/16/98	3802.05	20.89	0	3781.16
MW-43	10/09/98	3802.05	21.16	0	3780.89
MW-43	01/27/99	3802.05	20.40	0	3781.65
MW-43	04/19/99	3802.05	20.55	0	3781.50
MW-43	01/05/00	3802.05	20.58	0	3781.47
MW-43	04/26/00	3802.05	20.65	0	3781.40
MW-43	09/27/00	3802.05	20.83	0	3781.22
MW-43	04/16/01	3802.05	20.55	0	3781.50
MW-43	10/29/01	3802.05	20.43	0	3781.62
MW-43	04/15/02	3802.05	20.51	0	3781.54
MW-43	10/14/02	3802.05	20.72	0	3781.33
MW-43	04/15/03	3802.05	21.04	0	3781.01
MW-43	10/14/03	3802.05	21.68	0	3780.37
MW-44	12/01/91	3804.14	17.85	0	3786.29
MW-44	04/15/92	3804.14	19.40	0	3784.74
MW-44	07/01/92	3804.14	17.27	0	3786.87
MW-44	10/01/92	3804.14	20.28	0	3783.86
MW-44	01/01/93	3804.14	21.20	0	3782.94
MW-44	04/01/93	3804.14	21.48	0	3782.66
MW-44	07/01/93	3804.14	21.63	0	3782.51
MW-44	10/01/93	3804.14	21.58	0	3782.56
MW-44	01/01/94	3804.14	21.68	0	3782.46
MW-44	04/01/94	3804.14	22.02	0	3782.12
MW-44	07/01/94	3804.14	22.13	0	3782.01
MW-44	10/01/94	3804.14	21.58	0	3782.56
MW-44	01/01/95	3804.14	21.88	0	3782.26
MW-44	04/01/95	3804.14	22.26	0	3781.88
MW-44	07/01/95	3804.14	22.26	0	3781.88
MW-44	10/01/95	3804.14	21.84	0	3782.30
MW-44	01/16/96	3804.14	21.86	0	3782.28
MW-44	04/19/96	3804.14	21.88	0	3782.26
MW-44	07/15/96	3804.14	21.75	0	3782.39
MW-44	10/13/96	3804.14	19.32	0	3784.82

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-44	02/03/97	3804.14	20.79	0	3783.35
MW-44	04/28/97	3804.14	20.43	0	3783.71
MW-44	07/14/97	3804.14	20.31	0	3783.83
MW-44	10/13/97	3804.14	20.73	0	3783.41
MW-44	01/27/98	3804.14	20.66	0	3783.48
MW-44	04/27/98	3804.14	20.84	0	3783.30
MW-44	06/16/98	3804.14	21.04	0	3783.10
MW-44	10/09/98	3804.14	20.71	0	3783.43
MW-44	01/27/99	3804.14	20.01	0	3784.13
MW-44	04/19/99	3804.14	20.41	0	3783.73
MW-44	01/05/00	3804.14	19.96	0	3784.18
MW-44	04/26/00	3804.14	20.27	0	3783.87
MW-44	09/27/00	3804.14	20.39	0	3783.75
MW-44	04/16/01	3804.14	19.85	0	3784.29
MW-44	10/29/01	3804.14	19.78	0	3784.36
MW-44	04/15/02	3804.14	20.03	0	3784.11
MW-44	10/14/02	3804.14	20.43	0	3783.71
MW-44	03/29/03	PLUGGED AND ABANDONED			
MW-45	12/01/91	3808.68	13.91	0	3794.77
MW-45	07/01/93	3808.68	21.49	0	3787.19
MW-45	10/01/93	3808.68	21.47	0	3787.21
MW-45	01/01/94	3808.68	21.54	0	3787.14
MW-45	04/01/94	3808.68	22.64	0	3786.04
MW-45	07/01/94	3808.68	21.85	0	3786.83
MW-45	10/01/94	3808.68	21.52	0	3787.16
MW-45	01/01/95	3808.68	21.78	0	3786.90
MW-45	04/01/95	3808.68	22.13	0	3786.55
MW-45	07/01/95	3808.68	22.13	0	3786.55
MW-45	01/05/00	3808.68	18.88	0	3789.80
MW-45	04/26/00	3808.68	19.19	0	3789.49
MW-45	09/27/00	3808.68	19.19	0	3789.49
MW-45	04/16/01	3808.68	18.39	0	3790.29
MW-45	10/29/01	3808.68	18.53	0	3790.15
MW-45	04/15/02	3808.68	18.75	0	3789.93
MW-45	10/14/02	3808.68	18.39	0	3790.29
MW-45	04/15/03	3808.68	21.36	0	3787.32
MW-45	10/14/03	3808.68	21.35	0	3787.33
MW-46	10/01/93	3805.54	19.87	0	3785.67
MW-46	01/01/94	3805.54	19.42	0	3786.12
MW-46	04/01/94	3805.54	19.59	0	3785.95
MW-46	10/01/94	3805.54	19.20	0	3786.34
MW-46	04/01/95	3805.54	19.55	0	3785.99
MW-46	07/01/95	3805.54	19.55	0	3785.99
MW-46	01/16/96	3805.54	19.48	0	3786.06
MW-46	04/19/96	3805.54	19.52	0	3786.02
MW-46	07/15/96	3805.54	19.41	0	3786.13
MW-46	10/13/96	3805.54	15.73	0	3789.81
MW-46	02/04/97	3805.54	18.22	0	3787.32
MW-46	04/28/97	3805.54	16.93	0	3788.61
MW-46	07/14/97	3805.54	17.15	0	3788.39
MW-46	10/13/97	3805.54	18.01	0	3787.53
MW-46	01/27/98	3805.54	17.54	0	3788.00
MW-46	04/27/98	3805.54	18.34	0	3787.20
MW-46	06/16/98	3805.54	18.69	0	3786.85
MW-46	10/10/98	3805.54	17.82	0	3787.72
MW-46	01/27/99	3805.54	16.91	0	3788.63
MW-46	04/19/99	3805.54	17.44	0	3788.10
MW-46	01/05/00	3805.54	16.76	0	3788.78
MW-46	04/26/00	3805.54	17.17	0	3788.37
MW-46	09/27/00	3805.54	17.42	0	3788.12
MW-46	04/16/01	3805.54	16.68	0	3788.86
MW-46	10/29/01	3805.54	16.79	0	3788.75
MW-46	04/15/02	3805.54	17.49	0	3788.05
MW-46	10/14/02	3805.54	17.83	0	3787.71
MW-46	04/15/03	3805.54	19.38	0	3786.16
MW-46	10/14/03	3805.54	19.62	0	3785.92
MW-47	12/01/91	3805.09	18.49	0	3786.60
MW-47	07/01/93	3805.09	21.37	0	3783.72
MW-47	01/16/96	3805.09	D	--	--
MW-47	04/19/96	3805.09	D	--	--
MW-47	07/15/96	3805.09	D	--	--
MW-47	10/13/96	3805.09	19.66	0	3785.43
MW-47	02/04/97	3805.09	21.51	0	3783.58
MW-47	04/28/97	3805.09	21.46	0	3783.63
MW-47	07/14/97	3805.09	21.54	0	3783.55
MW-47	10/13/97	3805.09	21.48	0	3783.61
MW-47	01/27/98	3805.09	21.80	0	3783.29
MW-47	04/27/98	3805.09	21.50	0	3783.59
MW-47	06/16/98	3805.09	21.62	0	3783.47
MW-47	10/10/98	3805.09	21.54	0	3783.55
MW-47	01/27/99	3805.09	21.52	0	3783.57

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-47	04/19/99	3805.09	21.49	0	3783.60
MW-47	01/05/00	3805.09	21.62	0	3783.47
MW-47	04/26/00	3805.09	21.59	0	3783.50
MW-47	09/27/00	3805.09	21.62	0	3783.47
MW-47	04/16/01	3805.09	21.63	0	3783.46
MW-47	10/29/01	3805.09	D	--	--
MW-47	04/15/02	3805.09	D	--	--
MW-47	10/14/02	3805.09	D	--	--
MW-47	04/15/03	3805.09	D	--	--
MW-47	10/14/03	3805.09	21.68	0	3783.41
MW-48	12/01/91	3806.18	18.05	0	3788.13
MW-48	04/15/92	3806.18	19.44	0	3786.74
MW-48	07/01/92	3806.18	17.25	0	3788.93
MW-48	10/01/92	3806.18	18.87	0	3787.31
MW-48	01/01/93	3806.18	19.58	0	3786.60
MW-48	01/16/96	3806.18	D	--	--
MW-48	04/19/96	3806.18	D	--	--
MW-48	07/15/96	3806.18	D	--	--
MW-48	10/13/96	3806.18	17.88	0	3788.30
MW-48	02/04/97	3806.18	19.60	0	3786.58
MW-48	04/28/97	3806.18	19.66	0	3786.52
MW-48	07/14/97	3806.18	19.66	0	3786.52
MW-48	10/13/97	3806.18	19.68	0	3786.50
MW-48	01/27/98	3806.18	19.71	0	3786.47
MW-48	04/27/98	3806.18	19.72	0	3786.46
MW-48	06/16/98	3806.18	19.75	0	3786.43
MW-48	10/09/98	3806.18	19.71	0	3786.47
MW-48	01/27/99	3806.18	19.74	0	3786.44
MW-48	04/19/99	3806.18	19.71	0	3786.47
MW-48	01/05/00	3806.18	19.77	0	3786.41
MW-48	04/26/00	3806.18	19.72	0	3786.46
MW-48	09/27/00	3806.18	D	--	--
MW-48	04/16/01	3806.18	19.78	0	3786.40
MW-48	10/29/01	3806.18	D	--	--
MW-48	04/15/02	3806.18	D	--	--
MW-48	10/14/02	3806.18	D	--	--
MW-48	04/15/03	3806.18	19.69	0	3786.49
MW-48	10/14/03	3806.18	19.70	0	3786.48
MW-49	12/01/91	3805.61	16.60	0	3789.01
MW-49	07/01/93	3805.61	21.98	0	3783.63
MW-49	10/01/93	3805.61	21.93	0	3783.68
MW-49	01/01/94	3805.61	22.27	0	3783.34
MW-49	04/01/94	3805.61	22.64	0	3782.97
MW-49	07/01/94	3805.61	22.73	0	3782.88
MW-49	10/01/94	3805.61	22.30	0	3783.31
MW-49	01/01/95	3805.61	22.56	0	3783.05
MW-49	04/01/95	3805.61	22.94	0	3782.67
MW-49	07/01/95	3805.61	22.94	0	3782.67
MW-49	10/01/95	3805.61	22.68	0	3782.93
MW-49	01/16/96	3805.61	22.55	0	3783.06
MW-49	04/19/96	3805.61	22.59	0	3783.02
MW-49	07/15/96	3805.61	22.76	0	3782.85
MW-49	10/13/96	3805.61	19.54	0	3786.07
MW-49	02/03/97	3805.61	20.66	0	3784.95
MW-49	03/18/97	3805.61	20.99	0	3784.62
MW-49	04/28/97	3805.61	20.70	0	3784.91
MW-49	07/14/97	3805.61	20.31	0	3785.30
MW-49	10/13/97	3805.61	21.01	0	3784.60
MW-49	01/27/98	3805.61	21.08	0	3784.53
MW-49	04/27/98	3805.61	21.34	0	3784.27
MW-49	06/16/98	3805.61	21.35	0	3784.26
MW-49	10/09/98	3805.61	22.52	0	3783.09
MW-49	01/27/99	3805.61	20.50	0	3785.11
MW-49	04/19/99	3805.61	20.81	0	3784.80
MW-49	01/05/00	3805.61	20.07	0	3785.54
MW-49	04/26/00	3805.61	20.30	0	3785.31
MW-49	09/27/00	3805.61	20.52	0	3785.09
MW-49	04/16/01	3805.61	20.03	0	3785.58
MW-49	10/29/01	3805.61	19.96	0	3785.65
MW-49	04/15/02	3805.61	19.76	0	3785.85
MW-49	10/14/02	3805.61	20.56	0	3785.05
MW-49	04/15/03	3805.61	22.08	0	3783.53
MW-49	10/14/03	3805.61	22.52	0	3783.09
MW-50	12/01/91	3813.35	20.74	0	3792.61
MW-50	04/15/92	3813.35	22.83	0	3790.52
MW-50	07/01/92	3813.35	15.91	0	3797.44
MW-50	10/01/92	3813.35	23.77	0	3789.58
MW-50	01/01/93	3813.35	25.52	0	3787.83
MW-50	04/01/93	3813.35	26.16	0	3787.19
MW-50	07/01/93	3813.35	26.43	0	3786.92
MW-50	10/01/93	3813.35	26.43	0	3786.92

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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-50	01/01/94	3813.35	26.83	0	3786.52
MW-50	04/01/94	3813.35	27.04	0	3786.31
MW-50	07/01/94	3813.35	27.16	0	3786.19
MW-50	10/01/94	3813.35	26.87	0	3786.48
MW-50	01/01/95	3813.35	27.03	0	3786.32
MW-50	04/01/95	3813.35	27.37	0	3785.98
MW-50	07/01/95	3813.35	27.37	0	3785.98
MW-50	10/01/95	3813.35	26.85	0	3786.50
MW-50	01/16/96	3813.35	27.20	0	3786.15
MW-50	04/19/96	3813.35	27.22	0	3786.13
MW-50	07/15/96	3813.35	27.04	0	3786.31
MW-50	10/13/96	3813.35	25.89	0	3787.46
MW-50	02/03/97	3813.35	25.15	0	3788.20
MW-50	03/18/97	3813.35	25.18	0	3788.17
MW-50	04/28/97	3813.35	24.81	0	3788.54
MW-50	07/14/97	3813.35	24.56	0	3788.79
MW-50	10/13/97	3813.35	25.45	0	3787.90
MW-50	01/27/98	3813.35	25.39	0	3787.96
MW-50	04/27/98	3813.35	25.84	0	3787.51
MW-50	06/16/98	3813.35	26.05	0	3787.30
MW-50	10/09/98	3813.35	25.80	0	3787.55
MW-50	01/27/99	3813.35	24.78	0	3788.57
MW-50	04/19/99	3813.35	25.21	0	3788.14
MW-50	01/05/00	3813.35	24.39	0	3788.96
MW-50	04/26/00	3813.35	25.00	0	3788.35
MW-50	09/27/00	3813.35	25.06	0	3788.29
MW-50	04/16/01	3813.35	24.30	0	3789.05
MW-50	10/29/01	3813.35	24.42	0	3788.93
MW-50	04/15/02	3813.35	24.43	0	3788.92
MW-50	10/14/02	3813.35	24.76	0	3788.59
MW-50	04/15/03	3813.35	26.69	0	3786.66
MW-50	10/14/03	3813.35	27.17	0	3786.18
MW-51	12/01/91	3810.86	17.77	0	3793.09
MW-51	04/26/00	3810.86	NR	--	--
MW-51	09/27/00	3810.86	D	--	--
MW-51	04/16/01	3810.86	D	--	--
MW-51	10/29/01	3810.86	D	--	--
MW-51	04/15/02	3810.86	D	--	--
MW-51	10/14/02	3810.86	D	--	--
MW-51	04/15/03	3810.86	NR	--	--
MW-51	10/14/03	3810.86	NR	--	--
MW-52	07/01/92	3817.49	19.00	0	3798.49
MW-52	01/16/96	3817.49	D	--	--
MW-52	04/19/96	3817.49	D	--	--
MW-52	07/15/96	3817.49	D	--	--
MW-52	10/13/96	3817.49	20.97	0	3796.52
MW-52	02/04/97	3817.49	21.31	0	3796.18
MW-52	04/28/97	3817.49	D	--	--
MW-52	07/14/97	3817.49	D	--	--
MW-52	10/13/97	3817.49	D	--	--
MW-52	01/27/98	3817.49	D	--	--
MW-52	04/27/98	3817.49	D	--	--
MW-52	06/16/98	3817.49	D	--	--
MW-52	10/09/98	3817.49	21.37	0	3796.12
MW-52	01/27/99	3817.49	D	--	--
MW-52	04/19/99	3817.49	D	--	--
MW-52	04/26/00	3817.49	D	--	--
MW-52	09/27/00	3817.49	D	--	--
MW-52	04/16/01	3817.49	D	--	--
MW-52	10/29/01	3817.49	D	--	--
MW-52	04/15/02	3817.49	D	--	--
MW-52	10/14/02	3817.49	D	--	--
MW-52	03/29/03	PLUGGED AND ABANDONED			
MW-53	01/16/96	3809.92	D	--	--
MW-53	04/19/96	3809.92	D	--	--
MW-53	07/15/96	3809.92	D	--	--
MW-53	10/13/96	3809.92	D	--	--
MW-53	01/27/98	3809.92	D	--	--
MW-53	06/16/98	3809.92	D	--	--
MW-53	04/26/00	3809.92	D	--	--
MW-53	09/27/00	3809.92	D	--	--
MW-53	04/16/01	3809.92	D	--	--
MW-53	10/29/01	3809.92	D	--	--
MW-53	04/15/02	3809.92	D	--	--
MW-53	10/14/02	3809.92	D	--	--
MW-53	03/29/03	PLUGGED AND ABANDONED			
MW-54	12/01/91	3823.86	43.80	0	3780.06
MW-54	04/15/92	3823.86	44.77	0	3779.09
MW-54	07/01/92	3823.86	44.16	0	3779.70
MW-54	10/01/92	3823.86	44.66	0	3779.20

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-54	01/01/93	3823.86	45.54	0	3778.32
MW-54	04/01/93	3823.86	46.11	0	3777.75
MW-54	07/01/93	3823.86	46.61	0	3777.25
MW-54	10/01/93	3823.86	46.73	0	3777.13
MW-54	01/01/94	3823.86	46.34	0	3777.52
MW-54	04/01/94	3823.86	47.45	0	3776.41
MW-54	07/01/94	3823.86	47.12	0	3776.74
MW-54	10/01/94	3823.86	46.65	0	3777.21
MW-54	01/01/95	3823.86	46.59	0	3777.27
MW-54	04/01/95	3823.86	46.96	0	3776.90
MW-54	07/01/95	3823.86	46.96	0	3776.90
MW-54	10/01/95	3823.86	47.40	0	3776.46
MW-54	01/16/96	3823.86	46.79	0	3777.07
MW-54	04/17/96	3823.86	48.97	0	3774.89
MW-54	07/15/96	3823.86	48.74	0	3775.12
MW-54	10/13/96	3823.86	46.14	0	3777.72
MW-54	02/04/97	3823.86	46.06	0	3777.80
MW-54	04/28/97	3823.86	46.27	0	3777.59
MW-54	07/14/97	3823.86	46.42	0	3777.44
MW-54	10/14/97	3823.86	47.16	0	3776.70
MW-54	01/27/98	3823.86	47.27	0	3776.59
MW-54	04/27/98	3823.86	46.86	0	3777.00
MW-54	06/16/98	3823.86	47.31	0	3776.55
MW-54	10/10/98	3823.86	46.79	0	3777.07
MW-54	01/27/99	3823.86	46.19	0	3777.67
MW-54	04/19/99	3823.86	46.32	0	3777.54
MW-54	01/05/00	3823.86	45.55	0	3778.31
MW-54	04/26/00	3823.86	46.46	0	3777.40
MW-54	09/27/00	3823.86	46.31	0	3777.55
MW-54	04/16/01	3823.86	45.72	0	3778.14
MW-54	10/29/01	3823.86	45.87	0	3777.99
MW-54	04/15/02	3823.86	45.37	0	3778.49
MW-54	10/14/02	3823.86	45.92	0	3777.94
MW-54	04/15/03	3823.86	46.13	0	3777.73
MW-54	10/14/03	3823.86	46.69	0	3777.17
MW-55	12/01/91	3794.40	24.43	0	3769.97
MW-55	04/15/92	3794.40	24.77	0	3769.63
MW-55	07/01/92	3794.40	21.89	0	3772.51
MW-55	10/01/92	3794.40	24.47	0	3769.93
MW-55	01/01/93	3794.40	26.57	0	3767.83
MW-55	04/01/93	3794.40	28.70	0	3765.70
MW-55	07/01/93	3794.40	30.02	0	3764.38
MW-55	10/01/93	3794.40	30.76	0	3763.64
MW-55	01/01/94	3794.40	31.15	0	3763.25
MW-55	04/01/94	3794.40	32.30	0	3762.10
MW-55	07/01/94	3794.40	31.90	0	3762.50
MW-55	10/01/94	3794.40	28.61	0	3765.79
MW-55	01/01/95	3794.40	29.50	0	3764.90
MW-55	04/01/95	3794.40	30.65	0	3763.75
MW-55	07/01/95	3794.40	30.65	0	3763.75
MW-55	10/01/95	3794.40	32.20	0	3762.20
MW-55	01/16/96	3794.40	30.74	0	3763.66
MW-55	04/17/96	3794.40	33.03	0	3761.37
MW-55	07/16/96	3794.40	28.85	0	3765.55
MW-55	10/13/96	3794.40	28.02	0	3766.38
MW-55	02/04/97	3794.40	26.43	0	3767.97
MW-55	04/29/97	3794.40	26.91	0	3767.49
MW-55	07/15/97	3794.40	26.81	0	3767.59
MW-55	10/14/97	3794.40	27.21	0	3767.19
MW-55	01/28/98	3794.40	27.38	0	3767.02
MW-55	04/27/98	3794.40	27.57	0	3766.83
MW-55	06/16/98	3794.40	28.00	0	3766.40
MW-55	10/10/98	3794.40	28.36	0	3766.04
MW-55	01/27/99	3794.40	27.68	0	3766.72
MW-55	04/19/99	3794.40	27.89	0	3766.51
MW-55	01/05/00	3794.40	27.92	0	3766.48
MW-55	04/26/00	3794.40	27.96	0	3766.44
MW-55	09/27/00	3794.40	28.41	0	3765.99
MW-55	04/16/01	3794.40	27.92	0	3766.48
MW-55	10/29/01	3794.40	28.05	0	3766.35
MW-55	04/15/02	3794.40	27.83	0	3766.57
MW-55	10/14/02	3794.40	28.03	0	3766.37
MW-55	04/15/03	3794.40	28.77	0	3765.63
MW-55	10/14/03	3794.40	31.77	0	3762.63
MW-56	12/01/91	3782.45	32.58	0	3749.87
MW-56	04/15/92	3782.45	9.26	0	3773.19
MW-56	07/01/92	3782.45	31.37	0	3751.08
MW-56	10/01/92	3782.45	34.68	0	3747.77
MW-56	01/01/93	3782.45	40.40	0	3742.05
MW-56	01/16/96	3782.45	D	--	--
MW-56	04/19/96	3782.45	D	--	--
MW-56	07/16/96	3782.45	D	--	--

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-56	10/14/96	3782.45	34.34	0	3748.11
MW-56	02/04/97	3782.45	37.47	0	3744.98
MW-56	03/18/97	3782.45	40.26	0	3742.19
MW-56	04/29/97	3782.45	42.34	0	3740.11
MW-56	07/15/97	3782.45	43.73	0	3738.72
MW-56	10/14/97	3782.45	D	--	--
MW-56	01/28/98	3782.45	D	--	--
MW-56	04/27/98	3782.45	D	--	--
MW-56	06/16/98	3782.45	D	--	--
MW-56	10/10/98	3782.45	D	--	--
MW-56	01/27/99	3782.45	D	--	--
MW-56	04/19/99	3782.45	43.56	0	3738.89
MW-56	01/05/00	3782.45	41.79	0	3740.66
MW-56	04/26/00	3782.45	43.49	0	3738.96
MW-56	09/27/00	3782.45	D	--	--
MW-56	04/16/01	3782.45	41.70	0	3740.75
MW-56	10/29/01	3782.45	D	--	--
MW-56	04/15/02	3782.45	D	--	--
MW-56	10/14/02	3782.45	D	--	--
MW-56	04/15/03	3782.45	43.47	0	3738.98
MW-56	10/14/03	3782.45	D	--	--
MW-61	01/27/99	3816.20	36.06	0	3780.14
MW-61	04/19/99	3816.20	36.88	0	3779.32
MW-61	01/05/00	3816.20	36.55	0	3779.65
MW-61	04/26/00	3816.20	37.15	0	3779.05
MW-61	09/27/00	3816.20	37.49	0	3778.71
MW-61	04/16/01	3816.20	37.26	0	3778.94
MW-61	10/29/01	3816.20	37.55	0	3778.65
MW-61	04/15/02	3816.20	37.19	0	3779.01
MW-61	10/14/02	3816.20	37.79	0	3778.41
MW-61	04/15/03	3816.20	37.53	0	3778.67
MW-61	10/14/03	3816.20	37.80	0	3778.40
MW-65	12/01/91	3763.31	55.90	0	3707.41
MW-65	07/01/93	3763.31	56.34	0	3706.97
MW-65	10/01/93	3763.31	56.81	0	3706.50
MW-65	01/01/94	3763.31	56.67	0	3706.64
MW-65	07/01/94	3763.31	56.70	0	3706.61
MW-65	10/01/94	3763.31	56.20	0	3707.11
MW-65	01/01/95	3763.31	56.58	0	3706.73
MW-65	04/01/95	3763.31	57.14	0	3706.17
MW-65	07/01/95	3763.31	57.14	0	3706.17
MW-65	10/01/95	3763.31	57.07	0	3706.24
MW-65	01/16/96	3763.31	57.25	0	3706.06
MW-65	04/17/96	3763.31	57.35	0	3705.96
MW-65	07/16/96	3763.31	56.01	0	3707.30
MW-65	10/14/96	3763.31	56.92	0	3706.39
MW-65	02/04/97	3763.31	56.12	0	3707.19
MW-65	04/28/97	3763.31	56.18	0	3707.13
MW-65	07/15/97	3763.31	56.44	0	3706.87
MW-65	10/14/97	3763.31	56.22	0	3707.09
MW-65	01/28/98	3763.31	56.29	0	3707.02
MW-65	04/27/98	3763.31	56.39	0	3706.92
MW-65	06/15/98	3763.31	57.22	0	3706.09
MW-65	01/27/99	3763.31	35.01	0	3728.30
MW-65	04/19/99	3763.31	56.69	0	3706.62
MW-65	01/05/99	3763.31	56.71	0	3706.60
MW-65	04/26/00	3763.31	56.55	0	3706.76
MW-65	09/27/00	3763.31	57.81	0	3705.50
MW-65	04/16/01	3763.31	56.22	0	3707.09
MW-65	10/29/01	3763.31	56.17	0	3707.14
MW-65	04/15/02	3763.31	56.47	0	3706.84
MW-65	10/14/02	3763.31	56.11	0	3707.20
MW-65	04/15/03	3763.31	56.23	0	3707.08
MW-65	10/14/03	3763.31	57.08	0	3706.23
MW-69	12/01/91	3805.11	29.38	0	3775.73
MW-69	04/15/92	3805.11	31.63	0	3773.48
MW-69	07/01/92	3805.11	24.71	0	3780.40
MW-69	10/01/92	3805.11	31.37	0	3773.74
MW-69	01/01/93	3805.11	33.61	0	3771.50
MW-69	04/01/93	3805.11	39.58	0	3765.53
MW-69	07/01/93	3805.11	41.96	0	3763.15
MW-69	10/01/93	3805.11	41.26	0	3763.85
MW-69	10/01/95	3805.11	32.51	0	3772.60
MW-69	01/20/96	3805.11	37.54	4.19	3770.62
MW-69	04/17/96	3805.11	36.60	0.26	3768.69
MW-69	07/15/96	3805.11	31.26	0.36	3774.11
MW-69	02/03/97	3805.11	34.33	3.24	3773.14
MW-69	04/28/97	3805.11	32.74	0.02	3772.38
MW-69	07/14/97	3805.11	34.34	0.02	3770.78
MW-69	10/13/97	3805.11	35.55	0	3769.56
MW-69	01/27/98	3805.11	39.44	2.45	3767.45

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-69	04/27/98	3805.11	39.08	0	3766.03
MW-69	06/15/98	3805.11	40.77	0.79	3764.91
MW-69	01/05/00	3805.11	35.75	0.02	3769.37
MW-69	04/26/00	3805.11	37.62	0.05	3767.53
MW-69	09/27/00	3805.11	41.99	2.71	3765.10
MW-69	04/16/01	3805.11	38.81	4.01	3769.23
MW-69	10/29/01	3805.11	38.42	5.45	3770.67
MW-69	04/15/02	3805.11	42.30	5.03	3766.48
MW-69	10/14/02	3805.11	28.92	0	3776.19
MW-69	04/15/03	3805.11	33.09	0.10	3772.09
MW-69	10/14/03	3805.11	35.48	1.29	3770.57
MW-77	01/01/95	3775.48	80.03	0	3695.45
MW-77	04/01/95	3775.48	80.04	0	3695.44
MW-77	07/01/95	3775.48	80.04	0	3695.44
MW-77	10/01/95	3775.48	79.70	0	3695.78
MW-77	01/16/96	3775.48	79.84	0	3695.64
MW-77	04/17/96	3775.48	78.95	0	3696.53
MW-77	07/16/96	3775.48	79.42	0	3696.06
MW-77	10/14/96	3775.48	80.02	0	3695.46
MW-77	02/04/97	3775.48	D	--	--
MW-77	04/29/97	3775.48	80.35	0	3695.13
MW-77	07/15/97	3775.48	80.31	0	3695.17
MW-77	10/14/97	3775.48	78.92	0	3696.56
MW-77	01/28/98	3775.48	77.00	0	3698.48
MW-77	04/27/98	3775.48	78.48	0	3697.00
MW-77	06/16/98	3775.48	75.30	0	3700.18
MW-77	10/10/98	3775.48	79.84	0	3695.64
MW-77	01/27/99	3775.48	76.41	0	3699.07
MW-77	04/19/99	3775.48	77.50	0	3697.98
MW-77	01/05/00	3775.48	79.36	0	3696.12
MW-77	04/26/00	3775.48	78.57	0	3696.91
MW-77	09/27/00	3775.48	78.86	0	3696.62
MW-77	04/16/01	3775.48	79.91	0	3695.57
MW-77	10/29/01	3775.48	79.72	0	3695.76
MW-77	04/15/02	3775.48	80.42	0	3695.06
MW-77*	10/14/02	3775.48	57.95	0	3717.53
MW-77	04/15/03	3775.48	69.95	0	3705.53
MW-77	10/14/03	3775.48	73.98	0	3701.50
MW-78	01/01/95	3785.82	86.51	0	3699.31
MW-78	04/01/95	3785.82	86.32	0	3699.50
MW-78	07/01/95	3785.82	86.32	0	3699.50
MW-78	10/01/95	3785.82	86.19	0	3699.63
MW-78	01/16/96	3785.82	86.22	0	3699.60
MW-78	04/17/96	3785.82	86.29	0	3699.53
MW-78	07/16/96	3785.82	86.41	0	3699.41
MW-78	10/14/96	3785.82	59.39	0	3726.43
MW-78	02/04/97	3785.82	75.78	0	3710.04
MW-78	04/29/97	3785.82	74.53	0	3711.29
MW-78	07/15/97	3785.82	74.47	0	3711.35
MW-78	10/14/97	3785.82	82.08	0	3703.74
MW-78	01/28/98	3785.82	81.61	0	3704.21
MW-78	04/27/98	3785.82	82.33	0	3703.49
MW-78	06/16/98	3785.82	82.27	0	3703.55
MW-78	10/10/98	3785.82	82.85	0	3702.97
MW-78	01/27/99	3785.82	83.30	0.01	3702.53
MW-78	04/19/99	3785.82	83.42	0	3702.40
MW-78	01/05/00	3785.82	82.49	0	3703.33
MW-78	04/26/00	3785.82	83.41	0	3702.41
MW-78	09/27/00	3785.82	83.51	0	3702.31
MW-78	04/16/01	3785.82	81.79	0	3704.03
MW-78	10/29/01	3785.82	82.75	0	3703.07
MW-78	04/15/02	3785.82	82.89	0	3702.93
MW-78*	10/14/02	3785.82	59.42	0	3726.40
MW-78	04/15/03	3785.82	84.50	0	3701.32
MW-78	10/14/03	3785.82	77.86	0	3707.96
MW-79	01/01/95	3788.39	76.29	0	3712.10
MW-79	04/01/95	3788.39	77.32	0	3711.07
MW-79	07/01/95	3788.39	77.32	0	3711.07
MW-79	10/01/95	3788.39	79.57	0	3708.82
MW-79	01/16/96	3788.39	78.31	0	3710.08
MW-79	04/17/96	3788.39	78.36	0	3710.03
MW-79	07/15/96	3788.39	81.09	0	3707.30
MW-79	10/13/96	3788.39	80.08	0	3708.31
MW-79	02/03/97	3788.39	80.44	0	3707.95
MW-79	04/28/97	3788.39	75.65	0	3712.74
MW-79	07/14/97	3788.39	75.46	0	3712.93
MW-79	10/13/97	3788.39	78.70	0	3709.69
MW-79	01/27/98	3788.39	80.52	0	3707.87
MW-79	04/27/98	3788.39	81.14	0	3707.25
MW-79	06/15/98	3788.39	80.84	0	3707.55
MW-79	10/09/98	3788.39	81.13	0	3707.26

Appendix A
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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-79	01/27/99	3788.39	79.95	0	3708.44
MW-79	04/19/99	3788.39	73.09	0	3715.30
MW-79	01/05/00	3788.39	76.99	0	3711.40
MW-79	04/26/00	3788.39	75.95	0	3712.44
MW-79	09/27/00	3788.39	81.57	0	3706.82
MW-79	04/16/01	3788.39	81.58	0	3706.81
MW-79	10/29/01	3788.39	81.18	0	3707.21
MW-79	04/15/02	3788.39	80.88	0	3707.51
MW-79	10/14/02	3788.39	81.52	0	3706.87
MW-79	04/15/03	3788.39	81.69		3706.70
MW-79	10/14/03	3788.39	81.59		3706.80
MW-80	01/16/96	3821.64	D	--	--
MW-80	04/19/96	3821.64	D	--	--
MW-80	07/15/96	3821.64	D	--	--
MW-80	10/13/96	3821.64	D	--	--
MW-80	02/03/97	3821.64	D	--	--
MW-80	04/28/97	3821.64	D	--	--
MW-80	07/14/97	3821.64	D	--	--
MW-80	10/13/97	3821.64	D	--	--
MW-80	01/27/98	3821.64	D	--	--
MW-80	04/27/98	3821.64	D	--	--
MW-80	06/15/98	3821.64	D	--	--
MW-80	10/09/98	3821.64	D	--	--
MW-80	01/27/99	3821.64	D	--	--
MW-80	04/19/99	3821.64	D	--	--
MW-80	04/26/00	3821.64	D	--	--
MW-80	09/27/00	3821.64	D	--	--
MW-80	04/16/01	3821.64	D	--	--
MW-80	10/29/01	3821.64	D	--	--
MW-80	04/15/02	3821.64	D	--	--
MW-80	10/14/02	3821.64	D	--	--
MW-80	03/29/03	PLUGGED AND ABANDONED			
MW-90	02/04/97	3781.73	43.24	0	3738.49
MW-90	04/28/97	3781.73	43.54	0	3738.19
MW-90	07/14/97	3781.73	43.42	0	3738.31
MW-90	10/13/97	3781.73	44.78	0	3736.95
MW-90	01/27/98	3781.73	43.26	0	3738.47
MW-90	04/27/98	3781.73	43.68	0	3738.05
MW-90	06/15/98	3781.73	44.26	0	3737.47
MW-90	10/09/98	3781.73	96.68	0	3685.05
MW-90	01/27/99	3781.73	46.40	0.01	3735.34
MW-90	04/19/99	3781.73	40.11	0	3741.62
MW-90	01/05/00	3781.73	44.81	0	3736.92
MW-90	04/26/00	3781.73	46.12	0	3735.61
MW-90	09/27/00	3781.73	43.82	0	3737.91
MW-90	04/16/01	3781.73	44.45	0	3737.28
MW-90	10/29/01	3781.73	43.62	0	3738.11
MW-90	04/15/02	3781.73	46.17	0	3735.56
MW-90	10/14/02	3781.73	38.73	0	3743.00
MW-90	04/15/03	3781.73	44.05	0	3737.68
MW-90	10/14/03	3781.73	46.06	0	3735.67
MW-91	02/04/97	3783.07	64.90	0	3718.17
MW-91	04/29/97	3783.07	64.96	0.01	3718.11
MW-91	07/15/97	3783.07	64.96	0.02	3718.12
MW-91	10/14/97	3783.07	68.75	0	3714.32
MW-91	01/28/98	3783.07	70.57	0	3712.50
MW-91	04/27/98	3783.07	69.38	0	3713.69
MW-91	06/16/98	3783.07	72.26	0	3710.81
MW-91	10/10/98	3783.07	72.41	0	3710.66
MW-91	01/27/99	3783.07	72.66	0	3710.41
MW-91	04/19/99	3783.07	65.39	0	3717.68
MW-91	01/05/00	3783.07	70.73	0	3712.34
MW-91	04/26/00	3783.07	70.46	0	3712.61
MW-91	09/27/00	3783.07	71.74	0	3711.33
MW-91	04/16/01	3783.07	65.85	0	3717.22
MW-91	10/29/01	3783.07	63.90	0	3719.17
MW-91	04/15/02	3783.07	69.98	0	3713.09
MW-91	10/14/02	3783.07	46.52	0	3736.55
MW-91	04/15/03	3783.07	61.94	0	3721.13
MW-91	10/14/03	3783.07	70.84	0	3712.23
MW-92	02/04/97	3785.29	D	--	--
MW-92	04/29/97	3785.29	D	--	--
MW-92	07/15/97	3785.29	D	--	--
MW-92	10/14/97	3785.29	D	--	--
MW-92	01/28/98	3785.29	D	--	--
MW-92	04/27/98	3785.29	72.52	0	3712.77
MW-92	06/16/98	3785.29	72.45	0	3712.84
MW-92	10/10/98	3785.29	72.51	0	3712.78
MW-92	01/27/99	3785.29	72.43	0	3712.86
MW-92	04/19/99	3785.29	72.41	0	3712.88

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-92	04/26/00	3785.29	72.39	0	3712.90
MW-92	09/27/00	3785.29	NR	--	--
MW-92	04/16/01	3785.29	72.40	0	3712.89
MW-92	10/29/01	3785.29	72.29	0	3713.00
MW-92	04/15/02	3785.29	72.23	0	3713.06
MW-92	10/14/02	3785.29	56.36	0	3728.93
MW-92	03/29/03	PLUGGED AND ABANDONED			
MW-93	02/03/97	3817.50	D	--	--
MW-93	04/29/97	3817.50	D	--	--
MW-93	07/14/97	3817.50	D	--	--
MW-93	10/13/97	3817.50	D	--	--
MW-93	01/27/98	3817.50	D	--	--
MW-93	04/27/98	3817.50	D	--	--
MW-93	06/15/98	3817.50	D	--	--
MW-93	10/09/98	3817.50	D	--	--
MW-93	01/27/99	3817.50	D	--	--
MW-93	04/19/99	3817.50	D	--	--
MW-93	04/26/00	3817.50	D	--	--
MW-93	09/27/00	3817.50	D	--	--
MW-93	04/16/01	3817.50	D	--	--
MW-93	10/29/01	3817.50	D	--	--
MW-93	04/15/02	3817.50	D	--	--
MW-93	10/14/02	3817.50	D	--	--
MW-93	03/29/03	PLUGGED AND ABANDONED			
MW-99	02/04/97	3770.05	D	--	--
MW-99	04/29/97	3770.05	D	--	--
MW-99	07/15/97	3770.05	D	--	--
MW-99	10/14/97	3770.05	D	--	--
MW-99	01/28/98	3770.05	D	--	--
MW-99	04/27/98	3770.05	D	--	--
MW-99	06/16/98	3770.05	D	--	--
MW-99	10/10/98	3770.05	D	--	--
MW-99	01/27/99	3770.05	D	--	--
MW-99	04/19/99	3770.05	D	--	--
MW-99	04/26/00	3770.05	D	--	--
MW-99	09/27/00	3770.05	D	--	--
MW-99	04/16/01	3770.05	D	--	--
MW-99	10/29/01	3770.05	D	--	--
MW-99	04/15/02	3770.05	D	--	--
MW-99	10/14/02	3770.05	D	--	--
MW-99	03/29/03	PLUGGED AND ABANDONED			
MW-100	04/29/97	3773.31	D	--	--
MW-100	07/15/97	3773.31	D	--	--
MW-100	10/14/97	3773.31	D	--	--
MW-100	01/28/98	3773.31	D	--	--
MW-100	04/27/98	3773.31	D	--	--
MW-100	06/16/98	3773.31	D	--	--
MW-100	10/10/98	3773.31	D	--	--
MW-100	01/27/99	3773.31	D	--	--
MW-100	04/19/99	3773.31	D	--	--
MW-100	04/26/00	3773.31	D	--	--
MW-100	09/27/00	3773.31	72.61	0	3700.70
MW-100	04/16/01	3773.31	D	--	--
MW-100	10/29/01	3773.31	D	--	--
MW-100	04/15/02	3773.31	D	--	--
MW-100	10/14/02	3773.31	D	--	--
MW-100	04/15/03	3773.31	D	--	--
MW-100	10/14/03	3773.31	D	--	--
MW-101	02/04/97	3762.71	D	--	--
MW-101	04/29/97	3762.71	D	--	--
MW-101	07/15/97	3762.71	D	--	--
MW-101	10/14/97	3762.71	D	--	--
MW-101	01/28/98	3762.71	D	--	--
MW-101	04/27/98	3762.71	D	--	--
MW-101	06/16/98	3762.71	D	--	--
MW-101	10/10/98	3762.71	D	--	--
MW-101	01/27/99	3762.71	D	--	--
MW-101	04/19/99	3762.71	D	--	--
MW-101	04/26/00	3762.71	D	--	--
MW-101	09/27/00	3762.71	NR	--	--
MW-101	04/16/01	3762.71	D	--	--
MW-101	10/29/01	3762.71	D	--	--
MW-101	04/15/02	3762.71	D	--	--
MW-101	10/14/02	3762.71	D	--	--
MW-101	03/28/03	PLUGGED AND ABANDONED			
MW-102	02/04/97	3753.69	D	--	--
MW-102	04/28/97	3753.69	D	--	--
MW-102	07/15/97	3753.69	D	--	--
MW-102	10/13/97	3753.69	D	--	--

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-102	01/28/98	3753.69	82.60	0	3671.09
MW-102	04/27/98	3753.69	82.60	0	3671.09
MW-102	06/15/98	3753.69	D	--	--
MW-102	10/10/98	3753.69	D	--	--
MW-102	01/27/99	3753.69	82.62	0	3671.07
MW-102	04/19/99	3753.69	82.57	0	3671.12
MW-102	04/26/00	3753.69	82.56	0	3671.13
MW-102	09/27/00	3753.69	D	--	--
MW-102	04/16/01	3753.69	D	--	--
MW-102	10/29/01	3753.69	D	--	--
MW-102	04/15/02	3753.69	D	--	--
MW-102	10/14/02	3753.69	D	--	--
MW-102	03/28/03	PLUGGED AND ABANDONED			
MW-103	02/04/97	3743.14	D	--	--
MW-103	04/29/97	3743.14	D	--	--
MW-103	07/15/97	3743.14	D	--	--
MW-103	10/14/97	3743.14	72.30	0	3670.84
MW-103	01/28/98	3743.14	72.70	0	3670.44
MW-103	04/27/98	3743.14	72.78	0	3670.36
MW-103	06/16/98	3743.14	D	--	--
MW-103	10/10/98	3743.14	D	--	--
MW-103	01/27/99	3743.14	73.15	0	3669.99
MW-103	04/19/99	3743.14	73.16	0	3669.98
MW-103	04/26/00	3743.14	72.74	0	3670.40
MW-103	09/27/00	3743.14	NR	--	--
MW-103	04/16/01	3743.14	72.49	0	3670.65
MW-103	10/29/01	3743.14	72.04	0	3671.10
MW-103	04/15/02	3743.14	72.65	0	3670.49
MW-103	10/14/02	3743.14	71.89	0	3671.25
MW-103	03/28/03	PLUGGED AND ABANDONED			
MW-105	02/04/97	3736.93	D	--	--
MW-105	04/28/97	3736.93	D	--	--
MW-105	07/15/97	3736.93	D	--	--
MW-105	10/13/97	3736.93	D	--	--
MW-105	01/28/98	3736.93	82.93	0	3654.00
MW-105	04/27/98	3736.93	D	--	--
MW-105	06/15/98	3736.93	82.84	0	3654.09
MW-105	10/10/98	3736.93	82.33	0	3654.60
MW-105	01/27/99	3736.93	82.62	0	3654.31
MW-105	04/19/99	3736.93	82.00	0	3654.93
MW-105	01/05/00	3736.93	82.42	0	3654.51
MW-105	04/26/00	3736.93	82.22	0	3654.71
MW-105	09/27/00	3736.93	82.89	0	3654.04
MW-105	04/16/01	3736.93	82.33	0	3654.60
MW-105	10/29/01	3736.93	D	--	--
MW-105	04/15/02	3736.93	D	--	--
MW-105	10/14/02	3736.93	D	--	--
MW-105	04/15/03	3736.93	D	--	
MW-105	10/14/03	3736.93	82.55	0	3654.38
MW-106	02/04/97	3721.97	87.97	0	3634.00
MW-106	04/28/97	3721.97	87.59	0	3634.38
MW-106	07/15/97	3721.97	87.63	0	3634.34
MW-106	10/13/97	3721.97	88.75	0	3633.22
MW-106	01/28/98	3721.97	88.97	0	3633.00
MW-106	04/27/98	3721.97	89.36	0	3632.61
MW-106	06/15/98	3721.97	89.63	0	3632.34
MW-106	10/10/98	3721.97	89.61	0	3632.36
MW-106	01/27/99	3721.97	86.55	0	3635.42
MW-106	04/19/99	3721.97	89.58	0	3632.39
MW-106	01/05/00	3721.97	89.05	0	3632.92
MW-106	04/26/00	3721.97	89.31	0	3632.66
MW-106	09/27/00	3721.97	87.98	0	3633.99
MW-106	04/16/01	3721.97	88.81	0	3633.16
MW-106	10/29/01	3721.97	89.05	0	3632.92
MW-106	04/15/02	3721.97	89.05	0	3632.92
MW-106	10/14/02	3721.97	87.40	0	3634.57
MW-106	04/15/03	3721.97	88.91	0	3633.06
MW-106	10/14/03	3721.97	89.94	0	3632.03
MW-107	02/04/97	3726.27	D	--	--
MW-107	04/29/97	3726.27	D	--	--
MW-107	07/15/97	3726.27	D	--	--
MW-107	10/13/97	3726.27	D	--	--
MW-107	01/28/98	3726.27	D	--	--
MW-107	04/27/98	3726.27	D	--	--
MW-107	06/15/98	3726.27	D	--	--
MW-107	10/10/98	3726.27	D	--	--
MW-107	01/27/99	3726.27	D	--	--
MW-107	04/19/99	3726.27	D	--	--
MW-107	04/26/00	3726.27	D	--	--
MW-107	09/27/00	3726.27	NR	--	--

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-107	04/16/01	3726.27	D	--	--
MW-107	10/29/01	3726.27	D	--	--
MW-107	04/15/02	3726.27	D	--	--
MW-107	10/14/02	3726.27	D	--	--
MW-107	03/28/03	PLUGGED AND ABANDONED			
MW-109	06/17/98	3809.53	D	--	--
MW-109	10/10/98	3809.53	17.79	0	3791.74
MW-109	01/05/00	3809.53	17.42	0	3792.11
MW-109	04/26/00	3809.53	17.58	0	3791.95
MW-109	09/27/00	3809.53	17.81	0	3791.72
MW-109	04/16/01	3809.53	17.01	0	3792.52
MW-109	10/29/01	3809.53	17.59	0	3791.94
MW-109	04/15/02	3809.53	17.96	0	3791.57
MW-109	10/14/02	3809.53	15.87	0	3793.66
MW-109	04/15/03	3809.53	16.99	0	3792.54
MW-109	10/14/03	3809.53	17.55	0	3791.98
MW-126	01/05/00	3795.58	53.08	0	3742.50
MW-126	04/26/00	3795.58	54.03	0	3741.55
MW-126	09/27/00	3795.58	60.29	0	3735.29
MW-126	04/16/01	3795.58	54.25	0.52	3741.71
MW-126	10/29/01	3795.58	57.82	2.1	3739.29
MW-126	04/15/02	3795.58	56.95	2.23	3740.26
MW-126	10/14/02	3795.58	54.03	2.57	3743.43
MW-126	04/15/03	3796.28	63.65	3.96	3735.52
MW-126	10/14/03	3796.28	68.01	0	3728.27
STOCK_WELL	01/01/94	3779.76	19.61	0	3760.15
SUMP-16A	12/01/91	3785.14	11.65	0	3773.49
SUMP-16A	04/15/92	3785.14	12.02	0	3773.12
SUMP-16A	07/01/92	3785.14	4.87	0	3780.27
SUMP-16A	10/01/92	3785.14	12.00	0	3773.14
SUMP-16A	01/01/93	3785.14	13.00	0	3772.14
SUMP-16A	04/01/93	3785.14	14.15	0	3770.99
SUMP-16A	10/01/94	3785.14	11.25	0	3773.89
SUMP-16A	01/01/95	3785.14	16.34	0	3768.80
SUMP-16A	04/01/95	3785.14	17.32	0	3767.82
SUMP-16A	07/01/95	3785.14	17.32	0	3767.82
SUMP-16A	10/01/95	3785.14	14.60	0	3770.54
SUMP-16A	01/16/96	3785.14	16.30	0	3768.84
SUMP-16A	04/19/96	3785.14	17.45	0	3767.69
SUMP-16A	07/15/96	3785.14	16.85	0	3768.29
SUMP-16A	10/13/96	3785.14	15.99	0	3769.15
SUMP-16A	04/26/00	3785.14	D	--	--
SUMP-16A	09/27/00	3785.14	NR	--	--
SUMP-16A	04/16/01	3785.14	13.70	0	3771.44
SUMP-16A	10/29/01	3785.14	13.87	0	3771.27
SUMP-16A	04/15/02	3785.14	D	--	--
SUMP-16A	10/14/02	3785.14	D	--	--
SUMP-16A	04/15/03	3785.14	16.40	0	3768.74
SUMP-16A	10/14/03	3785.14	D	--	--
SUMP-A10	01/16/96	3800.99	D	--	--
SUMP-A10	04/19/96	3800.99	D	--	--
SUMP-A10	07/15/96	3800.99	D	--	--
SUMP-A10	10/13/96	3800.99	11.62	0	3789.37
SUMP-A10	04/26/00	3800.99	D	--	--
SUMP-A10	09/27/00	3800.99	NR	--	--
SUMP-A10	04/16/01	3800.99	D	--	--
SUMP-A10	10/29/01	3800.99	D	--	--
SUMP-A10	04/15/02	3800.99	D	--	--
SUMP-A10	10/14/02	3800.99	D	--	--
SUMP-A10	04/15/03	3800.99	D	--	--
SUMP-A10	10/14/03	3800.99	D	--	--
Lower Queen Wells					
MW-57	05/28/91	3787.70	160.25	0	3627.45
MW-57	06/01/91	3787.70	160.25	0	3627.45
MW-57	07/16/91	3787.70	160.29	0	3627.41
MW-57	08/21/91	3787.70	155.50	0	3632.20
MW-57	09/18/91	3787.70	154.29	0	3633.41
MW-57	10/22/91	3787.70	157.11	0	3630.59
MW-57	11/15/91	3787.70	157.50	0	3630.20
MW-57	03/01/92	3787.70	157.92	0	3629.78
MW-57	04/01/92	3787.70	157.59	0	3630.11
MW-57	05/01/92	3787.70	148.00	0	3639.70
MW-57	06/01/92	3787.70	151.21	0	3636.49
MW-57	07/01/92	3787.70	154.07	0	3633.63
MW-57	08/01/92	3787.70	155.24	0	3632.46
MW-57	09/01/92	3787.70	155.67	0	3632.03
MW-57	10/01/92	3787.70	156.01	0	3631.69

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-57	11/01/92	3787.70	156.31	0	3631.39
MW-57	12/01/92	3787.70	156.55	0	3631.15
MW-57	01/01/93	3787.70	156.68	0	3631.02
MW-57	02/01/93	3787.70	156.79	0	3630.91
MW-57	03/01/93	3787.70	157.00	0	3630.70
MW-57	04/01/93	3787.70	156.95	0	3630.75
MW-57	05/01/93	3787.70	157.23	0	3630.47
MW-57	06/01/93	3787.70	157.13	0	3630.57
MW-57	07/01/93	3787.70	157.42	0	3630.28
MW-57	08/01/93	3787.70	157.28	0	3630.42
MW-57	09/01/93	3787.70	157.57	0	3630.13
MW-57	10/01/93	3787.70	157.65	0	3630.05
MW-57	11/01/93	3787.70	157.89	0	3629.81
MW-57	12/01/93	3787.70	157.96	0	3629.74
MW-57	01/01/94	3787.70	157.91	0	3629.79
MW-57	02/01/94	3787.70	158.78	0	3628.92
MW-57	03/01/94	3787.70	158.92	0	3628.78
MW-57	04/01/94	3787.70	158.96	0	3628.74
MW-57	05/01/94	3787.70	158.74	0	3628.96
MW-57	07/01/94	3787.70	158.49	0	3629.21
MW-57	08/01/94	3787.70	158.16	0	3629.54
MW-57	09/01/94	3787.70	158.14	0	3629.56
MW-57	10/01/94	3787.70	158.31	0	3629.39
MW-57	12/01/94	3787.70	159.51	0	3628.19
MW-57	01/01/95	3787.70	158.77	0	3628.93
MW-57	04/01/95	3787.70	158.96	0	3628.74
MW-57	07/01/95	3787.70	158.06	0	3629.64
MW-57	10/01/95	3787.70	159.23	0	3628.47
MW-57	01/16/96	3787.70	159.67	0	3628.03
MW-57	04/17/96	3787.70	161.95	0	3625.75
MW-57	07/16/96	3787.70	162.02	0	3625.68
MW-57	10/14/96	3787.70	158.83	0	3628.87
MW-57	02/04/97	3787.70	159.89	0	3627.81
MW-57	04/29/97	3787.70	160.23	0	3627.47
MW-57	07/15/97	3787.70	160.29	0	3627.41
MW-57	09/30/97	3787.70	161.30	0	3626.40
MW-57	10/09/97	3787.70	161.33	0	3626.37
MW-57	10/14/97	3787.70	161.13	0	3626.57
MW-57	10/29/97	3787.70	161.04	0.01	3626.66
MW-57	11/04/97	3787.70	161.23	0.01	3626.47
MW-57	11/12/97	3787.70	161.26	0.01	3626.44
MW-57	11/19/97	3787.70	161.34	0.01	3626.36
MW-57	11/24/97	3787.70	161.33	0	3626.37
MW-57	12/10/97	3787.70	161.30	0	3626.40
MW-57	01/28/98	3787.70	161.11	0	3626.59
MW-57	02/25/98	3787.70	161.44	0	3626.26
MW-57	04/27/98	3787.70	161.29	0	3626.41
MW-57	05/28/98	3787.70	161.67	0	3626.03
MW-57	06/16/98	3787.70	161.62	0	3626.08
MW-57	10/10/98	3787.70	162.11	0	3625.59
MW-57	01/27/99	3787.70	162.16	0	3625.54
MW-57	04/19/99	3787.70	162.33	0	3625.37
MW-57	01/05/00	3787.70	162.62	0	3625.08
MW-57	04/26/00	3787.70	162.70	0	3625.00
MW-57	09/27/00	3787.70	163.02	0	3624.68
MW-57	04/16/01	3787.70	163.15	0	3624.55
MW-57	10/29/01	3787.70	163.44	0	3624.26
MW-57	04/15/02	3787.70	163.52	0	3624.18
MW-57	10/14/02	3787.70	162.26	0	3625.44
MW-57	04/15/03	3787.70	163.18	0	3624.52
MW-57	10/14/03	3787.70	164.24	0	3623.46
MW-58	07/16/91	3824.07	197.91	0	3626.16
MW-58	08/21/91	3824.07	193.76	0	3630.31
MW-58	09/18/91	3824.07	193.26	0	3630.81
MW-58	10/22/91	3824.07	194.45	0	3629.62
MW-58	11/15/91	3824.07	194.77	0	3629.30
MW-58	01/16/96	3824.07	D	--	--
MW-58	07/16/96	3824.07	D	--	--
MW-58	10/14/96	3824.07	196.01	0.01	3628.06
MW-58	02/04/97	3824.07	203.00	0	3621.07
MW-58	04/28/97	3824.07	204.14	0	3619.93
MW-58	07/15/97	3824.07	197.66	0	3626.41
MW-58	10/01/97	3824.07	199.20	0.3	3625.08
MW-58	10/09/97	3824.07	199.52	0.67	3625.03
MW-58	10/14/97	3824.07	196.10	0	3627.97
MW-58	01/28/98	3824.07	198.55	0	3625.52
MW-58	05/28/98	3824.07	205.14	0	3618.93
MW-58	10/11/98	3824.07	200.48	0	3623.59
MW-58	01/27/99	3824.07	D	--	--
MW-58	04/19/99	3824.07	217.17	0	3606.90
MW-58	01/05/00	3824.07	210.57	0	3613.50
MW-58	04/26/00	3824.07	223.51	0	3600.56
MW-58	09/27/00	3824.07	220.18	0	3603.89

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-58	04/16/01	3824.07	114.83	0	3709.24
MW-58	10/29/01	3824.07	177.31	0	3644.41
MW-58	04/15/02	3824.07	201.92	0	3622.15
MW-58	10/14/02	3824.07	199.69	0	3624.38
MW-58	04/15/03	3824.07	201.17	0	3622.90
MW-58	10/14/03	3824.07	202.19	0	3621.88
MW-59	07/16/91	3819.59	193.98	0	3625.61
MW-59	08/21/91	3819.59	189.84	0	3629.75
MW-59	09/18/91	3819.59	189.38	0	3630.21
MW-59	10/22/91	3819.59	190.65	0	3628.94
MW-59	11/15/91	3819.59	190.00	0	3629.59
MW-59	01/16/96	3819.59	192.56	0.07	3627.08
MW-59	04/17/96	3819.59	193.37	1.37	3627.22
MW-59	07/16/96	3819.59	193.40	1.42	3627.22
MW-59	10/14/96	3819.59	192.43	1.22	3628.05
MW-59	02/04/97	3819.59	193.70	1.28	3626.82
MW-59	04/29/97	3819.59	194.09	1.14	3626.33
MW-59	07/15/97	3819.59	194.11	1.17	3626.33
MW-59	09/30/97	3819.59	195.30	1.2	3625.16
MW-59	10/09/97	3819.59	194.05	0	3625.54
MW-59	10/14/97	3819.59	195.81	1.99	3625.23
MW-59	01/28/98	3819.59	193.94	0	3625.65
MW-59	04/27/98	3819.59	194.15	0	3625.44
MW-59	05/28/98	3819.59	195.72	1.16	3624.71
MW-59	06/16/98	3819.59	195.59	1.19	3624.86
MW-59	10/10/98	3819.59	194.84	1.09	3625.54
MW-59	01/27/99	3819.59	195.95	0.89	3624.29
MW-59	04/19/99	3819.59	195.95	0.78	3624.21
MW-59	01/05/00	3819.59	195.39	0	3624.20
MW-59	04/26/00	3819.59	193.72	0	3625.87
MW-59	09/27/00	3819.59	196.28	0	3623.31
MW-59	04/16/01	3819.59	196.48	0	3623.11
MW-59	10/29/01	3819.59	196.58	0	3623.01
MW-59	04/15/02	3819.59	195.69	0	3623.90
MW-59	10/14/02	3819.59	195.40	0	3624.19
MW-59	04/15/03	3819.59	200.58	0	3619.01
MW-59	10/14/03	3819.59	197.16	0	3622.43
MW-60	07/16/91	3815.28	188.22	0	3627.06
MW-60	08/21/91	3815.28	184.81	0	3630.47
MW-60	09/18/91	3815.28	184.32	0	3630.96
MW-60	10/22/91	3815.28	185.50	0	3629.78
MW-60	11/15/91	3815.28	185.43	0	3629.85
MW-60	03/01/92	3815.28	186.00	0	3629.28
MW-60	04/01/92	3815.28	185.79	0	3629.49
MW-60	05/01/92	3815.28	180.10	0	3635.18
MW-60	06/01/92	3815.28	181.67	0	3633.61
MW-60	07/01/92	3815.28	183.21	0	3632.07
MW-60	08/01/92	3815.28	183.61	0	3631.67
MW-60	09/01/92	3815.28	183.94	0	3631.34
MW-60	10/01/92	3815.28	184.18	0	3631.10
MW-60	11/01/92	3815.28	184.44	0	3630.84
MW-60	12/01/92	3815.28	184.67	0	3630.61
MW-60	01/01/93	3815.28	184.75	0	3630.53
MW-60	02/01/93	3815.28	184.86	0	3630.42
MW-60	03/01/93	3815.28	185.08	0	3630.20
MW-60	04/01/93	3815.28	185.02	0	3630.26
MW-60	05/01/93	3815.28	185.29	0	3629.99
MW-60	06/01/93	3815.28	185.23	0	3630.05
MW-60	07/01/93	3815.28	185.47	0	3629.81
MW-60	08/01/93	3815.28	185.41	0	3629.87
MW-60	09/01/93	3815.28	185.66	0	3629.62
MW-60	10/01/93	3815.28	185.70	0	3629.58
MW-60	11/01/93	3815.28	185.96	0	3629.32
MW-60	12/01/93	3815.28	185.98	0	3629.30
MW-60	01/01/94	3815.28	185.93	0	3629.35
MW-60	02/01/94	3815.28	186.79	0	3628.49
MW-60	03/01/94	3815.28	184.91	0	3630.37
MW-60	04/01/94	3815.28	186.91	0	3628.37
MW-60	05/01/94	3815.28	186.71	0	3628.57
MW-60	07/01/94	3815.28	186.54	0	3628.74
MW-60	08/01/94	3815.28	185.34	0	3629.94
MW-60	09/01/94	3815.28	186.24	0	3629.04
MW-60	10/01/94	3815.28	186.44	0	3628.84
MW-60	12/01/94	3815.28	187.54	0	3627.74
MW-60	01/01/95	3815.28	186.81	0	3628.47
MW-60	04/01/95	3815.28	187.01	0	3628.27
MW-60	07/01/95	3815.28	187.09	0	3628.19
MW-60	10/01/95	3815.28	187.29	0	3627.99
MW-60	01/19/96	3815.28	187.76	0	3627.52
MW-60	04/17/96	3815.28	187.83	0	3627.45
MW-60	07/16/96	3815.28	188.04	0	3627.24
MW-60	10/13/96	3815.28	187.89	0	3627.39

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-60	02/04/97	3815.28	188.19	0	3627.09
MW-60	03/18/97	3815.28	188.40	0	3626.88
MW-60	04/28/97	3815.28	188.48	0	3626.80
MW-60	07/14/97	3815.28	188.74	0	3626.54
MW-60	10/01/97	3815.28	189.70	0	3625.58
MW-60	10/09/97	3815.28	189.65	0	3625.63
MW-60	10/13/97	3815.28	189.97	0	3625.31
MW-60	01/27/98	3815.28	189.37	0	3625.91
MW-60	04/27/98	3815.28	189.65	0	3625.63
MW-60	05/28/98	3815.28	190.32	0	3624.96
MW-60	06/15/98	3815.28	189.90	0	3625.38
MW-60	10/10/98	3815.28	190.04	0	3625.24
MW-60	01/27/99	3815.28	190.99	0	3624.29
MW-60	04/19/99	3815.28	190.92	0	3624.36
MW-60	01/05/00	3815.28	190.71	0	3624.57
MW-60	04/26/00	3815.28	190.88	0	3624.40
MW-60	09/27/00	3815.28	192.24	0	3623.04
MW-60	04/16/01	3815.28	191.16	0	3624.12
MW-60	10/29/01	3815.28	191.65	0	3623.63
MW-60	04/15/02	3815.28	191.62	0	3623.66
MW-60	10/14/02	3815.28	190.59	0	3624.69
MW-60	04/15/03	3815.28	191.10	0	3624.18
MW-60	10/14/03	3815.28	192.17	0	3623.11
MW-61A	07/16/91	3815.97	189.06	0	3626.91
MW-61A	08/21/91	3815.97	186.85	0	3629.12
MW-61A	09/18/91	3815.97	186.92	0	3629.05
MW-61A	10/22/91	3815.97	187.99	0	3627.98
MW-61A	11/15/91	3815.97	187.00	0	3628.97
MW-61A	10/01/94	3815.97	187.26	0	3628.71
MW-61A	12/01/94	3815.97	188.24	0	3627.73
MW-61A	01/01/95	3815.97	187.57	0	3628.40
MW-61A	02/04/97	3815.97	187.98	0	3627.99
MW-61A	04/28/97	3815.97	188.14	0	3627.83
MW-61A	07/14/97	3815.97	191.60	0	3624.37
MW-61A	09/30/97	3815.97	191.10	0	3624.87
MW-61A	10/09/97	3815.97	192.16	0.01	3623.81
MW-61A	10/13/97	3815.97	190.78	0	3625.19
MW-61A	01/27/98	3815.97	192.27	0	3623.70
MW-61A	04/27/98	3815.97	192.64	0	3623.33
MW-61A	05/28/98	3815.97	192.00	0	3623.97
MW-61A	06/15/98	3815.97	193.73	0	3622.24
MW-61A	10/10/98	3815.97	193.22	0	3622.75
MW-61A	01/27/99	3815.97	193.37	0	3622.60
MW-61A	04/19/99	3815.97	202.48	0	3613.49
MW-61A	01/05/00	3815.97	193.51	0	3622.46
MW-61A	04/26/00	3815.97	192.33	0	3623.64
MW-61A	09/27/00	3815.97	192.75	0	3623.22
MW-61A	04/16/01	3815.97	192.52	0	3623.45
MW-61A	10/29/01	3815.97	192.80	0	3623.17
MW-61A	04/15/02	3815.97	193.02	0	3622.95
MW-61A	10/14/02	3815.97	192.02	0	3623.95
MW-61A	04/15/03	3819.97	192.45	0	3627.52
MW-61A	10/14/03	3819.97	193.42	0	3626.55
MW-62	08/21/91	3819.90	189.51	0	3630.39
MW-62	09/18/91	3819.90	189.11	0	3630.79
MW-62	10/22/91	3819.90	190.80	0	3629.10
MW-62	11/15/91	3819.90	189.60	0	3630.30
MW-62	01/16/96	3819.90	192.04	0.01	3627.86
MW-62	04/17/96	3819.90	192.39	0.01	3627.51
MW-62	07/16/96	3819.90	192.34	0	3627.56
MW-62	10/14/96	3819.90	191.45	0.01	3628.45
MW-62	02/04/97	3819.90	192.57	0	3627.33
MW-62	04/28/97	3819.90	192.89	0	3627.01
MW-62	07/15/97	3819.90	193.26	0	3626.64
MW-62	09/30/97	3819.90	194.20	0	3625.70
MW-62	10/09/97	3819.90	194.20	0	3625.70
MW-62	10/14/97	3819.90	193.80	0	3626.10
MW-62	10/29/97	3819.90	194.22	0.01	3625.68
MW-62	11/04/97	3819.90	194.18	0	3625.72
MW-62	11/12/97	3819.90	194.14	0.02	3625.77
MW-62	11/19/97	3819.90	194.30	0.01	3625.60
MW-62	11/24/97	3819.90	194.24	0.01	3625.66
MW-62	12/10/97	3819.90	194.33	0	3625.57
MW-62	01/28/98	3819.90	193.81	0	3626.09
MW-62	02/25/98	3819.90	194.32	0	3625.58
MW-62	04/27/98	3819.90	194.22	0	3625.68
MW-62	05/28/98	3819.90	194.76	0	3625.14
MW-62	06/16/98	3819.90	194.34	0	3625.56
MW-62	10/10/98	3819.90	194.77	0	3625.13
MW-62	01/27/99	3819.90	194.92	0	3624.98
MW-62	04/19/99	3819.90	195.03	0	3624.87
MW-62	01/05/00	3819.90	195.19	0	3624.71

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-62	04/26/00	3819.90	195.41	0	3624.49
MW-62	09/27/00	3819.90	196.80	0	3623.10
MW-62	04/16/01	3819.90	195.66	0	3624.24
MW-62	10/29/01	3819.90	196.14	0	3623.76
MW-62	04/15/02	3819.90	196.16	0	3623.74
MW-62	10/14/02	3819.90	195.03	0	3624.87
MW-62	04/15/03	3819.90	200.49	0	3619.41
MW-62	10/14/03	3819.90	196.71	0	3623.19
MW-63	08/21/91	3826.16	193.73	0	3632.43
MW-63	09/18/91	3826.16	190.65	0	3635.51
MW-63	10/22/91	3826.16	194.29	0	3631.87
MW-63	11/15/91	3826.16	195.34	0	3630.82
MW-63	03/01/92	3826.16	196.82	0	3629.34
MW-63	04/01/92	3826.16	197.02	0	3629.14
MW-63	05/01/92	3826.16	183.25	0	3642.91
MW-63	06/01/92	3826.16	187.21	0	3638.95
MW-63	07/01/92	3826.16	189.00	0	3637.16
MW-63	08/01/92	3826.16	192.73	0	3633.43
MW-63	09/01/92	3826.16	193.65	0	3632.51
MW-63	10/01/92	3826.16	194.24	0	3631.92
MW-63	11/01/92	3826.16	194.90	0	3631.26
MW-63	12/01/92	3826.16	195.32	0	3630.84
MW-63	01/01/93	3826.16	195.55	0	3630.61
MW-63	02/01/93	3826.16	195.84	0	3630.32
MW-63	03/01/93	3826.16	196.14	0	3630.02
MW-63	04/01/93	3826.16	195.99	0	3630.17
MW-63	05/01/93	3826.16	196.34	0	3629.82
MW-63	06/01/93	3826.16	196.43	0	3629.73
MW-63	07/01/93	3826.16	196.62	0	3629.54
MW-63	08/01/93	3826.16	196.69	0	3629.47
MW-63	09/01/93	3826.16	196.93	0	3629.23
MW-63	10/01/93	3826.16	196.89	0	3629.27
MW-63	11/01/93	3826.16	197.32	0	3628.84
MW-63	12/01/93	3826.16	197.43	0	3628.73
MW-63	01/01/94	3826.16	197.33	0	3628.83
MW-63	02/01/94	3826.16	198.42	0	3627.74
MW-63	03/01/94	3826.16	198.37	0	3627.79
MW-63	04/01/94	3826.16	197.47	0	3628.69
MW-63	05/01/94	3826.16	198.28	0	3627.88
MW-63	07/01/94	3826.16	197.98	0	3628.18
MW-63	08/01/94	3826.16	197.12	0	3629.04
MW-63	09/01/94	3826.16	197.33	0	3628.83
MW-63	10/01/94	3826.16	197.74	0	3628.42
MW-63	12/01/94	3826.16	199.00	0	3627.16
MW-63	01/01/95	3826.16	198.20	0	3627.96
MW-63	04/01/95	3826.16	198.46	0	3627.70
MW-63	07/01/95	3826.16	198.49	0	3627.67
MW-63	10/01/95	3826.16	198.57	0	3627.59
MW-63	01/16/96	3826.16	198.90	0	3627.26
MW-63	04/17/96	3826.16	199.23	0	3626.93
MW-63	07/16/96	3826.16	198.91	0	3627.25
MW-63	10/13/96	3826.16	194.89	0	3631.27
MW-63	02/04/97	3826.16	199.01	0	3627.15
MW-63	04/28/97	3826.16	199.46	0	3626.70
MW-63	07/14/97	3826.16	200.01	0	3626.15
MW-63	10/01/97	3826.16	200.80	0	3625.36
MW-63	10/09/97	3826.16	209.05	0	3617.11
MW-63	10/13/97	3826.16	200.88	0	3625.28
MW-63	01/27/98	3826.16	200.96	0	3625.20
MW-63	04/27/98	3826.16	201.28	0	3624.88
MW-63	05/28/98	3826.16	200.72	0	3625.44
MW-63	06/16/98	3826.16	201.56	0	3624.60
MW-63	10/09/98	3826.16	202.01	0	3624.15
MW-63	01/27/99	3826.16	202.44	0	3623.72
MW-63	04/19/99	3826.16	202.39	0	3623.77
MW-63	01/05/00	3826.16	202.45	0	3623.71
MW-63	04/26/00	3826.16	202.80	0	3623.36
MW-63	09/27/00	3826.16	202.88	0	3623.28
MW-63	04/16/01	3826.16	203.06	0	3623.10
MW-63	10/29/01	3826.16	203.03	0	3623.13
MW-63	04/15/02	3826.16	203.39	0	3622.77
MW-63	10/14/02	3826.16	198.14	0	3628.02
MW-63	04/15/03	3826.16	200.66	0	3625.50
MW-63	10/14/03	3826.16	201.90	0	3624.26
MW-64	08/21/91	3798.57	167.43	0	3631.14
MW-64	09/18/91	3798.57	167.21	0	3631.36
MW-64	10/22/91	3798.57	168.66	0	3629.91
MW-64	11/15/91	3798.57	168.90	0	3629.67
MW-64	03/01/92	3798.57	169.20	0	3629.37
MW-64	04/01/92	3798.57	169.00	0	3629.57
MW-64	05/01/92	3798.57	161.58	0	3636.99
MW-64	06/01/92	3798.57	164.25	0	3634.32

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Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-64	07/01/92	3798.57	166.36	0	3632.21
MW-64	08/01/92	3798.57	166.82	0	3631.75
MW-64	09/01/92	3798.57	167.17	0	3631.40
MW-64	10/01/92	3798.57	167.45	0	3631.12
MW-64	11/01/92	3798.57	167.63	0	3630.94
MW-64	12/01/92	3798.57	167.85	0	3630.72
MW-64	01/01/93	3798.57	167.99	0	3630.58
MW-64	02/01/93	3798.57	168.08	0	3630.49
MW-64	03/01/93	3798.57	168.26	0	3630.31
MW-64	04/01/93	3798.57	168.22	0	3630.35
MW-64	05/01/93	3798.57	168.52	0	3630.05
MW-64	06/01/93	3798.57	168.46	0	3630.11
MW-64	07/01/93	3798.57	168.70	0	3629.87
MW-64	08/01/93	3798.57	168.59	0	3629.98
MW-64	09/01/93	3798.57	168.83	0	3629.74
MW-64	10/01/93	3798.57	168.88	0	3629.69
MW-64	11/01/93	3798.57	169.09	0	3629.48
MW-64	12/01/93	3798.57	169.13	0	3629.44
MW-64	01/01/94	3798.57	169.12	0	3629.45
MW-64	02/01/94	3798.57	169.92	0	3628.65
MW-64	03/01/94	3798.57	170.05	0	3628.52
MW-64	04/01/94	3798.57	170.03	0	3628.54
MW-64	05/01/94	3798.57	169.89	0	3628.68
MW-64	07/01/94	3798.57	169.65	0	3628.92
MW-64	08/01/94	3798.57	168.39	0	3630.18
MW-64	09/01/94	3798.57	169.32	0	3629.25
MW-64	10/01/94	3798.57	169.56	0	3629.01
MW-64	12/01/94	3798.57	170.71	0	3627.86
MW-64	01/01/95	3798.57	169.94	0	3628.63
MW-64	04/01/95	3798.57	170.13	0	3628.44
MW-64	07/01/95	3798.57	170.24	0	3628.33
MW-64	10/01/95	3798.57	170.33	0	3628.24
MW-64	01/19/96	3798.57	170.87	0	3627.70
MW-64	04/17/96	3798.57	170.98	0	3627.59
MW-64	07/16/96	3798.57	171.27	0.33	3627.54
MW-64	10/13/96	3798.57	170.69	0.29	3628.09
MW-64	02/04/97	3798.57	171.53	0.38	3627.31
MW-64	03/18/97	3798.57	171.95	0.55	3627.02
MW-64	04/28/97	3798.57	171.93	0.55	3627.04
MW-64	07/15/97	3798.57	171.41	0.53	3627.54
MW-64	10/01/97	3798.57	173.70	1.4	3625.89
MW-64	10/09/97	3798.57	173.58	1.28	3625.92
MW-64	10/13/97	3798.57	173.33	1.29	3626.18
MW-64	10/21/97	3798.57	173.34	1.17	3626.08
MW-64	11/12/97	3798.57	176.15	0	3622.42
MW-64	11/19/97	3798.57	173.02	0	3625.55
MW-64	11/24/97	3798.57	174.56	0	3624.01
MW-64	12/10/97	3798.57	174.50	0	3624.07
MW-64	01/06/98	3798.57	174.50	0	3624.07
MW-64	01/15/98	3798.57	174.40	0	3624.17
MW-64	01/20/98	3798.57	174.56	0	3624.01
MW-64	01/28/98	3798.57	174.56	0	3624.01
MW-64	02/03/98	3798.57	173.16	0	3625.41
MW-64	02/25/98	3798.57	172.77	0	3625.80
MW-64	04/27/98	3798.57	172.74	0	3625.83
MW-64	05/28/98	3798.57	173.84	0	3624.73
MW-64	06/15/98	3798.57	173.03	0	3625.54
MW-64	10/10/98	3798.57	173.41	0	3625.16
MW-64	01/27/99	3798.57	173.54	0	3625.03
MW-64	04/19/99	3798.57	173.62	0	3624.95
MW-64	01/05/00	3798.57	173.82	0	3624.75
MW-64	04/26/00	3798.57	173.96	0	3624.61
MW-64	09/27/00	3798.57	174.37	0	3624.20
MW-64	04/16/01	3798.57	174.48	0	3624.09
MW-64	10/29/01	3798.57	174.79	0	3623.78
MW-64	04/15/02	3798.57	174.80	0	3623.77
MW-64	10/14/02	3798.57	173.94	0	3624.63
MW-64	04/15/03	3798.57	174.22	0	3624.35
MW-64	10/14/03	3798.57	175.25	0	3623.32
MW-65A	08/21/91	3763.26	131.36	0	3631.90
MW-65A	09/18/91	3763.26	130.91	0	3632.35
MW-65A	10/22/91	3763.26	133.09	0	3630.17
MW-65A	11/15/91	3763.26	133.70	0	3629.56
MW-65A	01/16/96	3763.26	136.11	1.3	3628.09
MW-65A	06/15/98	3763.26	137.96	0.93	3625.97
MW-65A	01/05/00	3763.26	139.58	0.97	3624.39
MW-65A	04/26/00	3763.26	138.78	0	3624.48
MW-65A	09/27/00	3763.26	139.93	0	3623.33
MW-65A	04/16/01	3763.26	139.61	0	3623.65
MW-65A	10/29/01	3763.26	139.99	0	3623.27
MW-65A	04/15/02	3763.26	140.06	0.9	3623.86
MW-65A	10/14/02	3763.26	138.45	0	3624.81
MW-65A	04/15/03	3763.26	139.05	0	3624.21

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-65A	10/14/03	3763.26	140.09	0	3623.17
MW-66	08/21/91	3828.98	196.77	0	3632.21
MW-66	09/18/91	3828.98	198.73	0	3630.25
MW-66	10/22/91	3828.98	199.70	0	3629.28
MW-66	11/15/91	3828.98	199.88	0	3629.10
MW-66	03/01/92	3828.98	200.37	0	3628.61
MW-66	04/01/92	3828.98	200.25	0	3628.73
MW-66	05/01/92	3828.98	195.25	0	3633.73
MW-66	06/01/92	3828.98	196.08	0	3632.90
MW-66	07/01/92	3828.98	197.35	0	3631.63
MW-66	08/01/92	3828.98	197.77	0	3631.21
MW-66	09/01/92	3828.98	198.17	0	3630.81
MW-66	10/01/92	3828.98	198.40	0	3630.58
MW-66	11/01/92	3828.98	198.76	0	3630.22
MW-66	12/01/92	3828.98	198.98	0	3630.00
MW-66	01/01/93	3828.98	199.10	0	3629.88
MW-66	02/01/93	3828.98	199.23	0	3629.75
MW-66	03/01/93	3828.98	199.49	0	3629.49
MW-66	04/01/93	3828.98	199.38	0	3629.60
MW-66	05/01/93	3828.98	199.63	0	3629.35
MW-66	06/01/93	3828.98	199.59	0	3629.39
MW-66	07/01/93	3828.98	199.82	0	3629.16
MW-66	08/01/93	3828.98	199.78	0	3629.20
MW-66	09/01/93	3828.98	200.01	0	3628.97
MW-66	10/01/93	3828.98	200.09	0	3628.89
MW-66	11/01/93	3828.98	200.35	0	3628.63
MW-66	12/01/93	3828.98	200.42	0	3628.56
MW-66	01/01/94	3828.98	200.33	0	3628.65
MW-66	02/01/94	3828.98	201.39	0	3627.59
MW-66	03/01/94	3828.98	201.44	0	3627.54
MW-66	04/01/94	3828.98	201.36	0	3627.62
MW-66	05/01/94	3828.98	201.26	0	3627.72
MW-66	07/01/94	3828.98	200.91	0	3628.07
MW-66	08/01/94	3828.98	199.86	0	3629.12
MW-66	09/01/94	3828.98	200.66	0	3628.32
MW-66	10/01/94	3828.98	200.83	0	3628.15
MW-66	12/01/94	3828.98	201.96	0	3627.02
MW-66	01/01/95	3828.98	201.04	0	3627.94
MW-66	04/01/95	3828.98	202.26	0	3626.72
MW-66	07/01/95	3828.98	201.59	0	3627.39
MW-66	10/01/95	3828.98	201.62	0	3627.36
MW-66	01/16/96	3828.98	200.89	0	3628.09
MW-66	04/17/96	3828.98	202.29	0	3626.69
MW-66	07/16/96	3828.98	202.45	0	3626.53
MW-66	10/13/96	3828.98	200.80	0	3628.18
MW-66	02/04/97	3828.98	202.60	0	3626.38
MW-66	04/28/97	3828.98	202.84	0	3626.14
MW-66	07/14/97	3828.98	202.72	0	3626.26
MW-66	09/30/97	3828.98	204.00	0	3624.98
MW-66	10/09/97	3828.98	204.20	0	3624.78
MW-66	10/13/97	3828.98	203.77	0	3625.21
MW-66	01/27/98	3828.98	203.79	0	3625.19
MW-66	04/27/98	3828.98	204.09	0	3624.89
MW-66	05/28/98	3828.98	204.18	0	3624.80
MW-66	06/15/98	3828.98	204.37	0	3624.61
MW-66	10/10/98	3828.98	204.86	0	3624.12
MW-66	01/27/99	3828.98	205.05	0	3623.93
MW-66	04/19/99	3828.98	205.10	0	3623.88
MW-66	01/05/99	3828.98	205.13	0	3623.85
MW-66	04/26/00	3828.98	205.41	0	3623.57
MW-66	09/27/00	3828.98	205.78	0	3623.20
MW-66	04/16/01	3828.98	205.59	0	3623.39
MW-66	10/29/01	3828.98	206.04	0	3622.94
MW-66	04/15/02	3828.98	205.98	0	3623.00
MW-66	10/14/02	3828.98	199.87	0	3629.11
MW-66	04/15/03	3828.98	205.39	0	3623.59
MW-66	10/14/03	3828.98	206.41	0	3622.57
MW-67	09/18/91	3765.87	133.99	0	3631.88
MW-67	10/22/91	3765.87	135.74	0	3630.13
MW-67	11/15/91	3765.87	136.00	0	3629.87
MW-67	03/01/92	3765.87	136.35	0	3629.52
MW-67	04/01/92	3765.87	136.25	0	3629.62
MW-67	05/01/92	3765.87	127.66	0	3638.21
MW-67	06/01/92	3765.87	131.08	0	3634.79
MW-67	07/01/92	3765.87	133.24	0	3632.63
MW-67	08/01/92	3765.87	133.89	0	3631.98
MW-67	09/01/92	3765.87	134.24	0	3631.63
MW-67	10/01/92	3765.87	134.33	0	3631.54
MW-67	11/01/92	3765.87	134.76	0	3631.11
MW-67	12/01/92	3765.87	135.00	0	3630.87
MW-67	01/01/93	3765.87	135.10	0	3630.77
MW-67	02/01/93	3765.87	135.19	0	3630.68

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-67	03/01/93	3765.87	135.39	0	3630.48
MW-67	04/01/93	3765.87	135.37	0	3630.50
MW-67	05/01/93	3765.87	135.63	0	3630.24
MW-67	06/01/93	3765.87	135.58	0	3630.29
MW-67	07/01/93	3765.87	135.81	0	3630.06
MW-67	08/01/93	3765.87	135.69	0	3630.18
MW-67	09/01/93	3765.87	135.99	0	3629.88
MW-67	10/01/93	3765.87	136.04	0	3629.83
MW-67	11/01/93	3765.87	136.26	0	3629.61
MW-67	12/01/93	3765.87	136.31	0	3629.56
MW-67	01/01/94	3765.87	136.25	0	3629.62
MW-67	02/01/94	3765.87	137.16	0	3628.71
MW-67	03/01/94	3765.87	137.22	0	3628.65
MW-67	04/01/94	3765.87	137.31	0	3628.56
MW-67	05/01/94	3765.87	137.14	0	3628.73
MW-67	07/01/94	3765.87	136.82	0	3629.05
MW-67	08/01/94	3765.87	135.55	0	3630.32
MW-67	09/01/94	3765.87	136.58	0	3629.29
MW-67	10/01/94	3765.87	136.71	0	3629.16
MW-67	12/01/94	3765.87	137.89	0	3627.98
MW-67	01/01/95	3765.87	137.09	0	3628.78
MW-67	04/01/95	3765.87	137.29	0	3628.58
MW-67	07/01/95	3765.87	137.40	0	3628.47
MW-67	10/01/95	3765.87	137.54	0	3628.33
MW-67	01/19/96	3765.87	138.02	0	3627.85
MW-67	04/17/96	3765.87	138.13	0	3627.74
MW-67	07/16/96	3765.87	138.14	0	3627.73
MW-67	10/14/96	3765.87	137.53	0	3628.34
MW-67	02/04/97	3765.87	138.37	0	3627.50
MW-67	04/28/97	3765.87	138.64	0	3627.23
MW-67	07/15/97	3765.87	138.95	0	3626.92
MW-67	10/01/97	3765.87	140.50	0.8	3625.95
MW-67	10/09/97	3765.87	144.05	4.35	3624.99
MW-67	10/13/97	3765.87	139.98	0.67	3626.37
MW-67	10/21/97	3765.87	140.55	0.75	3625.86
MW-67	10/29/97	3765.87	140.54	0.83	3625.93
MW-67	11/04/97	3765.87	140.43	0.75	3625.98
MW-67	11/12/97	3765.87	140.52	0.87	3625.98
MW-67	11/19/97	3765.87	140.55	0.77	3625.88
MW-67	11/24/97	3765.87	140.70	0.95	3625.86
MW-67	12/10/97	3765.87	140.57	0.85	3625.92
MW-67	01/06/98	3765.87	139.76	0	3626.11
MW-67	01/15/98	3765.87	139.75	0	3626.12
MW-67	01/20/98	3765.87	141.43	0.9	3625.09
MW-67	01/28/98	3765.87	140.14	0.77	3626.29
MW-67	02/03/98	3765.87	141.33	0.73	3625.07
MW-67	02/10/98	3765.87	141.32	0	3624.55
MW-67	02/17/98	3765.87	141.81	0.44	3624.38
MW-67	02/25/98	3765.87	141.12	0	3624.75
MW-67	04/27/98	3765.87	141.13	0.65	3625.21
MW-67	05/28/98	3765.87	141.43	0	3624.44
MW-67	06/15/98	3765.87	141.49	0	3624.38
MW-67	10/10/98	3765.87	140.50	0.05	3625.40
MW-67	04/19/99	3765.87	140.72	0	3625.15
MW-67	01/05/00	3765.87	140.77	0.47	3625.44
MW-67	04/26/00	3765.87	141.72	0	3624.15
MW-67	09/27/00	3765.87	141.51	0	3624.36
MW-67	04/16/01	3765.87	141.54	0	3624.33
MW-67	10/29/01	3765.87	141.49	0	3624.38
MW-67	04/15/02	3765.87	141.67	0	3624.20
MW-67	10/14/02	3765.87	140.89	0	3624.98
MW-67	04/15/03	3765.87	141.34	0	3624.53
MW-67	10/14/03	3765.87	142.41	0	3623.46
MW-68	09/18/91	3797.83	166.68	0	3631.15
MW-68	10/22/91	3797.83	169.37	0	3628.46
MW-68	11/15/91	3797.83	167.30	0	3630.53
MW-68	10/14/97	3797.83	171.76	0	3626.07
MW-68	01/27/98	3797.83	173.22	1.99	3626.06
MW-68	06/17/98	3797.83	172.90	0.85	3625.55
MW-68	01/05/00	3797.83	173.17	0	3624.66
MW-68	04/26/00	3797.83	173.30	0.18	3624.66
MW-68	09/27/00	3797.83	173.72	0	3624.11
MW-68	04/16/01	3797.83	175.00	1.23	3623.73
MW-68	10/29/01	3797.83	174.42	0.56	3623.82
MW-68	04/15/02	3797.83	174.69	0.38	3623.42
MW-68	10/14/02	3797.83	172.68	0	3625.15
MW-68	04/15/03	3797.83	174.11	0.12	3623.81
MW-68	10/14/03	3797.83	174.71	0.03	3623.14
MW-70	09/18/91	3822.57	191.59	0	3630.98
MW-70	10/22/91	3822.57	191.68	0	3630.89
MW-70	11/15/91	3822.57	192.20	0	3630.37
MW-70	03/01/92	3822.57	192.74	0	3629.83

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-70	04/01/92	3822.57	192.62	0	3629.95
MW-70	05/01/92	3822.57	189.97	0	3632.60
MW-70	06/01/92	3822.57	188.42	0	3634.15
MW-70	07/01/92	3822.57	188.87	0	3633.70
MW-70	08/01/92	3822.57	189.54	0	3633.03
MW-70	09/01/92	3822.57	190.02	0	3632.55
MW-70	10/01/92	3822.57	190.48	0	3632.09
MW-70	11/01/92	3822.57	190.86	0	3631.71
MW-70	12/01/92	3822.57	191.17	0	3631.40
MW-70	01/01/93	3822.57	191.39	0	3631.18
MW-70	02/01/93	3822.57	191.54	0	3631.03
MW-70	03/01/93	3822.57	191.77	0	3630.80
MW-70	04/01/93	3822.57	191.80	0	3630.77
MW-70	05/01/93	3822.57	192.09	0	3630.48
MW-70	06/01/93	3822.57	192.18	0	3630.39
MW-70	07/01/93	3822.57	192.32	0	3630.25
MW-70	08/01/93	3822.57	192.30	0	3630.27
MW-70	09/01/93	3822.57	192.53	0	3630.04
MW-70	10/01/93	3822.57	192.65	0	3629.92
MW-70	11/01/93	3822.57	192.91	0	3629.66
MW-70	12/01/93	3822.57	192.96	0	3629.61
MW-70	01/01/94	3822.57	192.99	0	3629.58
MW-70	02/01/94	3822.57	194.02	0	3628.55
MW-70	03/01/94	3822.57	194.00	0	3628.57
MW-70	04/01/94	3822.57	193.19	0	3629.38
MW-70	05/01/94	3822.57	193.86	0	3628.71
MW-70	07/01/94	3822.57	193.59	0	3628.98
MW-70	08/01/94	3822.57	193.09	0	3629.48
MW-70	09/01/94	3822.57	193.17	0	3629.40
MW-70	10/01/94	3822.57	193.38	0	3629.19
MW-70	12/01/94	3822.57	194.58	0	3627.99
MW-70	01/01/95	3822.57	192.83	0	3629.74
MW-70	04/01/95	3822.57	194.11	0	3628.46
MW-70	07/01/95	3822.57	194.19	0	3628.38
MW-70	10/01/95	3822.57	194.19	0	3628.38
MW-70	01/16/96	3822.57	194.68	0	3627.89
MW-70	04/17/96	3822.57	194.94	0	3627.63
MW-70	07/15/96	3822.57	194.70	0	3627.87
MW-70	10/13/96	3822.57	193.98	0	3628.59
MW-70	02/03/97	3822.57	194.47	0	3628.10
MW-70	04/28/97	3822.57	195.01	0	3627.56
MW-70	07/14/97	3822.57	195.44	0	3627.13
MW-70	10/01/97	3822.57	196.20	0	3626.37
MW-70	10/13/97	3822.57	196.05	0	3626.52
MW-70	10/29/97	3822.57	196.24	0.01	3626.33
MW-70	11/04/97	3822.57	196.35	0	3626.22
MW-70	11/12/97	3822.57	196.34	0	3626.23
MW-70	11/19/97	3822.57	196.36	0.01	3626.21
MW-70	11/24/97	3822.57	196.36	0	3626.21
MW-70	12/10/97	3822.57	196.47	0	3626.10
MW-70	01/27/98	3822.57	196.22	0	3626.35
MW-70	02/25/98	3822.57	196.45	0	3626.12
MW-70	04/27/98	3822.57	196.48	0	3626.09
MW-70	05/28/98	3822.57	196.91	0	3625.66
MW-70	06/15/98	3822.57	196.74	0	3625.83
MW-70	10/09/98	3822.57	197.27	0	3625.30
MW-70	01/27/99	3822.57	199.24	0	3623.33
MW-70	04/19/99	3822.57	197.40	0	3625.17
MW-70	01/05/00	3822.57	197.73	0	3624.84
MW-70	04/26/00	3822.57	197.71	0	3624.86
MW-70	09/27/00	3822.57	198.02	0	3624.55
MW-70	04/16/01	3822.57	198.34	0	3624.23
MW-70	10/29/01	3822.57	198.30	0	3624.27
MW-70	04/15/02	3822.57	198.85	0	3623.72
MW-70	10/14/02	3822.57	196.95	0	3625.62
MW-70	04/15/03	3822.57	198.12	0	3624.45
MW-70	10/14/03	3822.57	199.14	0	3623.43
MW-71	10/01/93	3778.05	149.68	0	3628.37
MW-71	11/01/93	3778.05	149.90	0	3628.15
MW-71	12/01/93	3778.05	149.93	0	3628.12
MW-71	01/01/94	3778.05	149.92	0	3628.13
MW-71	02/01/94	3778.05	150.94	0	3627.11
MW-71	03/01/94	3778.05	150.90	0	3627.15
MW-71	04/01/94	3778.05	149.98	0	3628.07
MW-71	05/01/94	3778.05	150.64	0	3627.41
MW-71	07/01/94	3778.05	150.37	0	3627.68
MW-71	08/01/94	3778.05	149.35	0	3628.70
MW-71	09/01/94	3778.05	150.19	0	3627.86
MW-71	10/01/94	3778.05	150.41	0	3627.64
MW-71	12/01/94	3778.05	151.41	0	3626.64
MW-71	01/01/95	3778.05	150.65	0	3627.40
MW-71	04/01/95	3778.05	150.88	0	3627.17
MW-71	07/01/95	3778.05	150.84	0	3627.21

Appendix A
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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-71	10/01/95	3778.05	151.15	0	3626.90
MW-71	01/16/96	3778.05	151.36	0	3626.69
MW-71	04/17/96	3778.05	151.74	0	3626.31
MW-71	07/16/96	3778.05	151.69	0	3626.36
MW-71	10/13/96	3778.05	149.72	0	3628.33
MW-71	02/04/97	3778.05	152.39	0	3625.66
MW-71	04/28/97	3778.05	152.52	0	3625.53
MW-71	07/14/97	3778.05	152.86	0	3625.19
MW-71	10/01/97	3778.05	153.40	0	3624.65
MW-71	10/09/97	3778.05	153.41	0.01	3624.64
MW-71	10/13/97	3778.05	153.39	0	3624.66
MW-71	01/28/98	3778.05	153.47	0	3624.58
MW-71	04/27/98	3778.05	153.91	0	3624.14
MW-71	05/28/98	3778.05	153.86	0	3624.19
MW-71	06/15/98	3778.05	153.88	0	3624.17
MW-71	10/10/98	3778.05	154.34	0	3623.71
MW-71	01/27/99	3778.05	154.50	0	3623.55
MW-71	04/19/99	3778.05	154.56	0	3623.49
MW-71	01/05/00	3778.05	154.66	0	3623.39
MW-71	04/26/00	3778.05	155.04	0	3623.01
MW-71	09/27/00	3778.05	155.15	0	3622.90
MW-71	04/16/01	3778.05	155.01	0	3623.04
MW-71	10/29/01	3778.05	155.26	0	3622.79
MW-71	04/15/02	3778.05	155.50	0	3622.55
MW-71	10/14/02	3778.05	154.39	0	3623.66
MW-71	04/15/03	3778.05	155.02	0	3623.03
MW-71	10/14/03	3778.05	155.85	0	3622.20
MW-72	10/01/93	3819.32	190.55	0.5	3629.14
MW-72	11/01/93	3819.32	189.91	0	3629.41
MW-72	12/01/93	3819.32	196.73	3.72	3625.30
MW-72	01/16/96	3819.32	216.76	16.5	3614.60
MW-72	04/17/96	3819.32	214.60	16.35	3616.65
MW-72	07/16/96	3819.32	201.95	11.85	3626.02
MW-72	10/14/96	3819.32	211.05	5.84	3612.53
MW-72	02/04/97	3819.32	213.65	1.22	3606.56
MW-72	04/29/97	3819.32	197.65	2.72	3623.65
MW-72	07/15/97	3819.32	212.06	6.71	3612.15
MW-72	10/09/97	3819.32	228.35	0	3590.97
MW-72	10/14/97	3819.32	229.54	0	3589.78
MW-72	10/29/97	3819.32	229.55	0	3589.77
MW-72	11/04/97	3819.32	227.75	0	3591.57
MW-72	11/12/97	3819.32	227.83	0	3591.49
MW-72	11/19/97	3819.32	206.30	0.26	3613.20
MW-72	11/24/97	3819.32	227.73	0	3591.59
MW-72	12/10/97	3819.32	228.74	0	3590.58
MW-72	01/06/98	3819.32	228.54	0.02	3590.79
MW-72	01/15/98	3819.32	228.50	0	3590.82
MW-72	01/20/98	3819.32	228.92	0	3590.40
MW-72	02/03/98	3819.32	220.23	0	3599.09
MW-72	02/10/98	3819.32	224.93	0	3594.39
MW-72	02/17/98	3819.32	224.27	0	3595.05
MW-72	02/25/98	3819.32	224.67	0	3594.65
MW-72	04/27/98	3819.32	216.73	0	3602.59
MW-72	05/28/98	3819.32	229.14	0	3590.18
MW-72	06/16/98	3819.32	222.68	0	3596.64
MW-72	10/11/98	3819.32	196.22	0	3623.10
MW-72	01/27/99	3819.32	229.90	0.01	3589.43
MW-72	04/19/99	3819.32	229.80	0	3589.52
MW-72	01/05/00	3819.32	209.27	0	3610.05
MW-72	04/26/00	3819.32	196.20	0	3623.12
MW-72	09/27/00	3819.32	211.13	0	3608.19
MW-72	04/16/01	3819.32	211.42	0	3607.90
MW-72	10/29/01	3819.32	216.42	0	3602.90
MW-72	04/15/02	3819.32	197.90	0	3621.42
MW-72	10/14/02	3819.32	197.35	0.68	3622.47
MW-72	04/15/03	3819.32	198.40	0.60	3621.36
MW-72	10/14/03	3819.32	198.42	0.1	3620.97
MW-73	12/01/94	3820.09	202.90	6.12	3621.65
MW-73	01/01/95	3820.09	195.75	1.68	3625.57
MW-73	04/01/95	3820.09	207.07	8.52	3619.23
MW-73	07/01/95	3820.09	204.48	6.72	3620.51
MW-73	10/01/95	3820.09	192.35	0	3627.74
MW-73	01/16/96	3820.09	192.66	0	3627.43
MW-73	04/17/96	3820.09	204.10	1.86	3617.34
MW-73	07/16/96	3820.09	193.91	1.61	3627.35
MW-73	10/14/96	3820.09	191.42	0.01	3628.67
MW-73	02/04/97	3820.09	193.00	0	3627.09
MW-73	04/29/97	3820.09	194.09	0.68	3626.49
MW-73	07/15/97	3820.09	193.70	0	3626.39
MW-73	09/30/97	3820.09	195.00	0.9	3625.74
MW-73	10/09/97	3820.09	194.92	0.72	3625.69
MW-73	10/14/97	3820.09	195.15	0	3624.94

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-73	01/28/98	3820.09	194.50	0	3625.59
MW-73	04/27/98	3820.09	194.40	0	3625.69
MW-73	05/28/98	3820.09	194.66	0	3625.43
MW-73	06/16/98	3820.09	194.67	0	3625.42
MW-73	10/10/98	3820.09	194.47	0	3625.62
MW-73	01/27/99	3820.09	195.14	0	3624.95
MW-73	04/19/99	3820.09	195.80	0	3624.29
MW-73	01/05/00	3820.09	195.89	0	3624.20
MW-73	04/26/00	3820.09	195.79	0	3624.30
MW-73	09/27/00	3820.09	196.13	0	3623.96
MW-73	04/16/01	3820.09	196.15	0	3623.94
MW-73	10/29/01	3820.09	196.45	0	3623.64
MW-73	04/15/02	3820.09	196.24	0	3623.85
MW-73	10/14/02	3820.09	195.09	0	3625.00
MW-73	04/15/03	3820.09	195.70	0	3624.39
MW-73	10/14/03	3820.09	196.86	0	3623.23
MW-74	12/01/94	3820.82	192.31	0	3628.51
MW-74	01/01/95	3820.82	193.88	1.44	3627.99
MW-74	04/01/95	3820.82	189.31	0.48	3631.86
MW-74	07/01/95	3820.82	188.07	0	3632.75
MW-74	01/16/96	3820.82	188.65	0	3632.17
MW-74	04/17/96	3820.82	187.30	0	3633.52
MW-74	07/16/96	3820.82	186.52	0	3634.30
MW-74	10/14/96	3820.82	178.77	0	3642.05
MW-74	02/04/97	3820.82	182.50	0	3638.32
MW-74	04/29/97	3820.82	183.92	0	3636.90
MW-74	07/15/97	3820.82	183.74	0	3637.08
MW-74	09/30/97	3820.82	185.30	0	3635.52
MW-74	10/09/97	3820.82	185.25	0	3635.57
MW-74	10/14/97	3820.82	185.77	0	3635.05
MW-74	01/28/98	3820.82	184.15	0	3636.67
MW-74	04/27/98	3820.82	184.44	0	3636.38
MW-74	05/28/98	3820.82	134.12	0	3686.70
MW-74	06/16/98	3820.82	187.47	0	3633.35
MW-74	10/10/98	3820.82	189.19	0	3631.63
MW-74	01/27/99	3820.82	186.50	0	3634.32
MW-74	04/19/99	3820.82	133.90	0	3686.92
MW-74	01/05/00	3820.82	189.39	0	3631.43
MW-74	04/26/00	3820.82	196.45	0	3624.37
MW-74	09/27/00	3820.82	197.29	0	3623.53
MW-74	04/16/01	3820.82	197.57	0	3623.25
MW-74	10/29/01	3820.82	196.91	0	3623.91
MW-74	04/15/02	3820.82	197.27	0	3623.55
MW-74	10/14/02	3820.82	196.32	0.25	3624.68
MW-74	04/15/03	3820.82	196.72	0	3624.10
MW-74	10/14/03	3820.82	197.60	0	3623.22
MW-75	12/01/94	3816.12	228.96	23.04	3603.98
MW-75	01/01/95	3816.12	209.93	12.72	3615.47
MW-75	04/01/95	3816.12	251.13	35.4	3590.83
MW-75	07/01/95	3816.12	295.32	59.52	3564.24
MW-75	01/18/96	3816.12	197.10	3.1	3621.28
MW-75	04/17/96	3816.12	189.17	0.04	3626.97
MW-75	07/16/96	3816.12	190.40	1.76	3627.00
MW-75	10/14/96	3816.12	190.01	1.79	3627.41
MW-75	02/04/97	3816.12	193.45	0	3622.67
MW-75	04/29/97	3816.12	200.64	3.34	3617.91
MW-75	07/15/97	3816.12	200.95	6.17	3619.67
MW-75	10/09/97	3816.12	200.87	4.59	3618.60
MW-75	10/14/97	3816.12	200.86	2.76	3617.27
MW-75	10/29/97	3816.12	200.62	0.54	3615.89
MW-75	11/04/97	3816.12	200.76	3.52	3617.92
MW-75	11/12/97	3816.12	196.10	0	3620.02
MW-75	11/19/97	3816.12	199.10	2.75	3619.02
MW-75	11/24/97	3816.12	200.42	5.57	3619.76
MW-75	12/10/97	3816.12	195.43	0	3620.69
MW-75	01/06/98	3816.12	214.82	0	3601.30
MW-75	01/15/98	3816.12	214.80	0	3601.32
MW-75	01/20/98	3816.12	200.95	0	3615.17
MW-75	02/03/98	3816.12	201.20	1.9	3616.30
MW-75	02/10/98	3816.12	205.10	4.5	3614.30
MW-75	02/17/98	3816.12	200.77	0.95	3616.04
MW-75	02/25/98	3816.12	203.15	2.15	3614.53
MW-75	04/27/98	3816.12	200.72	8.77	3621.80
MW-75	05/28/98	3816.12	201.72	2.7	3616.37
MW-75	06/16/98	3816.12	205.82	0	3610.30
MW-75	10/11/98	3816.12	192.53	3.8	3626.36
MW-75	01/27/99	3816.14	201.89	0.26	3614.44
MW-75	04/19/99	3816.14	207.70	0	3608.44
MW-75	01/05/00	3816.14	200.59	4.47	3618.81
MW-75	04/26/00	3816.12	194.98	0	3621.14
MW-75	09/27/00	3816.12	195.18	0	3620.94
MW-75	04/16/01	3816.12	204.02	0	3612.10

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Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-75	10/29/01	3816.12	219.07	0	3597.05
MW-75	04/15/02	3816.12	195.82	0	3620.30
MW-75	10/14/02	3816.12	194.70	0	3621.42
MW-75	04/15/03	3816.12	195.68	0	3620.44
MW-75	10/14/03	3816.12	196.15	0	3619.97
MW-76	12/01/94	3796.01	167.36	0	3628.65
MW-76	01/01/95	3796.01	169.05	2.04	3628.45
MW-76	07/01/95	3796.01	180.14	6.84	3620.86
MW-76	10/01/95	3796.01	168.22	0.41	3628.09
MW-76	01/16/96	3796.01	168.85	0.95	3627.85
MW-76	04/17/96	3796.01	169.59	0.99	3627.14
MW-76	07/16/96	3796.01	167.04	0	3628.97
MW-76	10/14/96	3796.01	171.86	0	3624.15
MW-76	02/04/97	3796.01	169.32	0	3626.69
MW-76	04/29/97	3796.01	174.30	0	3621.71
MW-76	07/15/97	3796.01	175.10	0	3620.91
MW-76	09/30/97	3796.01	176.20	0	3619.81
MW-76	10/14/97	3796.01	173.57	0	3622.44
MW-76	01/28/98	3796.01	173.10	0	3622.91
MW-76	04/27/98	3796.01	175.25	0	3620.76
MW-76	05/28/98	3796.01	173.68	0	3622.33
MW-76	06/16/98	3796.01	175.25	0	3620.76
MW-76	01/27/99	3796.01	177.03	1	3619.71
MW-76	04/26/00	3796.01	NR	--	--
MW-76	09/27/00	3796.01	NR	--	--
MW-76	04/16/01	3796.01	NR	--	--
MW-76	10/29/01	3796.01	NR	--	--
MW-76	04/15/02	3796.01	NR	--	--
MW-76	10/14/02	3796.01	NR	--	--
MW-76	04/15/03	3796.01	NG	--	--
MW-76	10/14/03	3796.01	--	--	--
MW-81	10/01/95	3817.03	195.77	2.74	3623.26
MW-81	01/16/96	3817.03	199.04	4.29	3621.12
MW-81	04/17/96	3817.03	204.35	9.95	3619.94
MW-81	07/16/96	3817.03	204.26	9.37	3619.61
MW-81	10/13/96	3817.03	202.11	8.49	3621.11
MW-81	02/04/97	3817.03	197.25	2.11	3621.32
MW-81	04/28/97	3817.03	204.40	9.15	3619.30
MW-81	07/14/97	3817.03	196.19	1.45	3621.89
MW-81	10/09/97	3817.03	200.02	0.02	3617.02
MW-81	10/14/97	3817.03	200.96	0.06	3616.11
MW-81	10/29/97	3817.03	202.44	1.44	3615.64
MW-81	11/04/97	3817.03	200.92	0	3616.11
MW-81	11/12/97	3817.03	200.95	0.25	3616.26
MW-81	11/19/97	3817.03	200.94	0.01	3616.09
MW-81	11/24/97	3817.03	200.81	0	3616.22
MW-81	12/10/97	3817.03	200.85	0	3616.18
MW-81	01/06/98	3817.03	199.35	0	3617.68
MW-81	01/15/98	3817.03	199.30	0	3617.73
MW-81	01/20/98	3817.03	200.89	0.79	3616.71
MW-81	01/27/98	3817.03	200.14	0.89	3617.53
MW-81	02/03/98	3817.03	200.88	0.58	3616.57
MW-81	02/10/98	3817.03	206.74	1.64	3611.48
MW-81	02/17/98	3817.03	218.70	12.08	3607.14
MW-81	02/25/98	3817.03	217.41	11.41	3607.94
MW-81	04/27/98	3817.03	197.05	0	3619.98
MW-81	05/28/98	3817.03	192.28	0	3624.75
MW-81	06/15/98	3817.03	197.58	0	3619.45
MW-81	10/11/98	3817.03	193.23	0	3623.80
MW-81	01/27/99	3817.03	200.12	0	3616.91
MW-81	04/19/99	3817.03	200.84	0	3616.19
MW-81	01/05/00	3817.03	199.38	0	3617.65
MW-81	04/26/00	3817.03	201.35	0	3615.68
MW-81	09/27/00	3817.03	202.99	0	3614.04
MW-81	04/16/01	3817.03	201.94	0	3615.09
MW-81	10/29/01	3817.03	204.69	0	3609.04
MW-81	04/15/02	3817.03	193.94	0	3623.09
MW-81	10/14/02	3817.03	192.80	0	3624.23
MW-81	04/15/03	3817.03	193.41	0	3623.62
MW-81	10/14/03	3817.03	194.42	0	3622.61
MW-82	10/01/95	3825.07	196.65	0	3628.42
MW-82	01/18/96	3825.07	209.62	0	3615.45
MW-82	04/17/96	3825.07	209.12	0	3615.95
MW-82	07/16/96	3825.07	222.80	0	3602.27
MW-82	10/14/96	3825.07	196.33	0.02	3628.75
MW-82	02/04/97	3825.07	223.66	0	3601.41
MW-82	04/28/97	3825.07	249.21	0	3575.86
MW-82	07/15/97	3825.07	248.90	0	3576.17
MW-82	09/30/97	3825.07	249.20	0	3575.87
MW-82	10/09/97	3825.07	197.07	0	3628.00
MW-82	10/14/97	3825.07	229.01	0	3596.06

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-82	10/29/97	3825.07	200.15	0	3624.92
MW-82	11/04/97	3825.07	209.26	0	3615.81
MW-82	11/12/97	3825.07	211.36	2.62	3615.62
MW-82	11/19/97	3825.07	213.86	5.28	3615.06
MW-82	11/24/97	3825.07	213.96	0	3611.11
MW-82	12/10/97	3825.07	212.95	0	3612.12
MW-82	02/25/98	3825.07	245.20	0	3579.87
MW-82	04/27/98	3825.07	235.62	0	3589.45
MW-82	05/28/98	3825.07	210.13	0	3614.94
MW-82	06/16/98	3825.07	249.20	0	3575.87
MW-82	10/11/98	3825.07	199.81	0	3625.26
MW-82	01/27/99	3825.07	250.24	0	3574.83
MW-82	04/19/99	3825.07	199.99	0	3625.08
MW-82	01/05/00	3825.07	199.67	0	3625.40
MW-82	04/26/00	3825.07	190.95	0	3634.12
MW-82	09/27/00	3825.07	202.05	1.63	3624.21
MW-82	04/16/01	3825.07	200.40	0	3624.67
MW-82	10/29/01	3825.07	201.71	0	3623.36
MW-82	04/15/02	3825.07	201.38	0	3623.69
MW-82	10/14/02	3825.07	201.15	1.68	3625.15
MW-82	04/15/03	3825.07	201.71	1.65	3624.56
MW-82	10/14/03	3825.07	201.97	0.67	3623.59
MW-83	10/01/95	3794.12	169.47	1.67	3625.87
MW-83	01/18/96	3794.12	189.30	16.8	3617.08
MW-83	04/17/96	3794.12	179.40	0.2	3614.86
MW-83	07/16/96	3794.12	176.36	0.56	3618.16
MW-83	10/14/96	3794.12	176.25	0.18	3618.00
MW-83	02/04/97	3794.12	178.77	0	3615.35
MW-83	04/28/97	3794.12	179.41	0	3614.71
MW-83	07/15/97	3794.12	168.18	1.62	3627.12
MW-83	09/30/97	3794.12	202.70	0	3591.42
MW-83	10/09/97	3794.12	202.70	0	3591.42
MW-83	10/14/97	3794.12	200.25	0	3593.87
MW-83	10/21/97	3794.12	202.55	0	3591.57
MW-83	10/29/97	3794.12	200.20	0	3593.92
MW-83	11/04/97	3794.12	200.17	0	3593.95
MW-83	11/12/97	3794.12	200.20	0	3593.92
MW-83	11/19/97	3794.12	194.44	0.58	3600.10
MW-83	11/24/97	3794.12	193.52	0	3600.60
MW-83	12/10/97	3794.12	187.51	0	3606.61
MW-83	01/28/98	3794.12	170.53	0	3623.59
MW-83	02/25/98	3794.12	182.22	4.87	3615.45
MW-83	04/27/98	3794.12	188.78	0	3605.34
MW-83	05/28/98	3794.12	170.14	0	3623.98
MW-83	06/16/98	3794.12	184.32	9.51	3616.74
MW-83	10/11/98	3794.12	169.96	0	3624.16
MW-83	01/27/99	3794.12	189.10	0	3605.02
MW-83	04/19/99	3794.12	124.09	0	3670.03
MW-83	01/05/00	3794.12	191.08	0	3603.04
MW-83	04/26/00	3794.12	170.53	0	3623.59
MW-83	09/27/00	3794.12	196.19	0	3597.93
MW-83	04/16/01	3794.12	195.97	0	3598.15
MW-83	10/29/01	3794.12	179.35	0	3614.77
MW-83	04/15/02	3794.12	171.21	0	3622.91
MW-83	10/14/02	3794.12	170.19	0	3623.93
MW-84	07/16/96	3759.60	131.50	0.39	3628.38
MW-84	10/14/96	3759.60	131.79	1.05	3628.57
MW-84	02/04/97	3759.60	132.84	1.29	3627.70
MW-84	04/29/97	3759.60	133.64	1.79	3627.26
MW-84	07/15/97	3759.60	133.89	1.9	3627.09
MW-84	09/30/97	3759.60	134.90	2.3	3626.37
MW-84	10/14/97	3759.60	136.64	3.94	3625.83
MW-84	10/21/97	3759.60	137.06	4.32	3625.69
MW-84	10/29/97	3759.60	133.35	0.72	3626.77
MW-84	11/04/97	3759.60	133.72	0	3625.88
MW-84	11/12/97	3759.60	132.70	0.05	3626.93
MW-84	11/19/97	3759.60	136.38	3.66	3625.89
MW-84	11/24/97	3759.60	136.00	3.23	3625.95
MW-84	12/10/97	3759.60	134.60	1.65	3626.20
MW-84	01/06/98	3759.60	133.48	0.08	3626.17
MW-84	01/15/98	3759.60	133.30	0	3626.30
MW-84	01/20/98	3759.60	147.14	6.91	3617.50
MW-84	01/28/98	3759.60	133.96	0.46	3625.97
MW-84	02/03/98	3759.60	133.89	0.13	3625.80
MW-84	02/10/98	3759.60	133.70	0.01	3625.90
MW-84	02/17/98	3759.60	139.13	2.86	3622.55
MW-84	02/25/98	3759.60	134.69	0.23	3625.07
MW-84	04/27/98	3759.60	135.34	0.89	3624.90
MW-84	05/28/98	3759.60	134.40	0	3625.20
MW-84	06/16/98	3759.60	134.94	0.4	3624.95
MW-84	10/11/98	3759.60	134.10	0	3625.50
MW-84	01/27/99	3759.60	135.21	0	3624.39

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-84	04/19/99	3759.60	136.05	0.15	3623.66
MW-84	01/05/00	3759.60	137.31	0	3622.29
MW-84	04/26/00	3759.60	137.18	0	3622.42
MW-84	09/27/00	3759.60	137.24	0	3622.36
MW-84	04/16/01	3759.60	139.05	2.04	3622.04
MW-84	10/29/01	3759.60	137.91	0	3621.69
MW-84	04/15/02	3759.60	137.79	0.42	3622.12
MW-84	10/14/02	3759.60	136.14	0	3623.46
MW-84	04/03/04	3759.60	136.77	0	3622.83
MW-84	10/04/04	3759.60	137.81	0	3621.79
MW-85	07/16/96	3824.93	200.62	3.64	3626.96
MW-85	10/13/96	3824.93	201.10	4.86	3627.37
MW-85	02/04/97	3824.93	200.85	3.34	3626.51
MW-85	04/29/97	3824.93	199.89	1.19	3625.90
MW-85	07/14/97	3824.93	199.39	0	3625.54
MW-85	10/09/97	3824.93	200.15	0.15	3624.88
MW-85	10/14/97	3824.93	200.35	0	3624.58
MW-85	10/29/97	3824.93	199.31	0	3625.62
MW-85	11/04/97	3824.93	200.16	0.1	3624.84
MW-85	11/12/97	3824.93	200.00	0	3624.93
MW-85	11/19/97	3824.93	199.28	0.01	3625.65
MW-85	11/24/97	3824.93	200.07	0	3624.86
MW-85	12/10/97	3824.93	200.12	0	3624.81
MW-85	01/06/98	3824.93	201.37	0.6	3623.99
MW-85	01/15/98	3824.93	201.30	0.55	3624.03
MW-85	01/20/98	3824.93	207.80	4.23	3620.21
MW-85	01/27/98	3824.93	201.62	1.82	3624.63
MW-85	02/03/98	3824.93	201.68	0.79	3623.82
MW-85	02/10/98	3824.93	201.36	0.42	3623.87
MW-85	02/17/98	3824.93	201.78	0.73	3623.68
MW-85	02/25/98	3824.93	200.95	0.2	3624.12
MW-85	04/27/98	3824.93	200.91	0.57	3624.43
MW-85	05/28/98	3824.93	203.78	1.02	3621.89
MW-85	06/16/98	3824.93	201.29	0.55	3624.04
MW-85	10/11/98	3824.93	201.32	1.27	3624.53
MW-85	01/27/99	3824.93	203.01	0.49	3622.28
MW-85	04/19/99	3824.93	202.58	0	3622.35
MW-85	01/05/00	3824.93	200.79	0	3624.14
MW-85	04/26/00	3824.93	213.40	10.73	3619.36
MW-85	09/27/00	3824.93	208.62	5.31	3620.19
MW-85	04/16/01	3824.93	202.99	0	3621.94
MW-85	10/29/01	3824.93	205.15	0	3623.23
MW-85	04/15/02	3824.93	204.28	2.67	3622.60
MW-85	10/14/02	3824.93	202.96	2.58	3623.85
MW-85	04/15/03	3824.93	201.28	0	3623.65
MW-85	10/14/03	3824.93	202.46	0	3622.47
MW-86	10/14/96	3823.99	193.32	0	3630.67
MW-86	02/04/97	3823.99	190.99	0	3633.00
MW-86	04/28/97	3823.99	197.37	0	3626.62
MW-86	07/14/97	3823.99	199.78	0	3624.21
MW-86	09/30/97	3823.99	188.10	0	3635.89
MW-86	10/09/97	3823.99	198.76	0	3625.23
MW-86	10/14/97	3823.99	196.27	0	3627.72
MW-86	01/27/98	3823.99	205.50	0	3618.49
MW-86	04/27/98	3823.99	203.08	0	3620.91
MW-86	05/28/98	3823.99	199.71	0	3624.28
MW-86	06/16/98	3823.99	203.43	0	3620.56
MW-86	10/11/98	3823.99	198.11	0	3625.88
MW-86	01/27/99	3823.99	222.50	0	3601.49
MW-86	04/19/99	3823.99	201.13	0	3622.86
MW-86	01/05/00	3823.99	211.12	0	3612.87
MW-86	04/26/00	3823.99	212.45	0	3611.54
MW-86	09/27/00	3823.99	202.63	0	3621.36
MW-86	04/16/01	3823.99	222.65	0	3601.34
MW-86	10/29/01	3823.99	216.58	0	3607.41
MW-86	04/15/02	3823.99	201.78	0	3622.21
MW-86	10/14/02	3823.99	D	--	--
MW-86	04/15/03	3823.99	200.08	0	3623.91
MW-86	10/14/03	3823.99	201.47	0	3622.52
MW-87	08/01/96	3740.50	113.11	0	3627.39
MW-87	10/14/96	3740.50	112.19	0	3628.31
MW-87	02/04/97	3740.50	112.94	0	3627.56
MW-87	04/28/97	3740.50	113.21	0	3627.29
MW-87	07/14/97	3740.50	113.83	0	3626.67
MW-87	10/09/97	3740.50	114.20	0	3626.30
MW-87	10/13/97	3740.50	114.43	0	3626.07
MW-87	10/29/97	3740.50	113.95	0	3626.55
MW-87	11/04/97	3740.50	114.30	0	3626.20
MW-87	11/12/97	3740.50	114.22	0	3626.28
MW-87	11/19/97	3740.50	114.35	0	3626.15
MW-87	11/24/97	3740.50	114.25	0	3626.25

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-87	12/10/97	3740.50	114.32	0	3626.18
MW-87	01/28/98	3740.50	114.07	0	3626.43
MW-87	02/25/98	3740.50	114.35	0	3626.15
MW-87	04/27/98	3740.50	114.52	0	3625.98
MW-87	05/28/98	3740.50	105.30	0	3635.20
MW-87	06/15/98	3740.50	114.52	0	3625.98
MW-87	10/10/98	3740.50	114.96	0	3625.54
MW-87	01/27/99	3740.50	115.08	0	3625.42
MW-87	04/19/99	3740.50	115.15	0	3625.35
MW-87	01/05/00	3740.50	115.32	0	3625.18
MW-87	04/26/00	3740.50	115.50	0	3625.00
MW-87	09/27/00	3740.50	115.82	0	3624.68
MW-87	04/16/01	3740.50	115.77	0	3624.73
MW-87	10/29/01	3740.50	116.25	0	3624.25
MW-87	04/15/02	3740.50	116.27	0	3624.23
MW-87	10/14/02	3740.50	115.32	0	3625.18
MW-87	04/15/03	3740.50	118.01	0	3622.49
MW-87	10/14/03	3740.50	116.76	0	3623.74
MW-87A	08/01/96	3739.53	124.91	0	3614.62
MW-87A	10/14/96	3739.53	104.75	0	3634.78
MW-87A	02/04/97	3739.53	103.69	0	3635.84
MW-87A	04/28/97	3739.53	104.43	0	3635.10
MW-87A	07/14/97	3739.53	104.92	0	3634.61
MW-87A	10/13/97	3739.53	104.44	0	3635.09
MW-87A	01/28/98	3739.53	104.79	0	3634.74
MW-87A	04/27/98	3739.53	105.21	0	3634.32
MW-87A	05/28/98	3739.53	114.02	0	3625.51
MW-87A	06/15/98	3739.53	105.47	0	3634.06
MW-87A	10/10/98	3739.53	105.99	0	3633.54
MW-87A	01/27/99	3739.53	105.98	0	3633.55
MW-87A	04/19/99	3739.53	107.30	0	3632.23
MW-87A	01/05/00	3739.53	106.05	0	3633.48
MW-87A	04/26/00	3739.53	105.26	0	3634.27
MW-87A	09/27/00	3739.53	107.61	0	3631.92
MW-87A	04/16/01	3739.53	107.62	0	3631.91
MW-87A	10/29/01	3739.53	108.81	0	3630.72
MW-87A	04/15/02	3739.53	109.11	0	3630.42
MW-87A	10/14/02	3739.53	107.07	0	3632.46
MW-87A	04/15/03	3739.53	107.99	0	3631.54
MW-87A	10/14/03	3739.53	107.12	0	3632.41
MW-88	08/01/96	3789.70	163.59	0	3626.11
MW-88	10/13/96	3789.70	162.22	0	3627.48
MW-88	02/04/97	3789.70	163.38	0	3626.32
MW-88	04/28/97	3789.70	163.54	0	3626.16
MW-88	07/14/97	3789.70	163.84	0	3625.86
MW-88	10/01/97	3789.70	164.40	0	3625.30
MW-88	10/09/97	3789.70	164.38	0	3625.32
MW-88	10/13/97	3789.70	164.34	0	3625.36
MW-88	01/27/98	3789.70	164.41	0	3625.29
MW-88	04/27/98	3789.70	164.84	0	3624.86
MW-88	05/28/98	3789.70	164.00	0	3625.70
MW-88	06/15/98	3789.70	164.87	0	3624.83
MW-88	10/10/98	3789.70	165.38	0	3624.32
MW-88	01/27/99	3789.70	165.49	0	3624.21
MW-88	04/19/99	3789.70	165.54	0	3624.16
MW-88	01/05/00	3789.70	165.62	0	3624.08
MW-88	04/26/00	3789.70	165.87	0	3623.83
MW-88	09/27/00	3789.70	166.25	0	3623.45
MW-88	04/16/01	3789.70	166.21	0	3623.49
MW-88	10/29/01	3789.70	166.49	0	3623.21
MW-88	04/15/02	3789.70	166.53	0	3623.17
MW-88	10/14/02	3789.70	165.52	0	3624.18
MW-88	04/15/03	3789.70	165.98	0	3623.72
MW-88	10/14/03	3789.70	166.89	0	3622.81
MW-89	08/01/96	3827.68	201.41	0	3626.27
MW-89	10/14/96	3827.68	199.95	0	3627.73
MW-89	02/04/97	3827.68	201.39	0	3626.29
MW-89	04/28/97	3827.68	201.67	0	3626.01
MW-89	07/14/97	3827.68	201.94	0	3625.74
MW-89	10/01/97	3827.68	202.80	0	3624.88
MW-89	10/09/97	3827.68	202.70	0	3624.98
MW-89	10/13/97	3827.68	202.70	0	3624.98
MW-89	01/27/98	3827.68	202.82	0	3624.86
MW-89	04/27/98	3827.68	203.04	0	3624.64
MW-89	05/28/98	3827.68	203.19	0	3624.49
MW-89	06/15/98	3827.68	203.27	0	3624.41
MW-89	10/10/98	3827.68	203.83	0	3623.85
MW-89	01/27/99	3827.68	204.12	0	3623.56
MW-89	04/19/99	3827.68	204.12	0	3623.56
MW-89	01/05/00	3827.68	204.47	0	3623.21
MW-89	04/26/00	3827.68	204.43	0	3623.25

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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-89	09/27/00	3827.68	204.70	0	3622.98
MW-89	04/16/01	3827.68	204.55	0	3623.13
MW-89	10/29/01	3827.68	204.88	0	3622.80
MW-89	04/15/02	3827.68	204.81	0	3622.87
MW-89	10/14/02	3827.68	203.53	0	3624.15
MW-89	04/15/03	3827.68	204.18	0	3623.50
MW-89	10/14/03	3827.68	205.35	0	3622.33
MW-94	07/15/96	3821.48	194.15	0	3627.33
MW-94	10/13/96	3821.48	196.21	0	3625.27
MW-94	02/04/97	3821.48	197.60	0	3623.88
MW-94	07/14/97	3821.48	198.65	0	3622.83
MW-94	09/30/97	3821.48	199.70	0	3621.78
MW-94	10/09/97	3821.48	196.04	0	3625.44
MW-94	10/14/97	3821.48	195.95	0	3625.53
MW-94	01/27/98	3821.48	195.89	0	3625.59
MW-94	04/27/98	3821.48	196.20	0	3625.28
MW-94	05/28/98	3821.48	196.35	0	3625.13
MW-94	06/16/98	3821.48	196.42	0	3625.06
MW-94	10/10/98	3821.48	196.91	0	3624.57
MW-94	01/27/99	3821.48	197.28	0	3624.20
MW-94	04/19/99	3821.48	197.18	0	3624.30
MW-94	01/05/00	3821.48	197.37	0	3624.11
MW-94	04/26/00	3821.48	197.46	0	3624.02
MW-94	09/27/00	3821.48	197.85	0	3623.63
MW-94	04/16/01	3821.48	197.75	0	3623.73
MW-94	10/29/01	3821.48	198.02	0	3623.46
MW-94	04/15/02	3821.48	198.17	0	3623.31
MW-94	10/14/02	3821.48	196.67	0	3624.81
MW-94	04/15/03	3821.48	197.38	0	3624.10
MW-94	10/14/03	3821.48	188.49	0	3632.99
MW-95	04/29/97	3746.26	118.48	0	3627.78
MW-95	07/15/97	3746.26	118.59	0	3627.67
MW-95	10/14/97	3746.26	119.30	0	3626.96
MW-95	10/29/97	3746.26	119.31	0	3626.95
MW-95	11/04/97	3746.26	119.35	0	3626.91
MW-95	11/12/97	3746.26	119.30	0	3626.96
MW-95	11/19/97	3746.26	119.41	0	3626.85
MW-95	11/24/97	3746.26	119.45	0	3626.81
MW-95	12/10/97	3746.26	119.42	0	3626.84
MW-95	01/28/98	3746.26	119.49	0	3626.77
MW-95	02/25/98	3746.26	119.62	0	3626.64
MW-95	04/27/98	3746.26	119.78	0	3626.48
MW-95	05/28/98	3746.26	119.90	0	3626.36
MW-95	06/16/98	3746.26	119.97	0	3626.29
MW-95	10/10/98	3746.26	120.46	0	3625.80
MW-95	01/27/99	3746.26	120.59	0	3625.67
MW-95	04/19/99	3746.26	120.72	0	3625.54
MW-95	01/05/00	3746.26	120.81	0	3625.45
MW-95	04/26/00	3746.26	120.93	0	3625.33
MW-95	09/27/00	3746.26	NR	--	--
MW-95	04/16/01	3746.26	121.38	0	3624.88
MW-95	10/29/01	3746.26	121.66	0	3624.60
MW-95	04/15/02	3746.26	121.91	0	3624.35
MW-95	10/14/02	3746.26	120.04	0	3626.22
MW-95	04/15/03	3746.26	121.26	0	3625.00
MW-95	10/14/03	3746.26	122.26	0	3624.00
MW-96	04/29/97	3739.80	112.60	0	3627.20
MW-96	07/15/97	3739.80	112.57	0	3627.23
MW-96	10/01/97	3739.80	113.40	0	3626.40
MW-96	10/09/97	3739.80	113.34	0	3626.46
MW-96	10/13/97	3739.80	113.38	0	3626.42
MW-96	10/29/97	3739.80	113.38	0	3626.42
MW-96	11/04/97	3739.80	113.35	0	3626.45
MW-96	11/12/97	3739.80	113.31	0	3626.49
MW-96	11/19/97	3739.80	113.45	0	3626.35
MW-96	11/24/97	3739.80	113.58	0	3626.22
MW-96	12/10/97	3739.80	113.47	0	3626.33
MW-96	01/28/98	3739.80	113.46	0	3626.34
MW-96	02/25/98	3739.80	113.48	0	3626.32
MW-96	04/27/98	3739.80	113.74	0	3626.06
MW-96	05/28/98	3739.80	113.88	0	3625.92
MW-96	06/15/98	3739.80	113.92	0	3625.88
MW-96	10/10/98	3739.80	114.37	0	3625.43
MW-96	01/27/99	3739.80	114.48	0	3625.32
MW-96	04/19/99	3739.80	114.56	0	3625.24
MW-96	01/05/00	3739.80	114.74	0	3625.06
MW-96	04/26/00	3739.80	114.91	0	3624.89
MW-96	09/27/00	3739.80	115.29	0	3624.51
MW-96	04/16/01	3739.80	115.33	0	3624.47
MW-96	10/29/01	3739.80	115.67	0	3624.13
MW-96	04/15/02	3739.80	115.78	0	3624.02

Appendix A
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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-96	10/14/02	3739.80	114.85	0	3624.95
MW-96	04/15/03	3739.80	115.20	0	3624.60
MW-96	10/14/03	3739.80	116.22	0	3623.58
MW-97	04/29/97	3750.16	122.82	0	3627.34
MW-97	07/15/97	3750.16	122.91	0	3627.25
MW-97	10/01/97	3750.16	123.80	0	3626.36
MW-97	10/09/97	3750.16	123.75	0	3626.41
MW-97	10/13/97	3750.16	123.61	0	3626.55
MW-97	10/29/97	3750.16	123.62	0	3626.54
MW-97	11/04/97	3750.16	123.74	0	3626.42
MW-97	11/12/97	3750.16	123.70	0	3626.46
MW-97	11/19/97	3750.16	123.85	0	3626.31
MW-97	11/24/97	3750.16	123.80	0	3626.36
MW-97	12/10/97	3750.16	123.90	0	3626.26
MW-97	01/28/98	3750.16	123.71	0	3626.45
MW-97	02/25/98	3750.16	123.89	0	3626.27
MW-97	04/27/98	3750.16	123.99	0	3626.17
MW-97	05/28/98	3750.16	124.12	0	3626.04
MW-97	06/15/98	3750.16	124.17	0	3625.99
MW-97	10/10/98	3750.16	124.63	0	3625.53
MW-97	01/27/99	3750.16	124.73	0	3625.43
MW-97	04/19/99	3750.16	124.83	0	3625.33
MW-97	01/05/00	3750.16	125.01	0	3625.15
MW-97	04/26/00	3750.16	125.19	0	3624.97
MW-97	09/27/00	3750.16	125.61	0	3624.55
MW-97	04/16/01	3750.16	125.60	0	3624.56
MW-97	10/29/01	3750.16	125.89	0	3624.27
MW-97	04/15/02	3750.16	126.04	0	3624.12
MW-97	10/14/02	3750.16	125.09	0	3625.07
MW-97	04/15/03	3750.16	125.45	0	3624.71
MW-97	10/14/03	3750.16	126.49	0	3623.67
MW-98	04/29/97	3770.15	142.42	0	3627.73
MW-98	07/15/97	3770.15	142.51	0	3627.64
MW-98	10/14/97	3770.15	143.55	0.29	3626.81
MW-98	10/29/97	3770.15	143.43	0.23	3626.88
MW-98	11/04/97	3770.15	143.50	0.25	3626.83
MW-98	11/12/97	3770.15	143.35	0.17	3626.92
MW-98	11/19/97	3770.15	143.48	0.22	3626.83
MW-98	11/24/97	3770.15	143.54	0.26	3626.79
MW-98	12/10/97	3770.15	143.52	0.12	3626.71
MW-98	01/28/98	3770.15	143.53	0.22	3626.78
MW-98	02/25/98	3770.15	143.77	0.19	3626.51
MW-98	04/27/98	3770.15	143.73	0.15	3626.52
MW-98	05/28/98	3770.15	143.80	0	3626.35
MW-98	06/16/98	3770.15	143.87	0.05	3626.31
MW-98	10/10/98	3770.15	144.32	0.08	3625.88
MW-98	01/27/99	3770.15	144.39	0	3625.76
MW-98	04/19/99	3770.15	148.78	0	3621.37
MW-98	01/05/00	3770.15	143.88	0	3626.27
MW-98	04/26/00	3770.15	144.04	0	3626.11
MW-98	09/27/00	3770.15	NR	--	--
MW-98	04/16/01	3770.15	144.55	0	3625.60
MW-98	10/29/01	3770.15	144.79	0	3625.36
MW-98	04/15/02	3770.15	144.98	0	3625.17
MW-98	10/14/02	3770.15	143.64	0	3626.51
MW-98	04/15/03	3770.15	144.42	0	3625.73
MW-98	10/14/03	3770.15	145.46	0	3624.69
MW-104	07/15/97	3793.64	168.72	0	3624.92
MW-104	10/13/97	3793.64	167.22	0	3626.42
MW-104	10/29/97	3793.64	167.25	0	3626.39
MW-104	11/04/97	3793.64	167.30	0	3626.34
MW-104	11/12/97	3793.64	167.20	0	3626.44
MW-104	11/19/97	3793.64	167.30	0	3626.34
MW-104	11/24/97	3793.64	167.30	0	3626.34
MW-104	12/10/97	3793.64	167.28	0	3626.36
MW-104	01/28/98	3793.64	167.33	0	3626.31
MW-104	02/25/98	3793.64	167.34	0	3626.30
MW-104	04/27/98	3793.64	167.59	0	3626.05
MW-104	05/28/98	3793.64	167.75	0	3625.89
MW-104	06/15/98	3793.64	167.81	0	3625.83
MW-104	10/10/98	3793.64	168.27	0	3625.37
MW-104	01/27/99	3793.64	168.69	0.29	3625.16
MW-104	04/19/99	3793.64	173.11	0.39	3620.81
MW-104	01/05/00	3793.64	168.57	0.15	3625.18
MW-104	04/26/00	3793.64	168.97	0.26	3624.86
MW-104	09/27/00	3793.64	169.30	0.14	3624.44
MW-104	04/16/01	3793.64	169.28	0	3624.36
MW-104	10/29/01	3793.64	169.52	0	3624.12
MW-104	04/15/02	3793.64	169.60	0	3624.04
MW-104	10/14/02	3793.64	169.74	0	3623.90
MW-104	04/15/03	3793.64	169.61	0	3624.03

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	*Measuring Point* Elevation (feet amsl)	*Depth to* Water (feet bmp)	*Condensate* Thickness (feet)	*Corrected Water-Level* Elevation (feet amsl)
MW-104	10/14/03	3793.64	170.09	0	3623.55
MW-108	07/15/97	3747.13	119.97	0	3627.16
MW-108	10/13/97	3747.13	120.47	0	3626.66
MW-108	10/29/97	3747.13	120.45	0	3626.68
MW-108	11/04/97	3747.13	120.42	0	3626.71
MW-108	11/12/97	3747.13	124.40	0	3622.73
MW-108	11/19/97	3747.13	120.55	0	3626.58
MW-108	11/24/97	3747.13	120.54	0	3626.59
MW-108	12/10/97	3747.13	120.55	0	3626.58
MW-108	01/28/98	3747.13	120.58	0	3626.55
MW-108	02/25/98	3747.13	120.57	0	3626.56
MW-108	04/27/98	3747.13	120.85	0	3626.28
MW-108	05/28/98	3747.13	120.72	0	3626.41
MW-108	06/15/98	3747.13	121.03	0	3626.10
MW-108	10/10/98	3747.13	121.50	0	3625.63
MW-108	01/27/99	3747.13	120.59	0	3626.54
MW-108	04/19/99	3747.13	121.72	0	3625.41
MW-108	01/05/00	3747.13	121.89	0	3625.24
MW-108	04/26/00	3747.13	122.08	0	3625.05
MW-108	09/27/00	3747.13	122.49	0	3624.64
MW-108	04/16/01	3747.13	122.52	0	3624.61
MW-108	10/29/01	3747.13	122.84	0	3624.29
MW-108	04/15/02	3747.13	122.47	0	3624.66
MW-108	10/14/02	3747.13	121.93	0	3625.20
MW-108	04/15/03	3747.13	122.42	0	3624.71
MW-108	10/14/03	3747.13	123.42	0	3623.71
MW-110	06/17/98	3812.61	187.42	1.3	3626.13
MW-110	10/09/98	3812.61	188.34	0	3624.27
MW-110	01/27/99	3812.61	192.59	0.02	3620.03
MW-110	04/19/99	3812.61	189.31	0	3623.30
MW-110	01/05/00	3812.61	191.89	0	3620.72
MW-110	04/26/00	3812.61	191.62	0	3620.99
MW-110	09/27/00	3812.61	192.19	0	3620.42
MW-110	04/16/01	3812.61	196.25	0	3616.36
MW-110	10/29/01	3812.61	192.38	0	3620.23
MW-110	04/15/02	3812.61	190.51	0.02	3622.11
MW-110	10/14/02	3812.61	188.38	0	3624.23
MW-110	04/15/03	3812.61	189.53	0	3623.08
MW-110	10/14/03	3812.61	190.62	0	3621.99
MW-111	06/19/98	3824.44	200.24	0	3624.20
MW-111	10/10/98	3824.44	200.89	0	3623.55
MW-111	01/27/99	3824.44	201.24	0	3623.20
MW-111	04/19/99	3824.44	201.26	0	3623.18
MW-111	01/05/00	3824.44	201.21	0	3623.23
MW-111	04/26/00	3824.44	201.48	0	3622.96
MW-111	09/27/00	3824.44	201.66	0	3622.78
MW-111	04/16/01	3824.44	201.74	0	3622.70
MW-111	10/29/01	3824.44	201.64	0	3622.80
MW-111	04/15/02	3824.44	201.83	0	3622.61
MW-111	10/14/02	3824.44	200.52	0	3623.92
MW-111	04/15/03	3824.44	201.21	0	3623.23
MW-111	10/14/03	3824.44	202.50	0	3621.94
MW-112	01/05/00	3780.11	154.98	0	3625.13
MW-112	04/26/00	3780.11	NR	--	--
MW-112	09/27/00	3780.11	155.39	0	3624.72
MW-112	04/16/01	3780.11	156.30	0	3623.81
MW-112	10/29/01	3780.11	156.68	0	3623.43
MW-112	04/15/02	3780.11	156.71	0	3623.40
MW-112	10/14/02	3780.11	154.97	0	3625.14
MW-112	04/15/03	3780.11	156.10	0.12	3624.10
MW-112*	10/14/03	3780.11	201.97	0.67	3578.63
MW-113	01/05/00	3772.67	147.43	0	3625.24
MW-113	04/26/00	3772.67	148.28	0.88	3625.03
MW-113	09/27/00	3772.67	147.72	0	3624.95
MW-113	04/16/01	3772.67	148.11	0.13	3624.65
MW-113	10/29/01	3772.67	148.95	0.2	3623.87
MW-113	04/15/02	3772.67	148.72	0.14	3624.05
MW-113	10/14/02	3772.67	147.33	0	3625.34
MW-113	04/15/03	3772.67	148.69	0.53	3624.37
MW-113	10/14/03	3772.67	149.24	0.21	3623.58
MW-114	01/05/00	3805.32	181.31	0	3624.01
MW-114	04/26/00	3805.32	81.48	0	3723.84
MW-114	09/27/00	3805.32	181.69	0	3623.63
MW-114	04/16/01	3805.32	181.95	0	3623.37
MW-114	10/29/01	3805.32	182.05	0	3623.27
MW-114	04/15/02	3805.32	182.31	0	3623.01
MW-114	10/14/02	3805.32	180.12	0	3625.20
MW-114	04/15/03	3805.32	181.52	0	3623.80

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-114	10/14/03	3805.32	182.64	0	3622.68
MW-115	01/05/00	3804.69	181.19	0	3623.50
MW-115	04/26/00	3804.69	181.11	0	3623.58
MW-115	09/27/00	3804.69	181.50	0	3623.19
MW-115	04/16/01	3804.69	181.31	0	3623.38
MW-115	10/29/01	3804.69	181.60	0	3623.09
MW-115	04/15/02	3804.69	182.45	0	3622.24
MW-115	10/14/02	3804.69	178.64	0	3626.05
MW-115	04/15/03	3804.69	181.08	0	3623.61
MW-115	10/14/03	3804.69	182.24	0	3622.45
MW-116	04/26/00	3792.11	167.45	0	3624.66
MW-116	09/27/00	3792.11	168.18	0	3623.93
MW-116	04/16/01	3792.11	168.23	0	3623.88
MW-116	10/29/01	3792.11	168.48	0	3623.63
MW-116	04/15/02	3792.11	168.75	0	3623.36
MW-116	10/14/02	3792.11	167.25	0	3624.86
MW-116	04/15/03	3792.11	168.04	0	3624.07
MW-116	10/14/03	3792.11	169.16	0	3622.95
MW-117A	01/05/00	3808.24	182.80	0	3625.44
MW-117A	04/26/00	3808.24	185.28	0	3622.96
MW-117A	09/27/00	3808.24	165.91	0	3642.33
MW-117A	04/16/01	3808.24	185.90	0	3622.34
MW-117A	10/29/01	3808.24	185.88	0	3622.36
MW-117A	04/15/02	3808.24	186.35	0	3621.89
MW-117A	10/14/02	3808.24	184.32	0	3623.92
MW-117A	04/15/03	3808.24	185.75	0	3622.49
MW-117A	10/14/03	3808.24	186.62	0	3621.62
MW-118	01/05/00	3762.88	138.21	0	3624.67
MW-118	04/26/00	3762.88	138.50	0	3624.38
MW-118	09/27/00	3762.88	138.85	0	3624.03
MW-118	04/16/01	3762.88	138.98	0	3623.90
MW-118	10/29/01	3762.88	129.35	0	3633.53
MW-118	04/15/02	3762.88	139.35	0	3623.53
MW-118	10/14/02	3762.88	138.14	0	3624.74
MW-118	04/15/03	3762.88	138.82	0	3624.06
MW-118	10/14/03	3762.88	139.86	0	3623.02
MW-119	01/05/00	3824.74	201.21	0	3623.53
MW-119	04/26/00	3824.74	201.30	0	3623.44
MW-119	09/27/00	3824.74	201.35	0	3623.39
MW-119	04/16/01	3824.74	201.45	0	3623.29
MW-119	10/29/01	3824.74	202.67	0	3622.07
MW-119	04/15/02	3824.74	201.71	0	3623.03
MW-119	10/14/02	3824.74	200.38	0	3624.36
MW-119	04/15/03	3824.74	200.87	0	3623.87
MW-119	10/14/03	3824.74	202.03	0	3622.71
MW-120	01/05/00	3820.65	195.61	1.17	3625.89
MW-120	04/26/00	3820.65	196.32	0.01	3624.34
MW-120	09/27/00	3820.65	196.28	0	3624.37
MW-120	04/16/01	3820.65	197.43	0.83	3623.83
MW-120	10/29/01	3820.65	197.32	0.12	3623.42
MW-120	04/15/02	3820.65	197.14	0	3623.51
MW-120	10/14/02	3820.65	196.28	0	3624.37
MW-120	04/15/03	3820.65	198.85	2.33	3623.50
MW-120	10/14/03	3820.65	197.53	0.01	3623.13
MW-121	01/05/00	3820.88	195.12	0	3625.76
MW-121	04/26/00	3820.88	195.40	0	3625.48
MW-121	09/27/00	3820.88	197.55	0.79	3623.91
MW-121	04/16/01	3820.88	197.85	0.65	3623.50
MW-121	10/29/01	3820.88	197.60	0.05	3623.32
MW-121	04/15/02	3820.88	197.68	0	3623.20
MW-121	10/14/02	3820.88	196.37	0	3624.51
MW-121	04/15/03	3820.88	197.30	0.04	3623.61
MW-121	10/14/03	3820.88	197.79	0.05	3623.13
MW-122	01/05/00	3822.79	197.61	0	3625.18
MW-122	04/26/00	3822.79	199.17	0	3623.62
MW-122	09/27/00	3822.79	199.50	0	3623.29
MW-122	04/16/01	3822.79	199.64	0	3623.15
MW-122	10/29/01	3822.79	199.87	0	3622.92
MW-122	04/15/02	3822.79	199.52	0	3623.27
MW-122	10/14/02	3822.79	198.22	0	3624.57
MW-122	04/15/03	3822.79	198.76	0	3624.03
MW-122	10/14/03	3822.79	199.99	0	3622.80
MW-123	01/05/00	3768.77	142.88	0.61	3626.34
MW-123	04/26/00	3768.77	143.98	0.13	3624.88
MW-123	09/27/00	3768.77	144.15	0	3624.62

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
MW-123	04/16/01	3768.77	144.32	0	3624.45
MW-123	10/29/01	3768.77	144.88	0.23	3624.06
MW-123	04/15/02	3768.77	144.82	0.51	3624.32
MW-123	10/14/02	3768.77	143.70	0.08	3625.13
MW-123	04/15/03	3768.77	144.25	0	3624.52
MW-123	10/14/03	3768.77	145.36	0	3623.41
MW-124	01/05/00	3777.83	151.95	0	3625.88
MW-124	04/26/00	3777.83	152.92	0	3624.91
MW-124	09/27/00	3777.83	153.71	0	3624.12
MW-124	04/16/01	3777.83	153.95	0.67	3624.37
MW-124	10/29/01	3777.83	153.67	0.06	3624.20
MW-124	04/15/02	3777.83	154.23	0.38	3623.88
MW-124	10/14/02	3777.83	152.75	0.12	3625.17
MW-124	04/15/03	3777.83	153.44	0	3624.39
MW-124	10/14/03	3777.83	154.45	0	3623.38
MW-125	01/05/00	3790.61	166.64	1.27	3624.90
MW-125	04/26/00	3790.61	166.07	0	3624.54
MW-125	09/27/00	3790.61	156.53	0.01	3634.09
MW-125	04/16/01	3790.61	166.60	0	3624.01
MW-125	10/29/01	3790.61	166.91	0	3623.70
MW-125	04/15/02	3790.61	167.22	0	3623.39
MW-125	10/14/02	3790.61	166.78	1.14	3624.66
MW-125	04/15/03	3790.61	166.96	0.03	3623.67
MW-125	10/14/03	3790.61	167.94	0.3	3622.89
MW-127	01/05/00	3825.17	202.12	0	3623.05
MW-127	04/26/00	3825.17	202.34	0.46	3623.17
MW-127	09/27/00	3825.17	202.00	0	3623.17
MW-127	04/16/01	3825.17	202.70	0.07	3622.52
MW-127	10/29/01	3825.17	202.51	0.03	3622.68
MW-127	04/15/02	3825.17	202.74	0	3622.43
MW-127	10/14/02	3825.17	200.92	0	3624.25
MW-127	04/15/03	3825.17	202.50	0	3622.67
MW-127	10/14/03	3825.17	202.99	0	3622.18
MW-128	01/05/00	3786.08	160.91	0	3625.17
MW-128	04/26/00	3786.08	161.25	0	3624.83
MW-128	09/27/00	3786.08	162.88	0	3623.20
MW-128	04/16/01	3786.08	161.87	0	3624.21
MW-128	10/29/01	3786.08	162.31	0	3623.77
MW-128	04/15/02	3786.08	162.41	0	3623.67
MW-128	10/14/02	3786.08	161.09	0	3624.99
MW-128	04/15/03	3786.08	162.10	0	3623.98
MW-128	10/14/03	3786.08	162.85	0	3623.23
MW-129	01/05/00	3800.82	175.48	0.84	3625.95
MW-129	04/26/00	3800.82	176.90	0	3623.92
MW-129	09/27/00	3800.82	176.48	0	3624.34
MW-129	04/16/01	3800.82	178.40	0.7	3622.93
MW-129	10/29/01	3800.82	178.65	0.99	3622.89
MW-129	04/15/02	3800.82	180.80	0.06	3620.06
MW-129	10/14/02	3800.82	175.98	0	3624.84
MW-129	04/15/03	3800.82	178.78	2.02	3623.51
MW-129	10/14/03	3800.82	180.92	3.31	3622.32
MW-130	01/05/00	3775.54	149.65	0.60	3626.33
MW-130	04/26/00	3775.54	151.03	0.52	3624.89
MW-130	09/27/00	3775.54	150.93	0.08	3624.67
MW-130	04/16/01	3775.54	151.24	0.14	3624.40
MW-130	10/29/01	3775.54	151.58	0.19	3624.10
MW-130	04/15/02	3775.54	151.64	0.03	3623.92
MW-130	10/14/02	3775.54	150.44	0.09	3625.17
MW-130	04/15/03	3775.54	150.99	0.00	3624.55
MW-130	10/14/03	3775.54	152.07	0.03	3623.49
MW-131	01/05/00	3784.23	158.32	0	3625.91
MW-131	04/26/00	3784.23	158.71	0	3625.52
MW-131	09/27/00	3784.23	159.71	0	3624.52
MW-131	04/16/01	3784.23	160.20	0	3624.03
MW-131	10/29/01	3784.23	160.38	0	3623.85
MW-131	04/15/02	3784.23	160.71	0	3623.52
MW-131	10/14/02	3784.23	159.22	0	3625.01
MW-131	04/15/03	3784.23	159.95	0	3624.28
MW-131	10/14/03	3784.23	161.06	0	3623.17
IW-1	07/16/96	3808.55	185.32	2.91	3625.35
IW-1	10/13/96	3808.55	181.83	2.81	3628.77
IW-1	02/03/97	3808.55	185.60	5.38	3626.87
IW-1	04/28/97	3808.55	183.12	1.53	3626.54
IW-1	07/14/97	3808.55	182.27	0.38	3626.55
IW-1	10/13/97	3808.55	181.80	0.16	3626.86
IW-1	11/04/97	3808.55	52.65	0	3755.90

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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
IW-1	11/12/97	3808.55	55.85	0	3752.70
IW-1	11/19/97	3808.55	41.80	0	3766.75
IW-1	11/24/97	3808.55	70.90	0	3737.65
IW-1	12/10/97	3808.55	4.00	0	3804.55
IW-1	04/27/98	3808.55	82.27	0	3726.28
IW-1	05/28/98	3808.55	11.26	0	3797.29
IW-1	06/15/98	3808.55	181.05	0	3627.50
IW-1	10/09/98	3808.55	61.46	0	3747.09
IW-1	01/05/00	3808.55	18.15	0	3790.40
IW-1	04/26/00	3808.55	19.22	0	3789.33
IW-1	09/27/00	3808.55	NR	--	--
IW-1	04/16/01	3808.55	NR	--	--
IW-1	10/29/01	3808.55	NR	--	--
IW-1	04/15/02	3808.55	184.20	0	3624.35
IW-1	10/14/02	3808.55	182.79	0	3625.76
IW-1	04/15/03	3808.55	183.69	0	3624.86
IW-1	10/14/03	3808.55	--	--	--
IW-2	08/01/96	3835.86	207.22	0	3628.64
IW-2	10/13/96	3835.86	205.52	0	3630.34
IW-2	02/03/97	3835.86	52.92	0	3782.94
IW-2	04/28/97	3835.86	28.89	0	3806.97
IW-2	07/14/97	3835.86	133.89	0	3701.97
IW-2	10/13/97	3835.86	29.61	0	3806.25
IW-2	11/04/97	3835.86	208.50	0	3627.36
IW-2	11/12/97	3835.86	208.70	0	3627.16
IW-2	11/19/97	3835.86	208.78	0	3627.08
IW-2	11/24/97	3835.86	208.95	0	3626.91
IW-2	12/10/97	3835.86	175.58	0	3660.28
IW-2	01/27/98	3835.86	121.00	0	3714.86
IW-2	02/25/98	3835.86	24.64	0	3811.22
IW-2	04/26/00	3835.86	NR	--	--
IW-2	09/27/00	3835.86	NR	--	--
IW-2	04/16/01	3835.86	NR	--	--
IW-2	10/29/01	3835.86	NR	--	--
IW-2	04/15/02	3835.86	NR	--	--
IW-2	10/14/02	3835.86	NR	--	--
IW-2	04/15/03	3835.86	NG	--	--
IW-2	10/14/03	3835.86	D	--	--
SW-1	02/04/97	3808.19	D	--	--
SW-1	05/28/98	3808.19	198.00	0	3610.19
SW-1	06/17/98	3808.19	198.05	0	3610.14
SW-1	04/26/00	3808.19	NR	--	--
SW-1	09/27/00	3808.19	NR	--	--
SW-1	04/16/01	3808.19	NR	--	--
SW-1	10/29/01	3808.19	NR	--	--
SW-1	04/15/02	3808.19	NR	--	--
SW-1	10/14/02	3808.19	NR	--	--
SW-1	04/15/03	3808.19	NG	--	--
SW-1	10/14/03	3808.19	--	--	--
SW-2	08/21/91	3808.79	180.53	0	3628.26
SW-2	09/18/91	3808.79	180.53	0	3628.26
SW-2	10/22/91	3808.79	179.74	0	3629.05
SW-2	11/15/91	3808.79	179.44	0	3629.35
SW-2	03/01/92	3808.79	180.12	0	3628.67
SW-2	04/01/92	3808.79	180.00	0	3628.79
SW-2	05/01/92	3808.79	176.52	0	3632.27
SW-2	06/01/92	3808.79	176.06	0	3632.73
SW-2	07/01/92	3808.79	176.06	0	3632.73
SW-2	08/01/92	3808.79	176.99	0	3631.80
SW-2	09/01/92	3808.79	177.57	0	3631.22
SW-2	10/01/92	3808.79	178.02	0	3630.77
SW-2	11/01/92	3808.79	178.31	0	3630.48
SW-2	12/01/92	3808.79	179.06	0	3629.73
SW-2	01/01/93	3808.79	178.88	0	3629.91
SW-2	02/01/93	3808.79	179.08	0	3629.71
SW-2	03/01/93	3808.79	179.31	0	3629.48
SW-2	04/01/93	3808.79	179.04	0	3629.75
SW-2	05/01/93	3808.79	179.22	0	3629.57
SW-2	06/01/93	3808.79	179.39	0	3629.40
SW-2	07/01/93	3808.79	179.76	0	3629.03
SW-2	08/01/93	3808.79	179.76	0	3629.03
SW-2	09/01/93	3808.79	179.86	0	3628.93
SW-2	10/01/93	3808.79	179.63	0	3629.16
SW-2	11/01/93	3808.79	180.39	0	3628.40
SW-2	12/01/93	3808.79	179.62	0	3629.17
SW-2	01/01/94	3808.79	180.41	0	3628.38
SW-2	02/01/94	3808.79	181.55	0	3627.24
SW-2	03/01/94	3808.79	180.10	0	3628.69
SW-2	04/01/94	3808.79	180.58	0	3628.21
SW-2	05/01/94	3808.79	181.13	0	3627.66
SW-2	07/01/94	3808.79	181.00	0	3627.79

Appendix A
Historic Fluid Level Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
SW-2	08/01/94	3808.79	180.61	0	3628.18
SW-2	09/01/94	3808.79	180.52	0	3628.27
SW-2	10/01/94	3808.79	181.56	0	3627.23
SW-2	12/01/94	3808.79	184.89	0	3623.90
SW-2	01/01/95	3808.79	181.26	0	3627.53
SW-2	04/01/95	3808.79	181.50	0	3627.29
SW-2	07/01/95	3808.79	181.62	0	3627.17
SW-2	10/01/95	3808.79	181.70	0	3627.09
SW-2	01/16/96	3808.79	182.21	0	3626.58
SW-2	04/17/96	3808.79	182.25	0	3626.54
SW-2	07/15/96	3808.79	182.24	0	3626.55
SW-2	10/01/96	3808.79	180.89	0	3627.90
SW-2	01/01/97	3808.79	182.21	0	3626.58
SW-2	02/04/97	3808.79	182.31	0	3626.48
SW-2	04/28/97	3808.79	182.80	0	3625.99
SW-2	07/15/97	3808.79	183.04	0	3625.75
SW-2	10/14/97	3808.79	183.89	0	3624.90
SW-2	01/27/98	3808.79	183.74	0	3625.05
SW-2	04/27/98	3808.79	185.05	0	3623.74
SW-2	05/28/98	3808.79	185.13	0	3623.66
SW-2	06/17/98	3808.79	185.15	0	3623.64
SW-2	10/09/98	3808.79	185.65	0	3623.14
SW-2	01/27/99	3808.79	185.94	0	3622.85
SW-2	04/19/99	3808.79	185.62	0	3623.17
SW-2	04/26/00	3808.79	NR	--	--
SW-2	09/27/00	3808.79	NR	--	--
SW-2	04/16/01	3808.79	186.59	0	3622.20
SW-2	10/29/01	3808.79	186.28	0	3622.51
SW-2	04/15/02	3808.79	186.52	0	3622.27
SW-2	10/14/02	3808.79	185.13	0	3623.66
SW-2	04/15/03	3808.79	185.86	0	3622.93
SW-2	10/14/03	3808.79	186.89	0	3621.90
SW-3	07/15/96	3842.29	215.52	0	3626.77
SW-3	10/01/96	3842.29	213.51	0	3628.78
SW-3	02/03/97	3842.29	215.63	0	3626.66
SW-3	04/28/97	3842.29	216.14	0	3626.15
SW-3	07/14/97	3842.29	216.74	0	3625.55
SW-3	10/14/97	3842.29	217.51	0	3624.78
SW-3	01/27/98	3842.29	217.54	0	3624.75
SW-3	04/27/98	3842.29	217.80	0	3624.49
SW-3	05/28/98	3842.29	217.98	0	3624.31
SW-3	06/15/98	3842.29	218.50	0	3623.79
SW-3	10/09/98	3842.29	218.58	0	3623.71
SW-3	01/27/99	3842.29	D	--	--
SW-3	04/19/99	3842.29	219.03	0	3623.26
SW-3	01/05/00	3842.29	218.96	0	3623.33
SW-3	04/26/00	3842.29	219.20	0	3623.09
SW-3	09/27/00	3842.29	219.45	0	3622.84
SW-3	04/16/01	3842.29	219.73	0	3622.56
SW-3	10/29/01	3842.29	219.97	0	3622.32
SW-3	04/15/02	3842.29	220.03	0	3622.26
SW-3	10/14/02	3842.29	217.90	0	3624.39
SW-3	04/15/03	3842.29	219.40	0	3622.89
SW-3	10/14/03	3842.29	220.22	0	3622.07

Appendix A
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Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
VE-1	06/15/98	--	204.78	0	--
VE-1	01/05/00	--	205.54	0	--
VE-1	04/26/00	3829.73	205.80	0	3623.93
VE-1	09/27/00	3829.73	206.05	0	3623.68
VE-1	04/16/01	3829.73	206.05	0	3623.68
VE-1	10/29/01	3829.73	206.43	0	3623.30
VE-1	04/15/02	3829.73	206.42	0	3623.31
VE-1	10/14/02	3829.73	205.28	0	3624.45
VE-1	04/15/03	3829.73	205.81	0	3623.92
VE-1	10/14/03	3829.73	206.78	0	3622.95
VE-2	06/15/98	--	200.67	0	--
VE-2	01/05/00	--	201.48	0	--
VE-2	04/26/00	3825.93	201.71	0	3624.22
VE-2	09/27/00	3825.93	202.10	0	3623.83
VE-2	04/16/01	3825.93	201.87	0	3624.06
VE-2	10/29/01	3825.93	202.43	0	3623.50
VE-2	04/15/02	3825.93	202.35	0	3623.58
VE-2	10/14/02	3825.93	201.32	0	3624.61
VE-2	04/15/03	3825.93	201.65	0	3624.28
VE-2	10/14/03	3825.93	202.78	0	3623.15
VE-3	06/15/98	--	191.32	0	--
VE-3	01/05/00	--	192.13	0	--
VE-3	04/26/00	3816.75	192.32	0	3624.43
VE-3	09/27/00	3816.75	192.78	0	3623.97
VE-3	04/16/01	3816.75	192.63	0	3624.12
VE-3	10/29/01	3816.75	192.94	0	3623.81
VE-3	04/15/02	3816.75	193.02	0	3623.73
VE-3	10/14/02	3816.75	192.05	0	3624.70
VE-3	04/15/03	3816.75	192.46	0	3624.29
VE-3	10/14/03	3816.75	193.45	0	3623.30
VE-4	06/15/98	--	179.89	0	--
VE-4	01/05/00	--	D	--	--
VE-4	04/26/00	3805.45	D	--	--
VE-4	09/27/00	3805.45	D	--	--
VE-4	04/16/01	3805.45	D	--	--
VE-4	10/29/01	3805.45	D	--	--
VE-4	04/15/02	3805.45	D	--	--
VE-4	10/14/02	3805.45	D	--	--
VE-4	04/15/03	3805.45	D	--	--
VE-4	10/14/03	3805.45	D	--	--
VE-5	06/15/98	--	164.48	0	--
VE-5	04/26/00	3790.10	165.51	0	3624.59
VE-5	09/27/00	3790.10	165.98	0	3624.12
VE-5	04/16/01	3790.10	165.83	0	3624.27
VE-5	10/29/01	3790.10	165.91	0	3624.19
VE-5	04/15/02	3790.10	D	--	--
VE-5	10/14/02	3790.10	D	--	--
VE-5	04/15/03	3790.10	D	--	--
VE-5	10/14/03	3790.10	D	--	--
VE-16	10/29/97	3750.96	124.27	0	3626.69
VE-16	11/04/97	3750.96	124.35	0	3626.61
VE-16	11/12/97	3750.96	124.22	0	3626.74
VE-16	11/19/97	3750.96	124.33	0	3626.63
VE-16	11/24/97	3750.96	124.33	0	3626.63
VE-16	12/10/97	3750.96	124.30	0	3626.66
VE-16	02/25/98	3750.96	124.38	0	3626.58
VE-16	06/15/98	3750.96	124.81	0	3626.15
VE-16	01/05/00	3750.96	125.69	0	3625.27
VE-16	04/26/00	3750.96	125.92	0	3625.04
VE-16	09/27/00	3750.96	126.19	0	3624.77
VE-16	04/16/01	3750.96	126.37	0	3624.59
VE-16	10/29/01	3750.96	126.59	0	3624.37
VE-16	04/15/02	3750.96	126.13	0	3624.83
VE-16	10/14/02	3750.96	125.64	0	3625.32
VE-16	04/15/03	3750.96	126.22	0	3624.74
VE-16	10/14/03	3750.96	127.27	0.01	3623.70
VE-17	10/29/97	3756.73	118.48	0	3638.25
VE-17	11/04/97	3756.73	117.00	0	3639.73
VE-17	11/12/97	3756.73	117.93	0	3638.80
VE-17	11/19/97	3756.73	118.13	0	3638.60
VE-17	11/24/97	3756.73	118.32	0	3638.41
VE-17	12/10/97	3756.73	118.24	0	3638.49
VE-17	02/25/98	3756.73	119.27	0	3637.46
VE-17	06/15/98	3756.73	117.27	0	3639.46
VE-17	01/05/00	3756.73	120.11	0	3636.62
VE-17	04/26/00	3756.73	120.84	0	3635.89
VE-17	09/27/00	3756.73	120.46	0	3636.27
VE-17	04/16/01	3756.73	119.54	0	3637.19

Appendix A
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Well ID	Date	Measuring Point Elevation (feet amsl)	Depth to Water (feet bmp)	Condensate Thickness (feet)	Corrected Water-Level Elevation (feet amsl)
VE-17	10/29/01	3756.73	119.54	0	3637.19
VE-17	04/15/02	3756.73	119.08	0	3637.65
VE-17	10/14/02	3756.73	116.69	0	3640.04
VE-17	04/15/03	3756.73	118.41	0	3638.32
VE-17	10/14/03	3756.73	118.19	0	3638.54
VE-18	06/15/98	3756.82	131.71	0	3625.11
VE-18	01/05/00	3756.82	131.56	0	3625.26
VE-18	04/26/00	3756.82	131.77	0	3625.05
VE-18	09/27/00	3756.82	132.09	0	3624.73
VE-18	04/16/01	3756.82	132.25	0	3624.57
VE-18	10/29/01	3756.82	132.51	0	3624.31
VE-18	04/15/02	3756.82	132.65	0	3624.17
VE-18	10/14/02	3756.82	131.53	0	3625.29
VE-18	04/15/03	3756.82	132.09	0	3624.73
VE-18	10/14/03	3756.82	133.15	0	3623.67
VE-19	10/29/97	3761.18	136.05	2.05	3626.62
VE-19	11/04/97	3761.18	136.41	2.45	3626.55
VE-19	11/19/97	3761.18	140.88	2.88	3622.40
VE-19	11/24/97	3761.18	140.33	1.39	3621.86
VE-19	12/10/97	3761.18	138.56	0	3622.62
VE-19	01/06/98	3761.18	139.67	2.56	3623.37
VE-19	01/15/98	3761.18	140.90	3.4	3622.76
VE-19	01/20/98	3761.18	140.16	0.48	3621.37
VE-19	02/03/98	3761.18	136.63	0.01	3624.55
VE-19	02/10/98	3761.18	138.66	1.11	3623.33
VE-19	02/17/98	3761.18	139.83	1.89	3622.72
VE-19	02/25/98	3761.18	139.80	1.95	3622.80
VE-19	05/28/98	3761.18	133.78	0	3627.40
VE-19	06/16/98	3761.18	136.97	0	3624.21
VE-19	01/05/00	3761.18	136.37	0.46	3625.15
VE-19	04/26/00	3761.18	NR	--	--
VE-19	09/27/00	3761.18	136.93	0	3624.25
VE-19	04/16/01	3761.18	137.02	0	3624.16
VE-19	10/29/01	3761.18	137.30	0	3623.88
VE-19	04/15/02	3761.18	137.58	0.39	3623.88
VE-19	10/14/02	3761.18	135.98	0.11	3625.28
VE-19	04/15/03	3761.18	136.42	0.02	3624.77
VE-19	10/14/03	3761.18	136.50	0.20	3624.83
VE-20	06/16/98	3768.41	142.26	0	3626.15
VE-20	01/05/00	3768.41	143.31	0	3625.10
VE-20	04/26/00	3768.41	143.33	0	3625.08
VE-20	09/27/00	3768.41	143.68	0	3624.73
VE-20	04/16/01	3768.41	143.64	0	3624.77
VE-20	10/29/01	3768.41	144.15	0	3624.26
VE-20	04/15/02	3768.41	144.25	0	3624.16
VE-20	10/14/02	3768.41	142.97	0	3625.44
VE-20	04/15/03	3768.41	143.69	0	3624.72
VE-20	10/14/03	3768.41	144.81	0	3623.60

Notes:
* MW-77, MW-78, and MW 112- DTW does not agree with historical and other MOC monthly gaugings prior to and after this event - ignore this data

Appendix B

Historical Analytical Data

Historical BTEX Analytical Data

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
BIEBBLE	05/28/91	--	--	--	<10
BIEBBLE	07/01/91	<5	--	--	--
BIEBBLE	07/19/91	--	<5	<5	--
BIEBBLE	04/01/92	<1	<1	<1	<1
BIEBBLE	07/01/92	<1	<1	<1	<1
BIEBBLE	10/01/92	<1	<1	<1	<1
BIEBBLE	01/01/93	<1	<1	<1	<1
BIEBBLE	04/15/93	<1	<1	<1	<1
BIEBBLE	07/15/93	<0.5	<0.5	<0.5	<0.5
BIEBBLE	10/14/93	<0.5	<0.5	<0.5	<0.5
BIEBBLE	01/13/94	<0.5	<0.5	<0.5	<0.5
BIEBBLE	04/05/94	<0.5	<0.5	<0.5	<0.5
BIEBBLE	07/21/94	<0.5	<0.5	<0.5	<0.5
BIEBBLE	10/06/94	<0.5	<0.5	<0.5	<0.5
BIEBBLE	01/11/95	<0.5	<0.5	<0.5	<0.5
BIEBBLE	04/07/95	<0.5	<0.5	<0.5	<0.5
BIEBBLE	07/21/95	<0.5	<0.5	<0.5	<0.5
BIEBBLE	10/12/95	<0.5	<0.5	<0.5	<0.5
BIEBBLE	01/19/96	<0.5	<0.5	<0.5	<0.5
BIEBBLE	04/17/96	<0.5	<0.5	<0.5	<0.5
BIEBBLE	07/01/96	<0.5	<0.5	<0.5	<0.5
BIEBBLE	10/01/96	<0.5	<0.5	<0.5	0.5
BIEBBLE	02/10/97	<0.5	<0.5	<0.5	<0.5
IW-2	08/01/96	<0.5	<0.5	<0.5	<0.5
LYMAN	05/28/91	--	--	--	<10
LYMAN	07/01/91	<5	--	--	--
LYMAN	07/19/91	--	<5	<5	--
LYMAN	04/01/92	<1	<1	<1	<1
LYMAN	07/01/92	<1	<1	<1	<1
LYMAN	10/01/92	<1	<1	<1	<1
LYMAN	01/01/93	<1	<1	<1	<1
LYMAN	04/15/93	<1	<1	<1	<1
LYMAN	05/12/93	<1	<1	<1	<1
LYMAN	06/28/93	<0.5	<0.5	<0.5	<0.5
LYMAN	07/15/93	<0.5	<0.5	<0.5	<0.5
LYMAN	08/03/93	<0.5	<0.5	<0.5	<0.5
LYMAN	09/21/93	<0.5	<0.5	<0.5	<0.5
LYMAN	10/14/93	<0.5	<0.5	<0.5	<0.5
LYMAN	11/10/93	<0.5	<0.5	<0.5	<0.5
LYMAN	12/06/93	<0.5	<0.5	<0.5	<0.5
LYMAN	01/12/94	<0.5	<0.5	<0.5	<0.5
LYMAN	02/09/94	<0.5	<0.5	<0.5	<0.5
LYMAN	03/16/94	<0.5	<0.5	<0.5	<0.5
LYMAN	04/05/94	<0.5	<0.5	<0.5	<0.5
LYMAN	05/19/94	<0.5	<0.5	<0.5	<0.5
LYMAN	06/23/94	<0.5	<0.5	<0.5	<0.5
LYMAN	07/21/94	<0.5	<0.5	<0.5	<0.5
LYMAN	08/24/94	<0.5	<0.5	<0.5	<0.5
LYMAN	09/20/94	<0.5	<0.5	<0.5	0.8
LYMAN	10/06/94	<0.5	<0.5	<0.5	<0.5
LYMAN	11/30/94	<0.5	<0.5	<0.5	<0.5

Notes:
Concentrations listed in micrograms per liter (ug/L)
<5 Constituent not detected above noted laboratory detection limit
-- Indicates parameter was not analyzed

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
LYMAN	12/16/94	<0.5	<0.5	<0.5	<0.5
LYMAN	01/11/95	<0.5	<0.5	<0.5	<0.5
LYMAN	03/09/95	<0.5	<0.5	<0.5	<0.5
LYMAN	04/07/95	<0.5	<0.5	<0.5	<0.5
LYMAN	05/18/95	<0.5	<0.5	<0.5	<0.5
LYMAN	07/21/95	<0.5	<0.5	<0.5	<0.5
LYMAN	10/12/95	<0.5	<0.5	<0.5	1.6
LYMAN	12/27/95	<0.5	<0.5	<0.5	<0.5
LYMAN	01/19/96	<0.5	<0.5	<0.5	<0.5
LYMAN	03/18/96	<0.5	<0.5	<0.5	<0.5
LYMAN	04/18/96	<0.5	<0.5	<0.5	<0.5
LYMAN	07/01/96	<0.5	<0.5	<0.5	<0.5
LYMAN	10/01/96	<0.5	<0.5	<0.5	<0.5
LYMAN	02/10/97	<0.5	<0.5	<0.5	<0.5
LYMAN	01/14/98	<0.5	<0.5	<0.5	<0.5
LYMAN	04/30/98	<0.5	<0.5	<0.5	<0.5
LYMAN	06/29/98	<1	<1	<1	<1
LYMAN	12/18/00	<5	<5	<5	<10
MW-1	05/01/91	500	--	--	--
MW-1	05/28/91	--	<500	1000	<500
MW-1	09/01/91	250	--	--	--
MW-1	12/01/91	200	200	300	100
MW-10	05/01/91	5500	--	--	--
MW-10	05/28/91	--	7000	500	4500
MW-10	09/01/91	2300	--	--	--
MW-10	12/01/91	2300	<100	200	2500
MW-10	04/01/92	1840	106	<3	2415
MW-10	07/01/92	1842	101	482	2183
MW-10	10/01/92	2100	144	436	759
MW-10	01/01/94	ND	--	ND	ND
MW-10	02/11/97	<0.5	<0.5	<0.5	<0.5
MW-11	09/01/91	3000	--	--	--
MW-11	12/01/91	3800	5800	500	5200
MW-11	04/01/92	3573	2979	484	6714
MW-11	07/01/92	2199	2440	463	3693
MW-11	10/01/92	2755	1896	<3	5196
MW-11	01/01/93	2746	1821	475	4280
MW-11	10/05/94	1800	<50	450	3500
MW-11	07/21/95	95	<0.5	4.4	250
MW-11	01/20/96	1000	32	190	2800
MW-11	04/19/96	650	38	84	2800
MW-11	07/01/96	500	46	370	2300
MW-11	10/01/96	270	15	230	1600
MW-11	02/07/97	270	20	81	1400
MW-12	09/01/91	3800	--	--	--
MW-13	09/01/91	3100	--	--	--
MW-13	12/01/91	3000	750	500	3300
MW-13	04/01/92	3501	142	<3	7137
MW-13	07/01/92	2708	136	597	2247
MW-13	10/01/96	1100	520	1200	2800
MW-13	02/07/97	1300	130	690	1000

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-13	07/01/98	800	<10	640	170
MW-14	09/01/91	5100	--	--	--
MW-14	06/22/98	820	<10	840	<10
MW-14	04/18/02	116	9	<5	<5
MW-14	10/16/02	23	<5	5	<5
MW-14	04/09/03	<5	<5	<5	<5
MW-14	10/24/03	330	<5	<5	<5
MW-15	09/01/91	5100	--	--	--
MW-16	09/01/91	1700	--	--	--
MW-16	04/15/93	514	53	39	2134
MW-17	09/01/91	2000	--	--	--
MW-17	04/15/93	1500	58	230	2900
MW-18	09/01/91	4300	--	--	--
MW-18	04/01/92	2900	82	750	1200
MW-18	07/01/92	2700	22	600	55
MW-18	10/01/92	3300	115	870	187
MW-19	07/01/91	4900	--	--	--
MW-19	07/19/91	--	1000	1300	--
MW-19	07/30/91	--	--	--	2500
MW-19	09/01/91	4700	--	--	--
MW-19	04/01/92	3240	347	807	326
MW-19	07/01/92	3000	40	800	41
MW-19	10/01/92	2756	73	758	166
MW-19	04/15/93	3926	130	16	82
MW-19	10/01/96	140	5.9	5.2	17
MW-19	02/07/97	360	980	1100	5600
MW-20	09/01/91	110	--	--	--
MW-21	05/01/91	9	--	--	--
MW-21	05/28/91	--	9	<1	3
MW-21	09/01/91	1000	--	--	--
MW-21	12/01/91	1100	<50	<50	1000
MW-21	04/15/93	114	19	38	38
MW-22	09/01/91	4	--	--	--
MW-24	09/01/91	3400	--	--	--
MW-24	07/01/92	4353	27	55	708
MW-26	09/01/91	3100	--	--	--
MW-26	12/01/91	3000	<100	400	3700
MW-26	07/01/92	2000	48	390	1400
MW-26	10/01/92	1860	59	567	1774
MW-26	01/01/93	1708	82	399	1083
MW-26	04/15/93	861	62	600	2014
MW-28	09/01/91	2200	--	--	--
MW-31	09/01/91	<1	--	--	--
MW-31	07/01/92	332	36	11	54
MW-31	10/01/92	9	32	10	18
MW-32	09/01/91	200	--	--	--
MW-33	09/01/91	6300	--	--	--
MW-34	09/01/91	2500	--	--	--
MW-35	09/01/91	5700	--	--	--
MW-37	06/01/91	<25	--	--	--
MW-37	06/22/91	--	<25	<25	<25

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-37	09/01/91	150	--	--	--
MW-37	07/14/93	27	7	<3	<3
MW-38	05/01/91	500	--	--	--
MW-38	05/28/91	--	<250	250	<250
MW-38	06/01/91	<10	--	--	--
MW-38	06/22/91	--	<10	<10	<10
MW-38	09/01/91	15	--	--	--
MW-38	12/01/91	15	<1	15	<1
MW-38	04/01/92	67	17	55	7
MW-38	07/01/92	37	34	25	56
MW-38	10/01/92	166	18	242	24
MW-38	10/01/96	0.6	<0.5	<0.5	0.7
MW-38	02/07/97	0.7	<0.5	<0.5	0.7
MW-39	05/01/91	<1	--	--	--
MW-39	05/28/91	--	<1	11	38
MW-39	06/01/91	<1	--	--	--
MW-39	06/22/91	--	<1	<1	<1
MW-39	09/01/91	880	--	--	--
MW-39	01/01/93	14	6	<5	<5
MW-39	04/15/93	28	15	4	11
MW-39	07/15/93	24	3	<3	3
MW-39	10/14/93	19	23	<3	10
MW-39	01/13/94	<2.5	<2.5	8.4	70
MW-39	04/07/94	<0.5	<0.5	4	38
MW-39	07/20/94	<0.5	<0.5	5.9	78
MW-39	01/10/95	<5	7.1	250	80
MW-39	10/01/96	20	<0.5	<0.5	<0.5
MW-39	02/07/97	<0.5	<0.5	<0.5	<0.5
MW-39	07/18/97	<0.5	<0.5	<0.5	<0.5
MW-39	04/30/98	<0.5	<0.5	<0.5	<0.5
MW-39	07/01/98	<1	<1	<1	<1
MW-39	Not Sampled - Dry				
MW-39	Well Plugged & Abandoned				
MW-41	07/01/91	300	--	--	--
MW-41	07/19/91	--	<50	350	--
MW-41	07/30/91	--	--	--	<50
MW-41	09/01/91	200	--	--	--
MW-41	12/01/91	170	30	400	<10
MW-41	07/15/93	12	<5	22	<5
MW-41	10/14/93	8.9	<0.5	17	<0.5
MW-41	01/13/94	5.3	<5	27	140
MW-41	04/06/94	0.6	<0.5	3.8	7.4
MW-41	07/20/94	1.4	31	4.9	<0.5
MW-41	10/06/94	3.2	44	0.7	90
MW-41	01/11/95	13	<5	42	23
MW-41	04/06/95	4.8	<0.5	19	33
MW-41	07/21/95	<0.5	<0.5	1.1	6.3
MW-41	10/12/95	1.8	8	2.6	18
MW-41	01/20/96	<5	10	<5	14
MW-41	04/19/96	1.7	9.8	5.5	6.7
MW-41	07/01/96	<0.5	6.1	3.6	1.7

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-41	10/01/96	8.1	2.4	5.8	5.5
MW-41	02/07/97	82	6.2	7.2	9.1
MW-41	07/18/97	280	6.9	6.9	23
MW-41	04/30/98	<0.5	7.1	4.5	21
MW-41	06/28/98	41	<1	<1	<1
MW-41	04/20/99	150	<5	<5	<10
MW-42	09/01/91	<1	--	--	--
MW-42	12/01/91	<1	<1	<1	<1
MW-43	06/01/91	<10	--	--	--
MW-43	06/22/91	--	<10	15	10
MW-43	09/01/91	320	--	--	--
MW-43	07/15/93	25	17	<3	3
MW-43	10/14/93	10	11	<3	<3
MW-43	01/13/94	<0.5	<0.5	<0.5	<0.5
MW-43	04/06/94	<0.5	<0.5	1.2	14
MW-43	07/20/94	<0.5	<0.5	1.5	7.1
MW-43	10/06/94	0.8	<0.5	2.3	17
MW-43	01/11/95	3	<0.5	5.5	15
MW-43	04/06/95	0.6	<0.5	2.8	14
MW-43	07/21/95	3	4	5.8	5.9
MW-43	10/12/95	1.2	2.4	3.8	5.5
MW-43	01/20/96	1.4	3.1	6.6	5.3
MW-43	04/19/96	4.4	4.3	1.3	5.3
MW-43	07/01/96	8.2	5.7	4.4	7
MW-43	10/01/96	230	2.1	4.3	3.6
MW-43	02/07/97	64	8.1	18	28
MW-43	07/18/97	110	<1	4.1	<1
MW-43	04/30/98	29	5.8	2.8	26
MW-43	06/22/98	7.3	<1	<1	<1
MW-43	04/20/99	12	<5	<5	<10
MW-43	12/08/99	<5	11	6.2	46
MW-43	04/28/00	4.1	<1	3.6	<1
MW-43	10/02/00	<5	7.4	5.1	41
MW-43	04/19/01	<5	<5	<5	<10
MW-43	10/31/01	<5	6	<5	<10
MW-43	04/17/02	<5	<5	<5	<5
MW-43	10/16/02	<5	8	<5	<5
MW-43	04/08/03	<5	<5	<5	<5
MW-43	10/28/03	<5	<5	<5	<5
MW-44	06/01/91	75	--	--	--
MW-44	06/22/91	--	<25	220	<25
MW-44	09/01/91	59	--	--	--
MW-44	04/01/92	6	22	24	2
MW-44	07/01/92	97	25	102	96
MW-44	10/01/92	12	34	96	24
MW-44	01/01/93	14	18	65	<1
MW-44	04/15/93	7	15	18	14
MW-44	07/15/93	6	16	<3	18
MW-44	10/14/93	3.6	<0.5	19	5.6
MW-44	01/13/94	12	<5	7.2	14
MW-44	04/06/94	22	<2.5	3.3	11

Notes:

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Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-44	07/20/94	36	<5	12	14
MW-44	10/05/94	130	<25	120	77
MW-44	01/11/95	63	<5	140	26
MW-44	04/06/95	19	2	71	16
MW-44	07/21/95	5.8	<0.5	16	5.6
MW-44	10/12/95	120	<50	240	260
MW-44	01/20/96	51	14	130	15
MW-44	04/19/96	26	11	74	6.3
MW-44	07/01/96	83	99	280	310
MW-44	10/01/96	33	2.7	20	2.6
MW-44	02/07/97	270	26	53	48
MW-44	07/18/97	750	<10	45	<10
MW-44	04/30/98	520	22	17	44
MW-44	06/22/98	440	<5	9.2	<5
MW-44	04/20/99	91	<5	16	<10
MW-45	06/01/91	<1	--	--	--
MW-45	06/22/91	--	<1	<1	<1
MW-45	09/01/91	<1	--	--	--
MW-45	12/01/91	<1	<1	<1	<1
MW-45	07/15/93	<3	6	7	4
MW-45	10/14/93	<3	3	<3	3
MW-45	01/13/94	<0.5	<0.5	<0.5	<0.5
MW-45	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-45	07/20/94	<0.5	<0.5	<0.5	<0.5
MW-46	06/01/91	3200	--	--	--
MW-46	06/22/91	--	<50	900	<50
MW-46	07/01/91	300	--	--	--
MW-46	07/19/91	--	<50	250	--
MW-46	07/30/91	--	--	--	250
MW-46	09/01/91	140	--	--	--
MW-46	10/01/96	900	33	440	59
MW-46	02/11/97	3300	550	1000	1400
MW-46	05/29/97	5000	1200	230	<100
MW-46	07/18/97	6100	1900	270	130
MW-46	04/30/98	1600	41	140	290
MW-46	07/01/98	1700	<5	97	120
MW-46	04/20/99	210	<5	11	20
MW-46	12/08/99	50	43	34	129
MW-46	04/28/00	17	<1	<1	<1
MW-46	10/02/00	12	39	19	128
MW-46	04/19/01	<5	<5	<5	<10
MW-46	10/31/01	<100	<100	<100	<200
MW-46	04/17/02	<5	<5	<5	<5
MW-46	10/16/02	14	<5	<5	<5
MW-46	04/09/03	<5	<5	<5	<5
MW-46		Not Sampled - Dry			
MW-47	06/01/91	600	--	--	--
MW-47	06/22/91	--	<100	2000	2700
MW-47	09/01/91	2600	--	--	--
MW-47	12/01/91	2200	<50	<50	<50
MW-47	10/01/96	1500	59	200	250

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Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-48	09/01/91	<1	--	--	--
MW-48	12/01/91	<1	5	10	<1
MW-48	07/01/92	47	18	6	18
MW-48	10/01/96	<0.5	<0.5	<0.5	1
MW-49	06/01/91	60	--	--	--
MW-49	06/22/91	--	<10	60	40
MW-49	09/01/91	35	--	--	--
MW-49	07/15/93	210	27	42	30
MW-49	10/14/93	68	26	9	20
MW-49	01/13/94	13	<5	15	110
MW-49	04/06/94	82	<0.5	11	10
MW-49	07/20/94	150	<5	32	27
MW-49	10/05/94	78	49	40	300
MW-49	01/11/95	220	<5	46	97
MW-49	04/06/95	120	<0.5	24	26
MW-49	07/21/95	17	<0.5	3.5	3.4
MW-49	10/12/95	240	<50	59	130
MW-49	01/20/96	160	130	120	570
MW-49	04/19/96	87	23	18	32
MW-49	07/01/96	370	220	190	630
MW-49	10/01/96	95	16	36	12
MW-49	02/07/97	79	66	45	160
MW-49	07/18/97	130	<1	35	9.8
MW-49	04/30/98	130	39	41	69
MW-49	07/01/98	78	<1	15	<1
MW-49	04/20/99	81	<5	32	<10
MW-49	12/08/99	32	68	58	380
MW-49	04/27/00	24	<1	12	<1
MW-49	10/02/00	35	38	18	107
MW-49	04/17/01	21	36	16	117
MW-49	10/31/01	21	<5	<5	<10
MW-49	04/17/02	19	<5	<5	<5
MW-49	10/16/02	31	<5	<5	<5
MW-49	04/08/03	71	<5	<5	<5
MW-49	10/28/03	97	<5	<5	<5
MW-50	06/01/91	<1	--	--	--
MW-50	06/22/91	--	<1	<1	<1
MW-50	09/01/91	<1	--	--	--
MW-50	12/01/91	<1	<1	<1	<1
MW-50	04/01/92	7	18	<3	17
MW-50	07/01/92	4	167	7	11
MW-50	10/01/92	8	10	3	2
MW-50	01/01/93	8	5	<3	5
MW-50	04/15/93	<1	<1	<1	<1
MW-50	07/15/93	<3	12	10	4
MW-50	10/14/93	9	16	<3	<3
MW-50	01/13/94	<0.5	<0.5	<0.5	<0.5
MW-50	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-50	07/20/94	<0.5	<0.5	<0.5	<0.5
MW-50	10/05/94	<0.5	<0.5	<0.5	<0.5
MW-50	01/11/95	<0.5	<0.5	<0.5	<0.5

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Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-50	04/06/95	<0.5	<0.5	<0.5	<0.5
MW-50	07/21/95	<0.5	<0.5	<0.5	<0.5
MW-50	10/12/95	<0.5	<0.5	<0.5	<0.5
MW-50	01/20/96	<0.5	<0.5	<0.5	<0.5
MW-50	04/19/96	<0.5	<0.5	<0.5	<0.5
MW-50	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-50	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-50	02/07/97	<0.5	<0.5	<0.5	<0.5
MW-50	07/18/97	<1	<1	<1	<1
MW-50	04/30/98	<0.5	<0.5	<0.5	<0.5
MW-50	06/28/98	<1	<1	<1	<1
MW-50	04/20/99	<5	<5	<5	<10
MW-50	12/08/99	<5	<5	<5	<10
MW-50	05/02/00	<1	<1	<1	<1
MW-50	10/02/00	<5	<5	<5	<10
MW-50	04/17/01	<5	<5	<5	<15
MW-50	10/31/01	<5	<5	<5	<10
MW-50	04/17/02	<5	<5	<5	<5
MW-50	10/16/02	<5	<5	<5	<5
MW-50	04/09/03	<5	<5	<5	<5
MW-50	10/22/03	<5	<5	<5	<5
MW-51	09/01/91	800	--	--	--
MW-51	12/01/91	<1	<1	<1	<1
MW-52	09/01/91	<1	--	--	--
MW-52	07/01/92	5	31	4	5
MW-53	09/01/91	<1	--	--	--
MW-54	09/01/91	<1	--	--	--
MW-54	12/01/91	<1	<1	<1	<1
MW-54	04/01/92	10	10	<3	14
MW-54	07/01/92	8	44	23	195
MW-54	10/01/92	62	7	195	630
MW-54	01/01/93	14	4	15	113
MW-54	04/14/93	10	<3	<3	8
MW-54	07/14/93	<3	<3	<3	3
MW-54	10/14/93	17	35	16	24
MW-54	01/12/94	8.6	<0.5	7.4	<0.5
MW-54	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-54	07/20/94	15	1.2	8.5	8.7
MW-54	10/05/94	19	0.6	29	6.3
MW-54	01/10/95	<0.5	<0.5	<0.5	<0.5
MW-54	04/06/95	<0.5	<0.5	<0.5	<0.5
MW-54	07/21/95	<0.5	<0.5	<0.5	<0.5
MW-54	10/11/95	0.7	<0.5	1.7	3
MW-54	01/20/96	<0.5	<0.5	<0.5	<0.5
MW-54	04/18/96	<0.5	<0.5	<0.5	<0.5
MW-54	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-54	10/01/96	0.9	<0.5	0.6	<0.5
MW-54	02/10/97	<0.5	<0.5	<0.5	<0.5
MW-54	07/16/97	0.9	3.2	2.1	17
MW-54	04/29/98	<0.5	<0.5	<0.5	<0.5
MW-54	06/25/98	<1	<1	<1	<1

Notes:

Concentrations listed in micrograms per liter (ug/L)

<5 Constituent not detected above noted laboratory detection limit

-- Indicates parameter was not analyzed

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-54	04/22/99	<5	<5	<5	<10
MW-54	01/06/00	<5	<5	<5	<10
MW-54	05/02/00	<1	<1	<1	<1
MW-54	10/03/00	<5	<5	<5	<10
MW-54	04/23/01	<5	<5	<5	<15
MW-54	11/01/01	<5	<5	<5	<10
MW-54	04/18/02	<5	<5	<5	<5
MW-54	10/21/02	<5	<5	<5	<5
MW-54	04/07/03	<5	<5	<5	<5
MW-54	10/27/03	<5	<5	<5	<5
MW-55	06/01/91	<50	--	--	--
MW-55	06/22/91	--	<50	<50	100
MW-55	09/01/91	940	--	--	--
MW-55	12/01/91	400	25	<25	25
MW-55	04/01/92	297	24	15	34
MW-55	07/01/92	483	36	64	66
MW-55	10/01/92	215	56	92	26
MW-55	01/01/93	390	68	90	32
MW-55	04/14/93	412	20	89	18
MW-55	07/14/93	625	21	8	50
MW-55	10/14/93	581	27	102	18
MW-55	01/12/94	290	<2.5	89	<2.5
MW-55	04/08/94	370	<2.5	33	<2.5
MW-55	07/20/94	360	5.5	16	120
MW-55	10/05/94	910	<5	480	<5
MW-55	01/11/95	650	<5	400	41
MW-55	04/11/95	420	<2.5	260	21
MW-55	07/20/95	350	<5	270	22
MW-55	10/11/95	100	6.1	70	15
MW-55	01/19/96	650	15	430	29
MW-55	04/18/96	370	13	310	22
MW-55	07/01/96	800	35	520	99
MW-55	10/01/96	520	32	460	84
MW-55	02/10/97	410	20	230	64
MW-55	07/16/97	140	11	110	9.2
MW-55	04/29/98	110	12	31	7.7
MW-55	06/25/98	180	<1	31	<1
MW-55	04/22/99	100	<5	13	<10
MW-55	12/09/99	90	19	15	<10
MW-55	05/02/00	68	<1	14	5.5
MW-55	10/04/00	43	10	14	<10
MW-55	04/24/01	50	<5	12	<5
MW-55	11/01/01	32	<5	10	<10
MW-55	04/24/02	43	12	<5	16
MW-55	10/17/02	40	<5	8	<5
MW-55	04/09/03	29	10	<5	<5
MW-55	10/24/03	33	<5	<5	<5
MW-56	06/01/91	2100	--	--	--
MW-56	06/22/91	--	<50	2900	<50
MW-56	07/01/91	2000	--	--	--
MW-56	07/19/91	--	500	1000	--

Notes:

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-56	07/30/91	--	--	--	1000
MW-56	09/01/91	2200	--	--	--
MW-56	12/01/91	1000	2000	3000	6000
MW-56	07/01/92	1114	64	962	49
MW-56	10/01/92	1026	47	<3	839
MW-56	01/01/93	1128	40	10	804
MW-56	10/01/96	1000	23	94	92
MW-56	02/11/97	370	12	51	51
MW-57	05/28/91	--	--	--	<0.2
MW-57	06/01/91	<1	--	--	--
MW-57	06/22/91	--	1	<1	<1
MW-57	07/01/91	<1	--	--	--
MW-57	07/19/91	--	0.2	0.4	--
MW-57	09/01/91	1600	--	--	--
MW-57	12/01/91	350	<10	<10	<10
MW-57	04/01/92	127	29	<3	16
MW-57	07/01/92	948	422	112	876
MW-57	10/01/92	15	33	<3	78
MW-57	01/01/93	21	40	165	19
MW-57	04/14/93	8	21	15	16
MW-57	07/14/93	6	8	<3	<3
MW-57	10/13/93	<0.5	1.6	<0.5	1.2
MW-57	01/12/94	<0.5	<0.5	<0.5	<0.5
MW-57	04/07/94	<0.5	<0.5	<0.5	<0.5
MW-57	07/19/94	0.7	<0.5	<0.5	1.8
MW-57	10/05/94	1.1	<0.5	<0.5	4
MW-57	01/11/95	4.3	<0.5	<0.5	1.3
MW-57	04/08/95	<0.5	<0.5	<0.5	<0.5
MW-57	07/20/95	<0.5	0.8	<0.5	<0.5
MW-57	10/11/95	64	1.7	0.7	5
MW-57	01/19/96	16	1.5	1	4.2
MW-57	04/18/96	<0.5	0.9	<0.5	<0.5
MW-57	07/01/96	2.8	1	<0.5	1.4
MW-57	10/01/96	54	2.8	3.4	13
MW-57	02/10/97	<0.5	0.9	<0.5	<0.5
MW-57	07/15/97	<0.5	<0.5	<0.5	<0.5
MW-57	04/29/98	<0.5	<0.5	<0.5	0.9
MW-57	06/24/98	<1	<1	<1	<1
MW-57	04/20/99	<5	<5	<5	<10
MW-57	05/04/00	<1	<1	3.4	8.8
MW-57	10/04/00	10	<5	<5	<10
MW-57	04/24/01	<5	<5	<5	<5
MW-57	04/22/02	<5	<5	<5	<5
MW-57	04/10/03	<5	<5	<5	<5
MW-58	09/01/91	40	--	--	--
MW-58	12/01/91	90	40	20	80
MW-58	04/01/92	203	32	56	68
MW-58	07/01/92	178	58	32	44
MW-58	10/01/92	190	49	26	57
MW-58	01/01/93	192	30	23	39
MW-58	04/13/93	55	16	31	9

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-58	07/13/93	25	42	14	13
MW-58	10/13/93	50	21	212	555
MW-58	04/05/94	<2.5	<2.5	7.4	27
MW-58	07/19/94	2	29	4.5	27
MW-58	10/06/94	6.7	<5	15	39
MW-58	04/08/95	2.2	<0.5	2.1	6.8
MW-58	10/01/96	110	320	940	10000
MW-58	01/30/98	350	23	42	96
MW-58	06/22/98	22	<1	28	35
MW-59	09/01/91	540	--	--	--
MW-59	12/01/91	420	40	240	420
MW-59	04/01/92	42	12	20	20
MW-59	07/01/92	268	45	110	232
MW-59	10/01/92	99	37	44	46
MW-59	01/01/93	26	<3	55	10
MW-59	04/13/93	10	14	12	5
MW-59	10/13/93	10	13	89	433
MW-59	04/05/94	<2.5	<2.5	3.3	25
MW-59	07/19/94	13	69	0.5	73
MW-59	10/06/94	4.1	3.7	23	37
MW-59	06/24/98	<5	<5	79	42
MW-59	05/04/00	29	<1	130	405
MW-59	10/05/00	<100	<100	490	520
MW-59	04/19/01	<5	<5	<5	<10
MW-59	04/23/02	<5	<5	<5	<5
MW-59	04/09/03	<5	<5	<5	<5
MW-60	05/28/91	--	--	--	<0.2
MW-60	07/01/91	<0.2	--	--	--
MW-60	07/19/91	--	<0.2	0.4	--
MW-60	09/01/91	33	--	--	--
MW-60	12/01/91	<1	<1	<1	<1
MW-60	04/01/92	5	9	<3	4
MW-60	07/01/92	17	1	<1	1
MW-60	10/01/92	32	109	36	57
MW-60	01/01/93	138	4	260	6
MW-60	04/14/93	17	16	<3	12
MW-60	07/14/93	<0.5	<0.5	<0.5	<0.5
MW-60	10/13/93	<0.5	1	0.5	1
MW-60	01/12/94	<0.5	<0.5	<0.5	<0.5
MW-60	04/07/94	<0.5	<0.5	<0.5	<0.5
MW-60	07/19/94	<0.5	1.3	<0.5	3.5
MW-60	10/05/94	<0.5	0.6	0.6	4.9
MW-60	01/10/95	<0.5	<0.5	<0.5	0.6
MW-60	04/07/95	<0.5	<0.5	<0.5	<0.5
MW-60	07/19/95	<0.5	4.9	<0.5	<0.5
MW-60	10/11/95	<0.5	<0.5	<0.5	<0.5
MW-60	01/19/96	<0.5	<0.5	<0.5	<0.5
MW-60	04/18/96	<0.5	<0.5	<0.5	<0.5
MW-60	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-60	10/01/96	2.5	0.9	<0.5	<0.5
MW-60	02/09/97	<0.5	<0.5	0.5	0.8

Notes:

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-60	05/06/97	<0.5	<0.5	<0.5	<0.5
MW-60	07/15/97	<0.5	<0.5	<0.5	<0.5
MW-60	10/16/97	<0.5	<0.5	<0.5	<0.5
MW-60	01/30/98	<0.5	<0.5	<0.5	<0.5
MW-60	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-60	07/01/98	<1	<1	<1	<1
MW-60	10/12/98	<0.5	<0.5	<0.5	<0.5
MW-60	02/01/99	<0.5	<0.5	<0.5	<0.5
MW-60	04/20/99	<5	<5	<5	<10
MW-60	12/13/99	<5	<5	<5	<10
MW-60	05/01/00	<1	<1	<1	<1
MW-60	10/04/00	<5	<5	<5	<10
MW-60	04/19/01	<5	<5	<5	<10
MW-60	11/01/01	<5	<5	<5	<10
MW-60	04/23/02	<5	<5	<5	<5
MW-60	10/17/02	<5	<5	<5	<5
MW-60	04/08/03	<5	<5	<5	<5
MW-60	10/23/03	<5	<5	<5	<5
MW-61	09/01/91	<1	--	--	--
MW-61	12/01/91	--	<1	<1	<1
MW-61	01/13/94	1.4	1	1.7	1.1
MW-61	04/07/94	<0.5	<0.5	0.5	<0.5
MW-61	07/20/94	3.2	<0.5	<0.5	0.8
MW-61	10/04/94	<5	23	14	160
MW-61	01/11/95	<0.5	0.7	2.5	0.8
MW-61	04/11/95	7	<0.5	7.8	35
MW-61	07/21/95	<0.5	<0.5	<0.5	<0.5
MW-61	10/10/95	<0.5	<0.5	<0.5	<0.5
MW-61	01/20/96	<0.5	<0.5	<0.5	<0.5
MW-61	04/18/96	<0.5	<0.5	<0.5	<0.5
MW-61	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-61	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-61	02/10/97	<0.5	<0.5	<0.5	<0.5
MW-61	07/17/97	<0.5	<0.5	<0.5	<0.5
MW-61	04/29/98	<0.5	<0.5	<0.5	<0.5
MW-61	06/28/98	<1	<1	<1	<1
MW-61	04/20/99	100	<5	13	<10
MW-61	04/20/99	100	<5	13	<10
MW-61	05/03/00	<1	<1	<1	<1
MW-61	10/02/00	<5	<5	<5	<10
MW-61	04/23/01	<5	<5	<5	<10
MW-61	10/31/01	<5	<5	<5	<10
MW-61	04/19/02	<5	<5	<5	<5
MW-61	10/16/02	<5	<5	<5	<5
MW-61	04/08/03	<5	<5	<5	<5
MW-61	10/22/03	<5	<5	<5	<5
MW-61A	05/28/91	--	--	--	0.5
MW-61A	07/01/91	2	--	--	--
MW-61A	07/19/91	--	1.5	0.4	--
MW-61A	09/01/91	190	--	--	--
MW-61A	12/01/91	10	10	5	75

Notes:

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-61A	04/01/92	6	7	<3	13
MW-61A	07/01/92	60	<10	3	8
MW-61A	10/01/92	470	17	<3	2351
MW-61A	01/01/93	585	82	397	2368
MW-61A	04/13/93	2821	173	817	3993
MW-61A	04/05/94	<0.5	<0.5	0.5	3.8
MW-61A	07/19/94	<0.5	<0.5	<0.5	2.5
MW-61A	10/04/94	4.8	4.5	3.7	37
MW-61A	01/10/95	16	<5	30	220
MW-61A	01/20/96	<0.5	<0.5	<0.5	0.8
MW-61A	04/19/96	<0.5	<0.5	<0.5	<0.5
MW-61A	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-61A	10/01/96	1.7	1.7	1.3	9.4
MW-61A	02/06/97	42	3.4	8.4	46
MW-61A	05/07/97	330	59	<25	850
MW-61A	06/27/97	22	11	-5.4	26
MW-61A	07/15/97	16	<10	10	93
MW-61A	10/15/97	35	13	22	95
MW-61A	01/29/98	15	16	26	130
MW-61A	04/29/98	7.1	9.5	24	93
MW-61A	06/28/98	1.5	<1	7.9	20
MW-61A	10/11/98	4.5	22	15	61
MW-61A	02/01/99	<0.5	<0.5	12	54
MW-61A	04/20/99	<5	<5	15	40
MW-61A	12/16/99	<5	6.3	<5	26.7
MW-61A	05/03/00	<1	<1	<1	1.5
MW-61A	10/02/00	<5	<5	<5	<10
MW-61A	04/18/01	<5	<5	<5	<15
MW-61A	10/31/01	<5	<5	<5	<10
MW-61A	04/19/02	<5	<5	<5	<5
MW-61A	10/16/02	<5	<5	<5	<5
MW-61A	04/08/03	<5	<5	<5	<5
MW-61A	10/22/03	<5	<5	<5	<5
MW-62	09/01/91	2200	--	--	--
MW-62	12/01/91	1400	<200	400	2400
MW-62	04/01/92	263	48	170	298
MW-62	07/01/92	357	13	184	301
MW-62	10/01/92	212	19	416	1692
MW-62	01/01/93	78	18	--	207
MW-62	04/13/93	33	15	16	24
MW-62	07/14/93	98	12	70	204
MW-62	10/13/93	19	20	20	32
MW-62	01/11/94	4.1	<2.5	13	44
MW-62	04/05/94	<2.5	<2.5	4.4	26
MW-62	07/19/94	4.3	32	7.5	26
MW-62	10/06/94	13	13	11	39
MW-62	04/08/95	7.5	30	12	30
MW-62	07/18/97	20	19	58	210
MW-62	06/26/98	<10	<10	41	56
MW-62	04/21/99	<5	<5	18	20
MW-62	05/03/00	4.5	1.5	3.3	16.7

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-62	10/05/00	14	<5	6	35
MW-62	04/20/01	<5	8.3	<5	24
MW-62	04/22/02	<5	<5	<5	<5
MW-62	04/10/03	8	<5	<5	<5
MW-63	09/01/91	<1	--	--	--
MW-63	12/01/91	<1	<1	<1	<1
MW-63	04/01/92	5	6	<3	8
MW-63	07/01/92	12	28	3	20
MW-63	10/01/92	4	7	17	33
MW-63	01/01/93	12	4	<3	13
MW-63	04/13/93	<1	<1	<1	<1
MW-63	07/13/93	4	<3	<3	<3
MW-63	10/12/93	14	48	11	39
MW-63	01/11/94	<0.5	0.7	<0.5	0.7
MW-63	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-63	07/18/94	1	9.6	1.4	13
MW-63	10/04/94	<0.5	2.6	1	8
MW-63	01/09/95	<0.5	<0.5	<0.5	<0.5
MW-63	04/07/95	<0.5	<0.5	<0.5	<0.5
MW-63	07/18/95	<0.5	1	<0.5	<0.5
MW-63	10/10/95	<0.5	<0.5	<0.5	<0.5
MW-63	01/18/96	<0.5	<0.5	<0.5	<0.5
MW-63	04/17/96	<0.5	<0.5	<0.5	<0.5
MW-63	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-63	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-63	02/05/97	<0.5	<0.5	<0.5	<0.5
MW-63	07/15/97	<0.5	<0.5	<0.5	<0.5
MW-63	10/15/97	<0.5	<0.5	<0.5	<0.5
MW-63	06/25/98	<1	<1	<1	<1
MW-63	10/11/98	<0.5	<0.5	<0.5	<0.5
MW-63	04/22/99	<5	<5	<5	<10
MW-63	04/27/00	<1	<1	<1	<1
MW-63	10/03/00	<5	<5	<5	<10
MW-63	04/24/01	<5	<5	<5	<15
MW-63	04/18/02	<5	<5	<5	<5
MW-63	04/10/03	<5	<5	<5	<5
MW-64	09/01/91	150	--	--	--
MW-64	12/01/91	130	<10	40	160
MW-64	04/01/92	245	32	82	331
MW-64	07/01/92	115	19	10	40
MW-64	10/01/92	37	61	<3	96
MW-64	01/01/93	6	2	1	4
MW-64	04/13/93	5	11	5	9
MW-64	07/13/93	2	<0.5	<0.5	<0.5
MW-64	10/13/93	18	12	3	71
MW-64	11/10/93	<4	<4	<4	<4
MW-64	01/12/94	1.7	<0.5	<0.5	0.9
MW-64	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-64	07/19/94	<0.5	0.5	<0.5	3.6
MW-64	10/05/94	<0.5	0.5	0.6	5.6
MW-64	01/10/95	12	<0.5	5.1	13

Notes:

Concentrations listed in micrograms per liter (ug/L)

<5 Constituent not detected above noted laboratory detection limit

-- Indicates parameter was not analyzed

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-64	04/07/95	18	<0.5	18	41
MW-64	07/19/95	17	1.1	9.8	23
MW-64	10/11/95	25	1.7	13	32
MW-64	01/19/96	14	2.2	9.3	23
MW-64	04/18/96	10	2	4.3	7.9
MW-64	07/16/97	84	<25	130	310
MW-64	06/23/98	<1	<1	<1	<1
MW-64	04/21/99	<5	<5	<5	<10
MW-64	12/13/99	<5	<5	<5	<10
MW-64	05/03/00	<1	<1	<1	<1
MW-64	10/04/00	<5	<5	<5	<10
MW-64	04/20/01	<5	<5	<5	<10
MW-64	11/05/01	<5	<5	<5	<10
MW-64	04/22/02	<5	<5	<5	<5
MW-64	10/17/02	<5	<5	<5	<5
MW-64	04/08/03	<5	<5	<5	<5
MW-64	10/22/03	<5	<5	<5	<5
MW-65	09/01/91	<1	--	--	--
MW-65	12/01/91	--	<1	<1	<1
MW-65	07/15/93	<3	6	<3	3
MW-65	10/05/94	<0.5	<0.5	<0.5	<0.5
MW-65	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-65	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-65	02/11/97	<0.5	<0.5	<0.5	<0.5
MW-65	05/07/97	<0.5	<0.5	<0.5	<0.5
MW-65	04/30/98	<0.5	<0.5	<0.5	<0.5
MW-65	12/09/99	<5	<5	<5	<10
MW-65	10/02/00	<5	<5	<5	<10
MW-65	04/20/01	<5	<5	<5	<10
MW-65	11/01/01	<5	<5	<5	<10
MW-65	10/16/02	<5	<5	<5	<5
MW-65	04/11/03	<5	<5	<5	<5
MW-65	Not Sampled - Dry				
MW-65A	09/01/91	680	--	--	--
MW-65A	12/01/91	150	15	<1	15
MW-65A	04/01/92	26	15	<3	12
MW-65A	07/01/92	413	235	93	551
MW-65A	10/01/92	11	<3	<3	67
MW-65A	01/01/93	3	<3	<3	11
MW-65A	04/13/93	4	9	3	8
MW-65A	07/13/93	<3	3	<3	<3
MW-65A	10/13/93	7	3	<3	<3
MW-65A	01/11/94	<0.5	<0.5	<0.5	<0.5
MW-65A	04/05/94	<0.5	<0.5	<0.5	<0.5
MW-65A	07/19/94	<0.5	<0.5	<0.5	<0.5
MW-65A	10/06/94	1.7	<0.5	<0.5	<0.5
MW-65A	01/11/95	<0.5	<0.5	<0.5	0.7
MW-65A	04/08/95	<0.5	<0.5	<0.5	0.5
MW-65A	01/20/96	<0.5	<0.5	<0.5	<0.5
MW-65A	04/18/96	<0.5	<0.5	<0.5	2
MW-65A	06/25/98	<1	<1	16	415

Notes:

Concentrations listed in micrograms per liter (ug/L)

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-66	09/01/91	<1	--	--	--
MW-66	12/01/91	<1	<1	<1	<1
MW-66	04/01/92	4	7	<3	4
MW-66	07/01/92	8	25	7	11
MW-66	10/01/92	12	36	<3	34
MW-66	01/01/93	3	6	3	20
MW-66	04/13/93	<3	5	5	<3
MW-66	07/13/93	8	4	<3	<3
MW-66	10/12/93	13	60	4	29
MW-66	11/10/93	<4	<4	<4	<4
MW-66	01/11/94	<0.5	<0.5	<0.5	0.6
MW-66	04/07/94	<0.5	<0.5	<0.5	<0.5
MW-66	07/19/94	<0.5	0.6	<0.5	0.8
MW-66	10/04/94	<0.5	3	1.5	17
MW-66	01/09/95	<0.5	<0.5	<0.5	<0.5
MW-66	04/11/95	<0.5	<0.5	<0.5	<0.5
MW-66	07/19/95	<0.5	0.9	<0.5	<0.5
MW-66	10/10/95	<0.5	<0.5	<0.5	3.5
MW-66	01/19/96	<0.5	<0.5	<0.5	<0.5
MW-66	04/17/96	<0.5	0.8	<0.5	1
MW-66	07/01/96	<0.5	<0.5	<0.5	0.5
MW-66	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-66	02/05/97	<0.5	<0.5	<0.5	<0.5
MW-66	05/06/97	<0.5	<0.5	<0.5	<0.5
MW-66	07/16/97	<0.5	<0.5	<0.5	<0.5
MW-66	10/15/97	<0.5	<0.5	<0.5	<0.5
MW-66	01/29/98	<0.5	<0.5	<0.5	<0.5
MW-66	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-66	06/17/98	<1	1.6	<1	<1
MW-66	10/11/98	<0.5	<0.5	<0.5	<0.5
MW-66	02/01/99	<0.5	<0.5	<0.5	<0.5
MW-66	04/21/99	<5	<5	<5	<10
MW-66	12/10/99	<5	<5	<5	<10
MW-66	04/27/00	<1	<1	<1	<1
MW-66	10/05/00	<5	<5	<5	<10
MW-66	04/18/01	<5	<5	<5	<15
MW-66	11/01/01	<5	<5	<5	<10
MW-66	04/19/02	<5	<5	<5	<5
MW-66	10/16/02	<5	<5	<5	<5
MW-66	04/08/03	<5	<5	<5	<5
MW-66	10/22/03	<5	<5	<5	<5
MW-67	09/01/91	280	--	--	--
MW-67	12/01/91	320	<10	<10	<10
MW-67	04/01/92	5	8	<3	12
MW-67	07/01/92	69	10	20	116
MW-67	10/01/92	3	9	<3	73
MW-67	01/01/93	8	3	<3	12
MW-67	04/13/93	7	18	7	19
MW-67	07/13/93	7	<3	<3	<3
MW-67	10/13/93	<0.5	0.9	<0.5	1.1
MW-67	01/12/94	<0.5	<0.5	<0.5	<0.5

Notes:

Concentrations listed in micrograms per liter (ug/L)

<5 Constituent not detected above noted laboratory detection limit

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-67	04/07/94	<0.5	<0.5	<0.5	<0.5
MW-67	07/19/94	<0.5	0.6	<0.5	3
MW-67	10/05/94	<0.5	<0.5	<0.5	4.3
MW-67	01/11/95	1	<0.5	<0.5	1.1
MW-67	04/07/95	1.8	<0.5	<0.5	1.3
MW-67	07/21/95	<0.5	<0.5	<0.5	0.6
MW-67	10/11/95	6.1	1.8	0.5	4.2
MW-67	01/19/96	4.8	3.6	0.6	4.7
MW-67	04/18/96	3.4	0.9	<0.5	2.5
MW-67	07/01/96	95	110	28	280
MW-67	02/10/97	15	4.8	1.9	41
MW-67	07/16/97	160	330	110	1200
MW-67	06/24/98	1.3	2.7	3.5	45.3
MW-67	04/22/99	<5	<5	<5	<10
MW-67	05/02/00	<1	<1	<1	13.4
MW-67	10/04/00	<5	<5	<5	<10
MW-67	04/19/01	<5	<5	<5	<10
MW-67	11/05/01	<5	<5	<5	<10
MW-67	04/22/02	<5	<5	<5	<5
MW-67	10/17/02	6	<5	<5	<5
MW-67	04/11/03	<5	<5	<5	<5
MW-67	10/22/03	<5	<5	<5	<5
MW-68	09/01/91	240	--	--	--
MW-68	12/01/91	1900	4500	500	4000
MW-68	04/01/92	2470	3370	550	3866
MW-68	07/01/92	160	267	49	746
MW-68	10/01/92	2205	3327	<3	4721
MW-68	01/01/93	376	944	246	2376
MW-68	04/13/93	650	1900	330	4000
MW-68	07/13/93	150	230	110	1100
MW-68	10/13/93	374	628	286	2398
MW-68	01/11/94	3000	820	1000	7700
MW-68	04/05/94	120	61	170	1300
MW-68	07/19/94	260	170	220	2000
MW-68	10/17/97	740	100	490	3800
MW-68	06/26/98	390	26	140	990
MW-69	09/01/91	2400	--	--	--
MW-69	12/01/91	2100	1100	150	4200
MW-69	07/01/92	568	56	1785	1966
MW-69	10/01/92	1598	71	<3	2879
MW-69	01/01/93	1284	49	309	1931
MW-69	07/18/97	930	23	410	1100
MW-69	04/30/98	970	22	500	530
MW-69	06/29/98	1200	<10	520	510
MW-69	Not Sampled - Condensate Present				
MW-69	Not Sampled - Condensate Present				
MW-69	Not Sampled - Condensate Present				
MW-69	10/18/02	80	<20	40	<20
MW-69	Not Sampled - Condensate Present				
MW-69	Not Sampled - Condensate Present				
MW-70	09/01/91	<1	--	--	--

Notes:

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-70	12/01/91	<1	<1	<1	<1
MW-70	04/01/92	3	17	<3	8
MW-70	07/01/92	<1	3	1	13
MW-70	10/01/92	11	40	63	60
MW-70	01/01/93	<3	<3	8	5
MW-70	04/14/93	9	20	<3	4
MW-70	07/13/93	<1	11	3	<3
MW-70	10/12/93	25	19	19	18
MW-70	11/10/93	<4	<4	<4	40
MW-70	01/11/94	<0.5	0.6	<0.5	<0.5
MW-70	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-70	07/18/94	<0.5	<0.5	<0.5	<0.5
MW-70	10/04/94	1.2	4.3	1.3	12
MW-70	01/09/95	<0.5	2.3	<0.5	2.4
MW-70	04/05/95	<0.5	<0.5	<0.5	1.1
MW-70	07/18/95	<0.5	0.8	<0.5	<0.5
MW-70	10/10/95	<0.5	<0.5	<0.5	<0.5
MW-70	01/18/96	<0.5	<0.5	<0.5	<0.5
MW-70	04/17/96	<0.5	<0.5	<0.5	<0.5
MW-70	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-70	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-70	02/05/97	<0.5	<0.5	<0.5	<0.5
MW-70	10/15/97	<0.5	<0.5	<0.5	<0.5
MW-70	06/16/98	<1	<1	<1	<1
MW-70	04/22/99	<5	<5	<5	<10
MW-70	04/28/00	<1	<1	<1	<1
MW-70	10/03/00	<5	<5	<5	<10
MW-70	04/24/01	<5	<5	<5	<15
MW-70	04/18/02	<5	<5	<5	<5
MW-70	04/06/03	<5	<5	<5	<5
MW-71	09/01/93	<4	<4	<4	<4
MW-71	10/12/93	8	5	4	16
MW-71	11/10/93	<4	<4	<4	<4
MW-71	01/11/94	<0.5	1.3	<0.5	0.5
MW-71	04/06/94	<0.5	<0.5	<0.5	<0.5
MW-71	07/18/94	<0.5	3	0.7	6.2
MW-71	10/04/94	1.1	6.8	2.7	31
MW-71	01/10/95	<0.5	<0.5	<0.5	<0.5
MW-71	06/23/95	<0.5	66	<0.5	<0.5
MW-71	07/18/95	<0.5	1.2	<0.5	1.9
MW-71	10/10/95	<0.5	<0.5	<0.5	7.3
MW-71	01/18/96	<0.5	<0.5	<0.5	<0.5
MW-71	04/17/96	<0.5	<0.5	<0.5	<0.5
MW-71	07/01/96	<0.5	<0.5	<0.5	<0.5
MW-71	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-71	02/09/97	5.2	1.3	0.8	1.3
MW-71	05/06/97	<0.5	<0.5	<0.5	<0.5
MW-71	07/17/97	<0.5	<0.5	<0.5	<0.5
MW-71	10/16/97	<0.5	<0.5	<0.5	<0.5
MW-71	01/29/98	<0.5	<0.5	<0.5	<0.5
MW-71	04/29/98	<0.5	<0.5	<0.5	<0.5

Notes:

Concentrations listed in micrograms per liter (ug/L)

<5 Constituent not detected above noted laboratory detection limit

-- Indicates parameter was not analyzed

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-71	06/28/98	<1	<1	<1	<1
MW-71	10/11/98	<0.5	<0.5	<0.5	<0.5
MW-71	02/01/99	<0.5	<0.5	<0.5	<0.5
MW-71	04/21/99	<5	<5	<5	<10
MW-71	12/10/99	<5	<5	<5	<10
MW-71	04/28/00	<1	<1	<1	<1
MW-71	10/02/00	<5	<5	<5	<10
MW-71	04/18/01	<5	<5	<5	<15
MW-71	10/31/01	<5	<5	<5	<10
MW-71	04/23/02	<5	<5	<5	<5
MW-71	10/16/02	<5	<5	<5	<5
MW-71	04/08/03	<5	<5	<5	<5
MW-71	10/21/03	<5	<5	<5	<5
MW-72	04/05/94	<2.5	<2.5	4.7	15
MW-72	07/19/94	18	<0.5	5.1	2.8
MW-72	06/30/98	56	<10	100	<10
MW-73	06/30/98	1.1	<1	<1	<1
MW-73	12/14/99	5.7	<5	<5	8.9
MW-73	05/04/00	<1	<1	<1	<1
MW-73	10/05/00	<5	<5	<5	<10
MW-73	04/23/01	<5	<5	<5	<5
MW-73	11/01/01	<5	<5	<5	<10
MW-73	04/24/02	<5	<5	<5	<5
MW-73	10/21/02	<5	<5	<5	<5
MW-73	04/09/03	<5	<5	<5	<5
MW-73	10/24/03	<5	<5	<5	<5
MW-74	07/18/97	180	320	180	1900
MW-74	06/24/98	220	<10	10	<10
MW-74	12/14/99	100	3900	990	6700
MW-74	05/04/00	<1	19	40	110
MW-74	10/05/00	<5	140	66	1320
MW-74	04/24/01	<100	<100	<100	<100
MW-74	11/01/01	<50	<50	<50	<100
MW-74	04/24/02	7	<5	<5	<5
MW-74	Not Sampled - Condensate Present				
MW-74	04/10/03	<5	<5	<5	<5
MW-74	10/23/03	<5	<5	<5	<5
MW-75	06/30/98	200	<10	89	270
MW-76	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-76	06/29/98	<1	<1	<1	<1
MW-77	07/21/95	<0.5	<0.5	1.9	2.8
MW-77	01/20/96	<0.5	3.1	<0.5	7.1
MW-77	04/19/96	<0.5	3.8	0.8	2.5
MW-77	07/01/96	8	14	19	35
MW-77	10/01/96	160	320	150	1000
MW-77	05/07/97	8.4	70	8.3	52
MW-77	07/18/97	14	30	11	71
MW-77	12/09/99	<5	<5	<5	<10
MW-77	10/03/00	<5	<5	<5	24
MW-77	Not Sampled - Condensate Present				
MW-77	Not Sampled - Dry				

Notes:
Concentrations listed in micrograms per liter (ug/L)
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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-77	10/21/02	<5	<5	<5	<5
MW-77	04/10/03	<5	<5	<5	<5
MW-77	10/24/03	<5	<5	<5	<5
MW-78	10/01/96	32	15	9.1	35
MW-78	02/10/97	41	7.9	7.4	12
MW-78	05/07/97	20	42	12	23
MW-78	07/17/97	8.2	10	6.6	16
MW-78	04/30/98	1.4	4.9	2	7.7
MW-78	06/28/98	<1	<1	<1	<1
MW-78	04/22/99	<5	<5	<5	<10
MW-78	12/09/99	<5	44	55	420
MW-78	10/05/00	<25	<25	<25	96
MW-78	Not Sampled - Condensate Present				
MW-78	11/02/01	<5	<5	<5	<10
MW-78	04/22/02	<5	<5	<5	<5
MW-78	10/01/02	<5	<5	<5	<5
MW-78	04/10/03	<5	<5	<5	<5
MW-78	10/24/03	<5	<5	<5	<5
MW-79	01/11/95	110	<5	8.5	61
MW-79	04/06/95	14	<0.5	10	53
MW-79	07/21/95	<5	74	7.7	62
MW-79	10/10/95	16	4	<2.5	3.7
MW-79	01/18/96	10	6.7	1.4	4.9
MW-79	04/19/96	2.4	7.3	1	2.7
MW-79	07/01/96	3.2	6.3	0.9	6.3
MW-79	10/01/96	1.7	5.8	1	4.2
MW-79	02/10/97	<0.5	<0.5	<0.5	<0.5
MW-79	05/07/97	<0.5	<0.5	<0.5	<0.5
MW-79	07/17/97	<0.5	<0.5	<0.5	<0.5
MW-79	04/29/98	<0.5	1.5	<0.5	1.1
MW-79	06/28/98	<1	<1	<1	<1
MW-79	04/22/99	<5	<5	<5	<10
MW-79	12/09/99	<5	<5	<5	<10
MW-79	05/02/00	<1	<1	<1	<1
MW-79	04/19/01	<5	<5	<5	<10
MW-79	11/01/01	<5	<5	<5	<10
MW-79	04/17/02	<5	<5	<5	<5
MW-79	10/18/02	<5	<5	<5	<5
MW-79	Not Sampled - Dry				
MW-79	Not Sampled - Dry				
MW-81	06/29/98	<1	<1	<1	1.5
MW-82	10/11/95	280	<50	450	910
MW-82	06/25/98	70	<5	75	510
MW-83	06/25/98	<10	<10	16	31
MW-84	06/23/98	93	13	55	458
MW-85	06/23/98	280	<5	120	6.3
MW-86	10/17/97	510	360	580	1400
MW-86	06/26/98	91	10	28	360
MW-87	08/01/96	<0.5	20	<0.5	0.5
MW-87	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-87	02/09/97	<0.5	<0.5	<0.5	<0.5

Notes:
Concentrations listed in micrograms per liter (ug/L)
<5 Constituent not detected above noted laboratory detection limit
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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-87	05/06/97	<0.5	<0.5	<0.5	<0.5
MW-87	10/16/97	<0.5	<0.5	<0.5	<0.5
MW-87	01/29/98	<0.5	<0.5	<0.5	<0.5
MW-87	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-87	06/27/98	<1	<1	<1	<1
MW-87	10/12/98	<0.5	<0.5	<0.5	<0.5
MW-87	02/02/99	<0.5	<0.5	<0.5	<0.5
MW-87	04/20/99	<5	<5	<5	<10
MW-87	12/13/99	<5	<5	<5	<10
MW-87	05/01/00	<1	<1	<1	<1
MW-87	10/04/00	<5	<5	<5	<10
MW-87	04/19/01	<5	<5	<5	<10
MW-87	11/01/01	<5	<5	<5	<10
MW-87	04/23/02	<5	<5	<5	<5
MW-87	10/17/02	<5	<5	<5	<5
MW-87	04/08/03	<5	<5	<5	<5
MW-87	10/23/03	<5	<5	<5	<5
MW-87A	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-87A	02/09/97	0.9	<0.5	0.7	1.5
MW-87A	05/07/97	<0.5	<0.5	<0.5	<0.5
MW-87A	10/16/97	<0.5	<0.5	<0.5	<0.5
MW-87A	01/29/98	<0.5	<0.5	<0.5	<0.5
MW-87A	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-87A	06/27/98	<1	<1	<1	<1
MW-87A	02/02/99	<0.5	<0.5	<0.5	<0.5
MW-87A	04/20/99	<5	<5	<5	<10
MW-87A	12/13/99	<5	<5	<5	<10
MW-87A	05/01/00	<1	<1	<1	<1
MW-87A	10/03/00	<5	<5	<5	<10
MW-87A	04/19/01	<5	<5	<5	<10
MW-87A	11/01/01	<5	<5	<5	<10
MW-87A	04/23/02	<5	<5	<5	<5
MW-87A	10/17/02	<5	<5	<5	<5
MW-87A	04/08/03	<5	<5	<5	<5
MW-87A	10/23/03	<5	<5	<5	<5
MW-88	08/01/96	<0.5	1.1	0.5	1
MW-88	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-88	02/05/97	<0.5	<0.5	<0.5	<0.5
MW-88	04/30/97	<0.5	<0.5	<0.5	<0.5
MW-88	10/15/97	<0.5	<0.5	<0.5	<0.5
MW-88	01/29/98	<0.5	<0.5	<0.5	<0.5
MW-88	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-88	06/27/98	<1	<1	<1	<1
MW-88	10/11/98	<0.5	<0.5	<0.5	<0.5
MW-88	02/01/99	1.6	1.8	1.6	4.8
MW-88	04/21/99	<5	<5	<5	<10
MW-88	12/10/99	<5	<5	<5	<10
MW-88	04/28/00	<1	<1	<1	<1
MW-88	10/02/00	<5	<5	<5	<5
MW-88	04/17/01	<5	<5	<5	<15
MW-88	10/31/01	<5	<5	<5	<10

Notes:

Concentrations listed in micrograms per liter (ug/L)

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-88	04/19/02	<5	<5	<5	<5
MW-88	10/16/02	<5	<5	<5	<5
MW-88	04/08/03	<5	<5	<5	<5
MW-88	10/21/03	<5	<5	<5	<5
MW-89	08/01/96	<0.5	1.1	<0.5	<0.5
MW-89	10/01/96	<0.5	<0.5	<0.5	<0.5
MW-89	02/05/97	<0.5	<0.5	<0.5	<0.5
MW-89	04/30/97	<0.5	<0.5	<0.5	<0.5
MW-89	10/15/97	<0.5	<0.5	<0.5	<0.5
MW-89	01/29/98	<0.5	<0.5	<0.5	<0.5
MW-89	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-89	06/17/98	<1	<1	<1	<1
MW-89	02/01/99	11	1.3	<0.5	<0.5
MW-89	04/21/99	<5	<5	<5	<10
MW-89	12/10/99	<5	<5	<5	<10
MW-89	04/27/00	<1	<1	<1	<1
MW-89	10/05/00	<5	<5	<5	<10
MW-89	04/18/01	<5	<5	<5	<10
MW-89	11/02/01	<5	<5	<5	<10
MW-89	04/19/02	<5	<5	<5	<5
MW-89	10/16/02	<5	<5	<5	<5
MW-89	04/07/03	<5	<5	<5	<5
MW-89	10/22/03	<5	<5	<5	<5
MW-90	02/10/97	17	0.5	15	1.4
MW-90	05/07/97	1.1	0.5	0.5	<0.5
MW-90	07/17/97	<0.5	<0.5	<0.5	<0.5
MW-90	04/29/98	<0.5	<0.5	<0.5	<0.5
MW-90	06/17/98	<1	<1	<1	<1
MW-90	04/23/99	<5	<5	<5	<10
MW-90	12/09/99	<5	<5	<5	<10
MW-90	05/02/00	<1	<1	<1	<1
MW-90	10/03/00	<5	<5	<5	<10
MW-90	04/24/01	82	9.3	65	140
MW-90	11/01/01	<5	<5	<5	<10
MW-90	04/18/02	<5	<5	<5	<5
MW-90	10/17/02	<5	<5	<5	<5
MW-90	04/06/03	<5	<5	<5	<5
MW-90	10/23/03	<5	<5	<5	<5
MW-91	02/11/97	340	14	50	55
MW-91	04/30/98	17	32	19	200
MW-91	04/23/99	19	<5	8	<10
MW-91	12/09/99	140	15	5.2	19
MW-91	10/03/00	<5	6.7	<5	35
MW-91	04/20/01	40.6	16.4	<5	<10
MW-91	11/01/01	<200	<200	<200	<500
MW-91	04/18/02	36	<5	<5	<5
MW-91	10/18/02	16	<5	5	<5
MW-91	04/06/03	59	<5	5	<5
MW-91	10/23/03	<5	<5	<5	<5
MW-94	10/17/97	<0.5	<0.5	<0.5	<0.5
MW-94	06/26/98	<1	<1	<1	<1

Notes:

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-94	04/22/99	<5	<5	<5	<10
MW-94	05/03/00	<1	<1	<1	<1
MW-94	10/05/00	<5	<5	<5	<10
MW-94	04/24/01	<5	<5	<5	<15
MW-94	04/24/02	<5	<5	<5	<5
MW-94	04/07/03	<5	<5	<5	<5
MW-95	04/30/97	<0.5	<0.5	<0.5	<0.5
MW-95	01/30/98	<0.5	<0.5	<0.5	<0.5
MW-95	06/22/98	<1	<1	<1	<1
MW-95	04/22/99	<5	<5	<5	<10
MW-95	12/14/99	<5	<5	<5	<10
MW-95	05/02/00	<1	<1	<1	<1
MW-95	04/24/01	<5	<5	<5	<15
MW-95	11/06/01	<5	<5	<5	<10
MW-95	04/23/02	<5	<5	<5	<5
MW-95	10/17/02	<5	<5	<5	<5
MW-95	04/09/03	<5	<5	<5	<5
MW-95	10/23/03	<5	<5	<5	<5
MW-96	04/30/97	<0.5	<0.5	<0.5	<0.5
MW-96	10/16/97	<0.5	<0.5	<0.5	<0.5
MW-96	01/30/98	<0.5	<0.5	<0.5	<0.5
MW-96	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-96	07/01/98	<1	<1	<1	<1
MW-96	10/12/98	<0.5	<0.5	<0.5	<0.5
MW-96	02/02/99	<0.5	<0.5	<0.5	<0.5
MW-96	04/22/99	<5	<5	<5	<10
MW-96	12/14/99	<5	<5	<5	<10
MW-96	05/01/00	<1	<1	<1	<1
MW-96	10/04/00	<5	<5	<5	<10
MW-96	04/19/01	<5	<5	<5	<10
MW-96	11/01/01	<5	<5	<5	<10
MW-96	04/22/02	<5	<5	<5	<5
MW-96	10/17/02	<5	<5	<5	<5
MW-96	04/10/03	<5	<5	<5	<5
MW-96	10/22/03	<5	<5	<5	<5
MW-97	04/30/97	<0.5	<0.5	<0.5	<0.5
MW-97	10/17/97	<0.5	<0.5	<0.5	<0.5
MW-97	01/30/98	<0.5	<0.5	<0.5	<0.5
MW-97	04/28/98	<0.5	<0.5	<0.5	<0.5
MW-97	07/01/98	<1	<1	<1	<1
MW-97	10/12/98	<2.5	<2.5	<2.5	<2.5
MW-97	02/02/99	<0.5	<0.5	<0.5	<0.5
MW-97	04/22/99	<5	<5	<5	<10
MW-97	12/14/99	<5	<5	<5	<10
MW-97	05/02/00	<1	<1	<1	<1
MW-97	10/04/00	<5	<5	<5	<10
MW-97	04/19/01	<5	<5	<5	<10
MW-97	11/01/01	<5	<5	<5	<10
MW-97	04/22/02	<5	<5	<5	<5
MW-97	10/17/02	<5	<5	<5	<5
MW-97	04/09/03	<5	<5	<5	<5

Notes:

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-97	10/21/03	<5	<5	<5	<5
MW-98	04/30/97	5.8	3.5	1.5	26
MW-98	06/29/98	<1	7.1	20	1010
MW-98	12/15/99	<5	13.2	<5	63.1
MW-98	05/02/00	<1	<1	<1	3.1
MW-98	04/24/01	32	<5	49	116
MW-98	11/06/01	<5	<5	<5	<10
MW-98	04/23/02	<5	<5	<5	<5
MW-98	10/17/02	<5	<5	<5	<5
MW-98	04/09/03	<5	<5	<5	<5
MW-98	10/23/03	<5	<5	<5	<5
MW-104	07/17/97	<0.5	0.5	<0.5	0.7
MW-104	07/01/98	<1	<1	<1	<1
MW-104	04/23/01	<5	<5	<5	<15
MW-104	11/05/01	<5	<5	<5	<10
MW-104	04/22/02	<5	<5	<5	<5
MW-104	10/21/02	<5	<5	<5	<5
MW-104	04/11/03	<5	<5	<5	<5
MW-104	10/22/03	<5	<5	<5	<5
MW-105	06/28/98	<1	<1	<1	<1
MW-105	12/09/99	<5	<5	<5	<10
MW-105	10/02/00	<5	<5	<5	<10
MW-105	04/18/01	<5	<5	<5	<15
MW-105		Not Sampled - Dry			
MW-105		Not Sampled - Dry			
MW-105		Not Sampled - Dry			
MW-105		Not Sampled - Dry			
MW-106	02/11/97	<0.5	<0.5	<0.5	<0.5
MW-106	05/07/97	<0.5	<0.5	<0.5	<0.5
MW-106	07/18/97	<0.5	<0.5	<0.5	<0.5
MW-106	04/30/98	<0.5	<0.5	<0.5	<0.5
MW-106	06/28/98	<1	<1	<1	<1
MW-106	04/29/99	<5	<5	<5	<10
MW-106	12/08/99	<5	<5	<5	<10
MW-106	05/01/00	<1	<1	<1	<1
MW-106	10/02/00	<5	<5	<5	<10
MW-106	04/18/01	<5	9.4	<5	<15
MW-106	10/31/01	<5	<5	<5	<10
MW-106	04/17/02	<5	<5	<5	<5
MW-106	10/16/02	<5	7	<5	<5
MW-106	04/09/03	<5	<5	<5	<5
MW-106	10/21/03	<5	<5	<5	<5
MW-108	07/17/97	<0.5	<0.5	0.5	<0.5
MW-108	06/22/98	<1	<1	<1	<1
MW-108	04/22/99	<5	<5	<5	<10
MW-108	12/14/99	<5	<5	<5	<10
MW-108	05/04/00	<1	<1	<1	<1
MW-108	04/19/01	<5	<5	<5	<10
MW-108	11/05/01	<5	<5	<5	<10
MW-108	04/22/02	<5	<5	<5	<5
MW-108	10/17/02	<5	<5	<5	<5

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-108	04/11/03	<5	<5	<5	<5
MW-108	10/22/03	<5	<5	<5	<5
MW-110	06/30/98	170	<10	150	160
MW-111	06/29/98	<1	<1	<1	<1
MW-111	10/11/98	<0.5	<0.5	<0.5	<0.5
MW-111	02/01/99	<0.5	0.8	<0.5	<0.5
MW-111	04/21/99	<5	<5	<5	<10
MW-111	12/13/99	<5	<5	<5	<10
MW-111	04/27/00	<1	<1	<1	<1
MW-111	10/05/00	<5	<5	<5	<10
MW-111	04/18/01	<5	<5	<5	<15
MW-111	11/02/01	<5	<5	<5	<10
MW-111	04/19/02	<5	<5	<5	<5
MW-111	10/16/02	<5	<5	<5	<5
MW-111	04/07/03	<5	<5	<5	6
MW-111	10/22/03	<5	<5	<5	<5
MW-113	08/11/99	140	<5	59	390
MW-114	07/26/99	<5	<5	<5	<10
MW-115	07/26/99	<5	<5	<5	10
MW-116	07/26/99	<5	<5	<5	<10
MW-117A	12/16/99	<5	<5	<5	<10
MW-118	12/15/99	<5	<5	<5	<10
MW-119	12/28/99	16	<5	<5	<10
MW-121	12/16/99	500	10	370	20
MW-122	12/16/99	11	29	<5	22
MW-124	12/14/99	79	<50	210	1500
MW-127	12/28/99	190	7.1	38	16
MW-128	12/28/99	11	<5	<5	<10
SUMP-16A	07/01/91	560	--	--	--
SUMP-16A	07/19/91	--	850	100	--
SUMP-16A	07/30/91	--	--	--	660
SUMP-16A	09/01/91	240	--	--	--
SUMP-16A	12/01/91	2000	1000	<500	3500
SUMP-16A	04/01/92	1332	203	<3	3679
SUMP-16A	07/01/92	1495	2028	280	3442
SUMP-16A	10/01/92	632	87	<3	1821
SUMP-16A	01/01/93	741	40	96	1355
SUMP-16A	04/14/93	707	881	298	4226
SUMP-16A	10/05/94	170	<2.5	120	680
SUMP-16A	01/11/95	2	5.1	2.4	32
SUMP-16A	10/12/95	130	<13	98	780
SUMP-16A	04/19/96	0.8	1.5	3.8	27
SUMP-16A	07/01/96	5.1	0.9	1.2	7.7
SUMP-A10	10/12/95	<0.5	2.9	<0.5	<0.5
SW-01	05/28/91	--	--	--	<10
SW-01	07/01/91	<5	--	--	--
SW-01	07/19/91	--	<5	<5	--
SW-01	09/01/91	<1	--	--	--
SW-01	12/01/91	<1	--	--	--
SW-01	04/01/92	5	6	<3	14
SW-01	07/01/92	17.5	69	<3	67

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Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
SW-01	10/01/92	16	15	<3	10
SW-01	01/01/93	6	<3	<3	<3
SW-01	04/15/93	<1	<1	<1	<1
SW-01	05/12/93	<1	<1	<1	<1
SW-01	06/28/93	<0.5	<0.5	<0.5	<0.5
SW-01	07/15/93	<0.5	<0.5	<0.5	<0.5
SW-01	08/03/93	<0.5	<0.5	<0.5	<0.5
SW-01	09/21/93	<0.5	<0.5	1	0.6
SW-01	10/14/93	<0.5	<0.5	<0.5	<0.5
SW-01	11/10/93	<0.5	<0.5	<0.5	<0.5
SW-01	12/06/93	<0.5	<0.5	<0.5	<0.5
SW-01	01/12/94	<0.5	<0.5	<0.5	<0.5
SW-01	02/09/94	<0.5	<0.5	<0.5	<0.5
SW-01	03/16/94	<0.5	<0.5	<0.5	<0.5
SW-01	04/05/94	<0.5	<0.5	<0.5	<0.5
SW-01	05/19/94	<0.5	<0.5	<0.5	<0.5
SW-01	06/23/94	<0.5	<0.5	<0.5	<0.5
SW-01	07/21/94	<0.5	<0.5	<0.5	<0.5
SW-01	08/24/94	<0.5	<0.5	<0.5	<0.5
SW-01	09/20/94	<0.5	<0.5	0.8	2.2
SW-01	10/06/94	<0.5	<0.5	<0.5	0.6
SW-01	11/30/94	<0.5	<0.5	<0.5	<0.5
SW-01	12/16/94	<0.5	<0.5	0.7	4.8
SW-01	01/11/95	<0.5	<0.5	<0.5	<0.5
SW-01	03/09/95	<0.5	<0.5	<0.5	<0.5
SW-01	04/07/95	<0.5	<0.5	<0.5	<0.5
SW-01	05/18/95	<0.5	<0.5	<0.5	<0.5
SW-01	07/21/95	<0.5	<0.5	<0.5	<0.5
SW-01	10/12/95	<0.5	<0.5	0.6	1.2
SW-01	12/27/95	<0.5	<0.5	<0.5	<0.5
SW-01	01/19/96	0.8	4.5	1.5	8.7
SW-01	03/18/96	<0.5	<0.5	<0.5	<0.5
SW-01	04/24/96	<0.5	<0.5	<0.5	<0.5
SW-01	07/01/96	<0.5	<0.5	<0.5	<0.5
SW-01	10/01/96	<0.5	<0.5	<0.5	<0.5
SW-01	02/10/97	<0.5	<0.5	<0.5	<0.5
SW-01	12/10/97	<0.1	<0.1	<0.1	<0.1
SW-01	06/30/98	<1	<1	<1	<1
SW-01	04/23/99	<5	<5	<5	<10
SW-02	09/01/91	<1	--	--	--
SW-02	12/01/91	<1	--	--	--
SW-02	04/01/92	11	12	<3	5
SW-02	07/01/92	7	38	<1	24
SW-02	10/01/92	69	37	25	61
SW-02	01/01/93	47	6	7	9
SW-02	04/15/93	4	<1	<1	<1
SW-02	05/12/93	3	<1	<1	<1
SW-02	01/11/95	<0.5	<0.5	<0.5	<0.5
SW-02	06/24/98	<1	<1	<1	<1
SW-02	04/23/99	<5	<5	<5	<10
SW-03	07/01/96	<0.5	<0.5	<0.5	<0.5

Notes:

Concentrations listed in micrograms per liter (ug/L)

<5 Constituent not detected above noted laboratory detection limit

-- Indicates parameter was not analyzed

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
SW-03	10/01/96	<0.5	<0.5	<0.5	<0.5
SW-03	06/24/98	<1	<1	<1	<1
SW-03	04/23/99	<5	<5	<5	<10
TH-21A	07/01/91	1700	--	--	--
TH-21A	07/19/91	--	3400	1200	--
TH-21A	07/30/91	--	--	--	2200
TH-A11	07/01/91	1100	--	--	--
TH-A11	07/19/91	--	1600	1100	--
TH-A11	07/30/91	--	--	--	800
TH-A11	09/01/91	1400	--	--	--
TH-A11	12/01/91	2900	3500	300	4000
TH-A11	04/01/92	3465	3303	306	4158
TH-A11	07/01/92	1258	1710	423	3416
TH-A11	10/01/92	2742	2235	<3	3408
UIHS_ARROYO	05/28/91	--	--	--	<10
UIHS_ARROYO	07/01/91	<5	--	--	--
UIHS_ARROYO	07/19/91	--	<5	<5	--
UIHS_ARROYO	09/01/91	<1	--	--	--
UIHS_ARROYO	12/01/91	<1	--	--	--
UIHS_ARROYO	04/01/92	<1	<1	<1	<1
UIHS_ARROYO	07/01/92	<1	<1	<1	<1
UIHS_ARROYO	10/01/92	<1	<1	<1	<1
UIHS_ARROYO	01/01/93	<1	<1	<1	<1
UIHS_ARROYO	04/15/93	<1	<1	--	<1
UIHS_ARROYO	05/12/93	<1	<1	<1	<1
UIHS_ARROYO	06/28/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	07/15/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	08/03/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	09/21/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	10/14/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	11/10/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	12/06/93	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	01/13/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	02/09/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	03/16/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	04/05/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	05/19/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	06/23/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	07/21/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	08/24/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	09/20/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	10/06/94	<0.5	<0.5	<0.5	0.6
UIHS_ARROYO	11/30/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	12/16/94	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	01/11/95	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	03/09/95	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	04/07/95	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	05/18/95	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	07/21/95	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	10/12/95	<0.5	<0.5	<0.5	1.2
UIHS_ARROYO	12/27/95	<0.5	<0.5	<0.5	<0.5

Notes:

Concentrations listed in micrograms per liter (ug/L)

<5 Constituent not detected above noted laboratory detection limit

-- Indicates parameter was not analyzed

Appendix B

Historical BTEX Analytical Data, May 1991 - October 2003

Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Well ID	Sample Date	Analytical Results			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
UIHS_ARROYO	01/19/96	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	03/18/96	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	04/24/96	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	07/01/96	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	10/01/96	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	02/10/97	<0.5	<0.5	<0.5	<0.5
UIHS_ARROYO	06/26/98	<1	<1	<1	<1

Notes:
Concentrations listed in micrograms per liter (ug/L)
<5 Constituent not detected above noted laboratory detection limit
-- Indicates parameter was not analyzed

Historical General Chemistry Analytical Data
May 1991 - December 1999

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
BIEBBLE	7/1/1991	NA	NA	NA	NA	NA	14	NA	1.4	NA	NA	NA	NA	NA	NA	NA	250	1000
BIEBBLE	4/1/1992	NA	NA	NA	NA	NA	13.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	7/1/1992	NA	NA	NA	NA	NA	7.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	10/1/1992	NA	NA	NA	NA	NA	10.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	1/1/1993	NA	NA	NA	NA	NA	10.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	4/15/1993	NA	NA	NA	NA	NA	11.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	7/15/1993	NA	NA	NA	NA	NA	13.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	10/14/1993	NA	NA	NA	NA	NA	10.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	1/13/1994	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	4/5/1994	NA	NA	NA	NA	NA	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	7/21/1994	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	10/6/1994	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	1/11/1995	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	4/7/1995	NA	NA	NA	NA	NA	10.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	7/21/1995	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	10/12/1995	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	1/19/1996	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	4/17/1996	NA	NA	NA	NA	NA	10.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	7/1/1996	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	10/1/1996	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BIEBBLE	2/10/1997	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	4/1/1992	NA	NA	NA	NA	NA	218	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	7/1/1992	NA	NA	NA	NA	NA	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	10/1/1992	NA	NA	NA	NA	NA	285	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	1/1/1993	NA	NA	NA	NA	NA	344	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	4/1/1993	NA	NA	NA	NA	NA	363	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	7/1/1993	NA	NA	NA	NA	NA	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	10/1/1993	NA	NA	NA	NA	NA	181	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	1/1/1994	NA	NA	NA	NA	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	4/1/1994	NA	NA	NA	NA	NA	139	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	7/1/1994	NA	NA	NA	NA	NA	129	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	10/1/1994	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	1/1/1995	NA	NA	NA	NA	NA	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LOWER-QUEEN-MAX	4/1/1995	NA	NA	NA	NA	NA	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	7/1/1991	NA	NA	NA	NA	NA	20	NA	1.3	NA	NA	NA	NA	NA	NA	NA	450	980
LYMAN	4/1/1992	NA	NA	NA	NA	NA	12.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	7/1/1992	NA	NA	NA	NA	NA	14.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	10/1/1992	NA	NA	NA	NA	NA	15.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	1/1/1993	NA	NA	NA	NA	NA	13.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	4/15/1993	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	5/12/1993	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	6/28/1993	NA	NA	NA	NA	NA	12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	7/15/1993	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	8/3/1993	NA	NA	NA	NA	NA	13.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	9/21/1993	NA	NA	NA	NA	NA	12.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	10/14/1993	NA	NA	NA	NA	NA	14.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	11/10/1993	NA	NA	NA	NA	NA	482	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	12/6/1993	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	1/12/1994	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	2/9/1994	NA	NA	NA	NA	NA	12.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	3/16/1994	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	4/5/1994	NA	NA	NA	NA	NA	12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	5/19/1994	NA	NA	NA	NA	NA	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	6/23/1994	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	7/21/1994	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	8/24/1994	NA	NA	NA	NA	NA	11.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	9/20/1994	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	10/6/1994	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	11/30/1994	NA	NA	NA	NA	NA	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	12/16/1994	NA	NA	NA	NA	NA	11.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	1/11/1995	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	3/9/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	4/7/1995	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	5/18/1995	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	7/21/1995	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	10/12/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	1/19/1996	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	4/18/1996	NA	NA	NA	NA	NA	11.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	7/1/1996	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	10/1/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	2/10/1997	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	4/30/1998	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LYMAN	6/29/1998	NA	NA	NA	NA	NA	13	<0.005	0.6	NA	NA	NA	NA	7.4	<0.005	NA	670	1000
MW-001	4/1/1991	NA	NA	NA	NA	NA	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-001	5/1/1991	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	820
MW-001	12/1/1991	NA	NA	NA	NA	NA	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-010	5/1/1991	NA	NA	NA	NA	NA	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1600
MW-010	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	1440
MW-010	12/1/1991	NA	NA	NA	NA	NA	323	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-010	4/1/1992	NA	NA	NA	NA	NA	319	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-010	7/1/1992	NA	NA	NA	NA	NA	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-010	10/1/1992	NA	NA	NA	NA	NA	312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-010	1/1/1994	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-010	2/11/1997	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	12/1/1991	NA	NA	NA	NA	NA	790	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	4/1/1992	NA	NA	NA	NA	NA	653	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	7/1/1992	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	10/1/1992	NA	NA	NA	NA	NA	239	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	1/1/1993	NA	NA	NA	NA	NA	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-011	10/5/1994	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	7/21/1995	NA	NA	NA	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	1/20/1996	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	4/19/1996	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	7/1/1996	NA	NA	NA	NA	NA	37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	10/1/1996	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-011	2/7/1997	NA	NA	NA	NA	NA	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-013	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	2790
MW-013	12/1/1991	NA	NA	NA	NA	NA	780	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-013	4/1/1992	NA	NA	NA	NA	NA	1240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-013	7/1/1992	NA	NA	NA	NA	NA	269	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-013	10/1/1996	NA	NA	NA	NA	NA	45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-013	2/7/1997	NA	NA	NA	NA	NA	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-013	3/21/1997	NA	NA	NA	NA	NA	NA	NA	0.4	NA	NA	NA	NA	NA	NA	NA	<10	770
MW-013	6/21/1998	NA	NA	NA	NA	NA	230	<0.005	0.3	NA	NA	NA	NA	7	0.023	NA	<5	1000
MW-014	6/22/1998	NA	NA	NA	NA	NA	330	<0.005	0.4	NA	NA	NA	NA	7	0.008	NA	<5	1400
MW-016	4/15/1993	NA	NA	NA	NA	NA	246	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-017	4/15/1993	NA	NA	NA	NA	NA	306	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-018	5/1/1991	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-018	4/1/1992	NA	NA	NA	NA	NA	464	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1580
MW-018	7/1/1992	NA	NA	NA	NA	NA	109	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-018	10/1/1992	NA	NA	NA	NA	NA	408	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	5/1/1991	NA	NA	NA	NA	NA	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	5/22/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-019	7/1/1991	NA	NA	NA	NA	NA	466	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	1460
MW-019	4/1/1992	NA	NA	NA	NA	NA	463	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	7/1/1992	NA	NA	NA	NA	NA	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	10/1/1992	NA	NA	NA	NA	NA	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	10/1/1996	NA	NA	NA	NA	NA	96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-019	2/7/1997	NA	NA	NA	NA	NA	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-021	5/1/1991	NA	NA	NA	NA	NA	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1220
MW-021	12/1/1991	NA	NA	NA	NA	NA	343	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-021	4/15/1993	NA	NA	NA	NA	NA	283	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-024	7/1/1992	NA	NA	NA	NA	NA	455	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-026	5/1/1991	NA	NA	NA	NA	NA	440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1650
MW-026	12/1/1991	NA	NA	NA	NA	NA	356	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-026	7/1/1992	NA	NA	NA	NA	NA	164	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-026	10/1/1992	NA	NA	NA	NA	NA	222	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-026	1/1/1993	NA	NA	NA	NA	NA	177	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-031	7/1/1992	NA	NA	NA	NA	NA	337	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-031	10/1/1992	NA	NA	NA	NA	NA	296	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-037	6/1/1991	NA	NA	NA	NA	NA	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-037	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-037	7/14/1993	NA	NA	NA	NA	NA	173	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	5/1/1991	NA	NA	NA	NA	NA	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	790
MW-038	5/22/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-038	6/1/1991	NA	NA	NA	NA	NA	38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-038	12/1/1991	NA	NA	NA	NA	NA	111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	4/1/1992	NA	NA	NA	NA	NA	127	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	7/1/1992	NA	NA	NA	NA	NA	147	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	10/1/1992	NA	NA	NA	NA	NA	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	10/1/1996	NA	NA	NA	NA	NA	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-038	2/7/1997	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	5/1/1991	NA	NA	NA	NA	NA	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	6/1/1991	NA	NA	NA	NA	NA	244	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-039	1/1/1993	NA	NA	NA	NA	NA	231	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	4/15/1993	NA	NA	NA	NA	NA	83	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	7/15/1993	NA	NA	NA	NA	NA	296	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	10/14/1993	NA	NA	NA	NA	NA	277	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	1/13/1994	NA	NA	NA	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	4/7/1994	NA	NA	NA	NA	NA	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	7/20/1994	NA	NA	NA	NA	NA	198	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	1/10/1995	NA	NA	NA	NA	NA	194	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	10/1/1996	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	2/7/1997	NA	NA	NA	NA	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-039	7/18/1997	NA	NA	NA	NA	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	6/1/1991	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	41	758
MW-041	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA
MW-041	7/1/1991	NA	NA	NA	NA	NA	38	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA
MW-041	12/1/1991	NA	NA	NA	NA	NA	108	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	7/15/1993	NA	NA	NA	NA	NA	242	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	10/14/1993	NA	NA	NA	NA	NA	264	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	1/13/1994	NA	NA	NA	NA	NA	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	4/6/1994	NA	NA	NA	NA	NA	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	7/20/1994	NA	NA	NA	NA	NA	259	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	10/6/1994	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	1/11/1995	NA	NA	NA	NA	NA	326	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	4/6/1995	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	7/21/1995	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	10/12/1995	NA	NA	NA	NA	NA	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	1/20/1996	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	4/19/1996	NA	NA	NA	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	7/1/1996	NA	NA	NA	NA	NA	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	10/1/1996	NA	NA	NA	NA	NA	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	2/7/1997	NA	NA	NA	NA	NA	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	3/20/1997	NA	NA	NA	NA	NA	NA	NA	1.5	NA	NA	NA	NA	NA	NA	NA	98	1500

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-041	7/18/1997	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-041	6/19/1998	NA	NA	NA	NA	NA	120	<0.005	1.5	NA	NA	NA	NA	7.5	0.024	NA	190	1200
MW-041	4/20/1999	NA	NA	NA	NA	NA	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	810
MW-042	12/1/1991	NA	NA	NA	NA	NA	571	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	6/1/1991	NA	NA	NA	NA	NA	138	NA	NA	NA	NA	NA	NA	NA	NA	NA	47	1300
MW-043	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-043	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	370	1600
MW-043	7/15/1993	NA	NA	NA	NA	NA	232	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	10/14/1993	NA	NA	NA	NA	NA	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	1/13/1994	NA	NA	NA	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/6/1994	NA	NA	NA	NA	NA	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	7/20/1994	NA	NA	NA	NA	NA	266	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	10/6/1994	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	1/11/1995	NA	NA	NA	NA	NA	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/6/1995	NA	NA	NA	NA	NA	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	7/21/1995	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	10/12/1995	NA	NA	NA	NA	NA	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	1/20/1996	NA	NA	NA	NA	NA	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/19/1996	NA	NA	NA	NA	NA	280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	7/1/1996	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	10/1/1996	NA	NA	NA	NA	NA	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	2/7/1997	NA	NA	NA	NA	NA	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	7/18/1997	NA	NA	NA	NA	NA	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	6/22/1998	NA	NA	NA	NA	NA	210	<0.005	0.8	NA	NA	NA	NA	7.3	0.007	NA	53	1500
MW-043	4/20/1999	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1100
MW-044	6/1/1991	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	641
MW-044	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-044	4/1/1992	NA	NA	NA	NA	NA	660	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	7/1/1992	NA	NA	NA	NA	NA	263	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	10/1/1992	NA	NA	NA	NA	NA	356	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	1/1/1993	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	4/15/1993	NA	NA	NA	NA	NA	365	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	7/15/1993	NA	NA	NA	NA	NA	445	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	10/14/1993	NA	NA	NA	NA	NA	543	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	1/13/1994	NA	NA	NA	NA	NA	490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	4/6/1994	NA	NA	NA	NA	NA	440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	7/20/1994	NA	NA	NA	NA	NA	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	10/5/1994	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	1/11/1995	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	4/6/1995	NA	NA	NA	NA	NA	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	7/21/1995	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	10/12/1995	NA	NA	NA	NA	NA	520	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	1/20/1996	NA	NA	NA	NA	NA	580	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	4/19/1996	NA	NA	NA	NA	NA	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	7/1/1996	NA	NA	NA	NA	NA	480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	10/1/1996	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	2/7/1997	NA	NA	NA	NA	NA	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	7/18/1997	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-044	6/22/1998	NA	NA	NA	NA	NA	260	<0.005	0.8	NA	NA	NA	NA	7.2	0.04	NA	66	1000
MW-044	4/20/1999	NA	NA	NA	NA	NA	94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	910
MW-045	6/1/1991	NA	NA	NA	NA	NA	507	NA	NA	NA	NA	NA	NA	NA	NA	NA	2940	5440
MW-045	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.9	NA	NA	NA	NA	NA	NA	NA
MW-045	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2090	3920
MW-045	12/1/1991	NA	NA	NA	NA	NA	354	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-045	7/15/1993	NA	NA	NA	NA	NA	434	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-045	10/14/1993	NA	NA	NA	NA	NA	408	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-045	1/13/1994	NA	NA	NA	NA	NA	440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-045	4/6/1994	NA	NA	NA	NA	NA	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-045	7/20/1994	NA	NA	NA	NA	NA	429	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	6/1/1991	NA	NA	NA	NA	NA	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	1220
MW-046	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA/R
MW-046	7/1/1991	NA	NA	NA	NA	NA	45	NA	NA	NA	0.1	NA	NA	NA	NA	NA	NA	NA
MW-046	10/1/1996	NA	NA	NA	NA	NA	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	2/11/1997	NA	NA	NA	NA	NA	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	5/29/1997	NA	990	NA	62	3	132	NA	1.3	<1	NA	NA	NA	7.5	NA	1200	106	1300
MW-046	7/18/1997	NA	NA	NA	NA	NA	180	NA	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	12/10/1997	NA	NA	NA	NA	NA	NA	NA	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	6/21/1998	NA	NA	NA	NA	NA	140	<0.005	1.1	NA	NA	NA	NA	7.2	NA	NA	22	940
MW-046	4/20/1999	NA	NA	NA	NA	NA	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	580
MW-047	6/1/1991	NA	NA	NA	NA	NA	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	23	652
MW-047	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0	NA	NA	NA	NA	NA	NA	NA
MW-047	12/1/1991	NA	NA	NA	NA	NA	433	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-047	10/1/1996	NA	NA	NA	NA	NA	700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-048	12/1/1991	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-048	7/1/1992	NA	NA	NA	NA	NA	431	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-048	10/1/1996	NA	NA	NA	NA	NA	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	6/1/1991	NA	NA	NA	NA	NA	365	NA	NA	NA	NA	NA	NA	NA	NA	NA	1800	3910
MW-049	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	NA	NA	NA	NA	NA	NA
MW-049	7/15/1993	NA	NA	NA	NA	NA	399	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	10/14/1993	NA	NA	NA	NA	NA	397	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	1/13/1994	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	4/6/1994	NA	NA	NA	NA	NA	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	7/20/1994	NA	NA	NA	NA	NA	368	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	10/5/1994	NA	NA	NA	NA	NA	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	1/11/1995	NA	NA	NA	NA	NA	389	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	4/6/1995	NA	NA	NA	NA	NA	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	7/21/1995	NA	NA	NA	NA	NA	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	10/12/1995	NA	NA	NA	NA	NA	350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	1/20/1996	NA	NA	NA	NA	NA	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-049	4/19/1996	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	7/1/1996	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	10/1/1996	NA	NA	NA	NA	NA	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	2/7/1997	NA	NA	NA	NA	NA	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	3/20/1997	NA	NA	NA	NA	NA	NA	NA	1.4	NA	NA	NA	NA	NA	NA	NA	1000	3100
MW-049	7/18/1997	NA	NA	NA	NA	NA	350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	6/21/1998	NA	NA	NA	NA	NA	630	0.05	1.3	NA	NA	NA	NA	7	0.012	NA	780	2800
MW-049	4/20/1999	NA	NA	NA	NA	NA	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3000
MW-050	6/1/1991	NA	NA	NA	NA	NA	388	NA	NA	NA	NA	NA	NA	NA	NA	NA	3420	6070
MW-050	6/25/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.5	NA	NA	NA	NA	NA	NA	NA
MW-050	12/1/1991	NA	NA	NA	NA	NA	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/1/1992	NA	NA	NA	NA	NA	397	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	7/1/1992	NA	NA	NA	NA	NA	379	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	10/1/1992	NA	NA	NA	NA	NA	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	1/1/1993	NA	NA	NA	NA	NA	337	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/15/1993	NA	NA	NA	NA	NA	955	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	7/15/1993	NA	NA	NA	NA	NA	347	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	10/14/1993	NA	NA	NA	NA	NA	292	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	1/13/1994	NA	NA	NA	NA	NA	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/6/1994	NA	NA	NA	NA	NA	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	7/20/1994	NA	NA	NA	NA	NA	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	10/5/1994	NA	NA	NA	NA	NA	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	1/11/1995	NA	NA	NA	NA	NA	314	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/6/1995	NA	NA	NA	NA	NA	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	7/21/1995	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	10/12/1995	NA	NA	NA	NA	NA	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	1/20/1996	NA	NA	NA	NA	NA	290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/19/1996	NA	NA	NA	NA	NA	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	7/1/1996	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	10/1/1996	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	2/7/1997	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	3/20/1997	NA	NA	NA	NA	NA	NA	NA	1.2	NA	NA	NA	NA	NA	NA	NA	3600	5900
MW-050	7/18/1997	NA	NA	NA	NA	NA	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	6/19/1998	NA	NA	NA	NA	NA	340	<0.005	1.2	NA	NA	NA	NA	8.2	<0.005	NA	3800	5900
MW-050	4/20/1999	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6200
MW-051	12/1/1991	NA	NA	NA	NA	NA	38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-052	7/1/1992	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	12/1/1991	NA	NA	NA	NA	NA	87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	4/1/1992	NA	NA	NA	NA	NA	151	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	7/1/1992	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	10/1/1992	NA	NA	NA	NA	NA	55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	1/1/1993	NA	NA	NA	NA	NA	134	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	4/14/1993	NA	NA	NA	NA	NA	145	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	7/14/1993	NA	NA	NA	NA	NA	146	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	10/14/1993	NA	NA	NA	NA	NA	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	1/12/1994	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	4/6/1994	NA	NA	NA	NA	NA	102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	7/20/1994	NA	NA	NA	NA	NA	135	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	10/5/1994	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	1/10/1995	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	4/6/1995	NA	NA	NA	NA	NA	102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	7/21/1995	NA	NA	NA	NA	NA	95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	10/11/1995	NA	NA	NA	NA	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	1/20/1996	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	4/18/1996	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	7/1/1996	NA	NA	NA	NA	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	10/1/1996	NA	NA	NA	NA	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	2/10/1997	NA	NA	NA	NA	NA	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	7/16/1997	NA	NA	NA	NA	NA	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	6/25/1998	NA	NA	NA	NA	NA	110	<0.005	1.8	NA	NA	NA	NA	7.1	<0.005	NA	1300	2200
MW-054	4/22/1999	NA	NA	NA	NA	NA	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3400
MW-055	6/1/1991	NA	NA	NA	NA	NA	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	12/1/1991	NA	NA	NA	NA	NA	501	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	4/1/1992	NA	NA	NA	NA	NA	385	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	7/1/1992	NA	NA	NA	NA	NA	273	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	10/1/1992	NA	NA	NA	NA	NA	292	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	1/1/1993	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	4/14/1993	NA	NA	NA	NA	NA	301	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	7/14/1993	NA	NA	NA	NA	NA	312	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	10/14/1993	NA	NA	NA	NA	NA	287	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	1/12/1994	NA	NA	NA	NA	NA	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	4/8/1994	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	7/20/1994	NA	NA	NA	NA	NA	299	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	10/5/1994	NA	NA	NA	NA	NA	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	1/11/1995	NA	NA	NA	NA	NA	321	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	4/11/1995	NA	NA	NA	NA	NA	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	7/20/1995	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	10/11/1995	NA	NA	NA	NA	NA	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	1/19/1996	NA	NA	NA	NA	NA	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	4/18/1996	NA	NA	NA	NA	NA	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	7/1/1996	NA	NA	NA	NA	NA	350	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	10/1/1996	NA	NA	NA	NA	NA	210	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	2/10/1997	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	7/16/1997	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1000
MW-055	6/25/1998	NA	NA	NA	NA	NA	300	<0.005	1.5	NA	NA	NA	NA	7	0.016	NA	55	1500
MW-056	6/1/1991	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	7/1/1991	NA	NA	NA	NA	NA	102	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	1220
MW-056	12/1/1991	NA	NA	NA	NA	NA	197	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-056	7/1/1992	NA	NA	NA	NA	NA	248	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	10/1/1992	NA	NA	NA	NA	NA	183	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	1/1/1993	NA	NA	NA	NA	NA	269	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	10/1/1996	NA	NA	NA	NA	NA	270	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	2/11/1997	NA	NA	NA	NA	NA	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-056	3/20/1997	NA	NA	NA	NA	NA	NA	NA	1.5	NA	NA	NA	NA	NA	NA	NA	<10	1200
MW-057	6/1/1991	NA	NA	NA	NA	NA	15.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/1/1991	NA	NA	NA	NA	NA	21	NA	<1	NA	2.7	NA	NA	NA	NA	NA	60	460
MW-057	12/1/1991	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	4/1/1992	NA	NA	NA	NA	NA	117	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/1/1992	NA	NA	NA	NA	NA	63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	10/1/1992	NA	NA	NA	NA	NA	67	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	1/1/1993	NA	NA	NA	NA	NA	131	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	4/14/1993	NA	NA	NA	NA	NA	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/14/1993	NA	NA	NA	NA	NA	72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	10/13/1993	NA	NA	NA	NA	NA	73.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	1/12/1994	NA	NA	NA	NA	NA	64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	4/7/1994	NA	NA	NA	NA	NA	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/19/1994	NA	NA	NA	NA	NA	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	10/5/1994	NA	NA	NA	NA	NA	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	1/11/1995	NA	NA	NA	NA	NA	35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	4/6/1995	NA	NA	NA	NA	NA	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/20/1995	NA	NA	NA	NA	NA	37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	10/11/1995	NA	NA	NA	NA	NA	47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	1/19/1996	NA	NA	NA	NA	NA	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	4/18/1996	NA	NA	NA	NA	NA	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/1/1996	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	10/1/1996	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	2/10/1997	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	7/15/1997	NA	NA	NA	NA	NA	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	6/25/1998	NA	NA	NA	NA	NA	50	<0.005	0.5	NA	NA	NA	NA	7.3	0.006	NA	110	490
MW-057	4/20/1999	NA	NA	NA	NA	NA	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500
MW-058	12/1/1991	NA	NA	NA	NA	NA	124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	4/1/1992	NA	NA	NA	NA	NA	156	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	7/1/1992	NA	NA	NA	NA	NA	149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	10/1/1992	NA	NA	NA	NA	NA	155	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	1/1/1993	NA	NA	NA	NA	NA	175	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	4/13/1993	NA	NA	NA	NA	NA	133	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	7/13/1993	NA	NA	NA	NA	NA	133	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	10/13/1993	NA	NA	NA	NA	NA	59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	4/5/1994	NA	NA	NA	NA	NA	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	7/19/1994	NA	NA	NA	NA	NA	38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	10/6/1994	NA	NA	NA	NA	NA	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	1/11/1995	NA	NA	NA	NA	NA	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	4/8/1995	NA	NA	NA	NA	NA	39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	4/18/1996	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	10/1/1996	NA	NA	NA	NA	NA	38	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-058	6/22/1998	NA	NA	NA	NA	NA	42	<0.005	0.9	NA	NA	NA	NA	7.4	<0.005	NA	<5	760
MW-059	12/1/1991	NA	NA	NA	NA	NA	149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	4/1/1992	NA	NA	NA	NA	NA	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	7/1/1992	NA	NA	NA	NA	NA	55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	10/1/1992	NA	NA	NA	NA	NA	69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	1/1/1993	NA	NA	NA	NA	NA	46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	4/13/1993	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	10/13/1993	NA	NA	NA	NA	NA	56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	4/5/1994	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	7/19/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	10/6/1994	NA	NA	NA	NA	NA	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	1/11/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	2/9/1997	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	6/24/1998	NA	NA	NA	NA	NA	560	<0.005	0.6	NA	NA	NA	NA	7.5	0.022	NA	2300	4100
MW-060	7/1/1991	NA	NA	NA	NA	NA	13	NA	2	NA	0.4	NA	NA	NA	NA	NA	383	860
MW-060	12/1/1991	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	4/1/1992	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	7/1/1992	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/1/1992	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	1/1/1993	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	4/14/1993	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	7/14/1993	NA	NA	NA	NA	NA	10.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/13/1993	NA	NA	NA	NA	NA	13.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	1/12/1994	NA	NA	NA	NA	NA	9.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	4/7/1994	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	7/19/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/5/1994	NA	NA	NA	NA	NA	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	1/10/1995	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	4/7/1995	NA	NA	NA	NA	NA	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	7/19/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/11/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	1/19/1996	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	4/18/1996	NA	NA	NA	NA	NA	12.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	7/1/1996	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/1/1996	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/19/1996	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	2/9/1997	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	3/19/1997	NA	NA	NA	NA	NA	NA	NA	0.8	NA	NA	NA	NA	NA	NA	NA	280	760
MW-060	5/6/1997	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	7/15/1997	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	10/16/1997	0.07	NA	NA	NA	NA	NA	NA	NA	NA	0.28	<0.2	0.06	NA	NA	NA	NA	NA
MW-060	6/21/1998	NA	NA	NA	NA	NA	12	<0.005	1.4	NA	NA	NA	NA	7.3	<0.005	NA	390	720

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-060	4/20/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	12/1/1991	NA	NA	NA	NA	NA	413	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	1/13/1994	NA	NA	NA	NA	NA	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	4/7/1994	NA	NA	NA	NA	NA	450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	7/20/1994	NA	NA	NA	NA	NA	387	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	10/4/1994	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	1/11/1995	NA	NA	NA	NA	NA	439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	4/11/1995	NA	NA	NA	NA	NA	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	7/21/1995	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	10/10/1995	NA	NA	NA	NA	NA	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	1/20/1996	NA	NA	NA	NA	NA	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	4/18/1996	NA	NA	NA	NA	NA	450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	7/1/1996	NA	NA	NA	NA	NA	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	10/1/1996	NA	NA	NA	NA	NA	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	2/10/1997	NA	NA	NA	NA	NA	410	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	7/17/1997	NA	NA	NA	NA	NA	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	8/18/1998	NA	NA	NA	NA	NA	480	<0.005	2.2	NA	NA	NA	NA	6.9	<0.005	NA	1600	3200
MW-061	4/20/1999	NA	NA	NA	NA	NA	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2900
MW-061A	7/1/1991	NA	NA	NA	NA	NA	16	NA	1.6	NA	0.1	NA	NA	NA	NA	NA	347	805
MW-061A	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	335	755
MW-061A	12/1/1991	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	4/1/1992	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	7/1/1992	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	10/1/1992	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	1/1/1993	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	4/13/1993	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	4/5/1994	NA	NA	NA	NA	NA	10.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	7/19/1994	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	10/4/1994	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	1/10/1995	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	1/20/1996	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	4/19/1996	NA	NA	NA	NA	NA	10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	7/1/1996	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	2/6/1997	NA	266	<0.3	NA	<1	13	NA	0.85	<1	NA	NA	NA	7.5	NA	1020	340	840
MW-061A	5/7/1997	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	8/28/1997	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	7/15/1997	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	10/15/1997	0.08	NA	NA	NA	NA	NA	NA	NA	NA	<0.06	0.4	<2.5	NA	NA	NA	NA	NA
MW-061A	6/18/1998	NA	NA	NA	NA	NA	4	0.025	0.8	NA	NA	NA	NA	7.3	<0.005	NA	300	690
MW-061A	4/20/1999	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	730
MW-062	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19	1120
MW-062	12/1/1991	NA	NA	NA	NA	NA	247	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	4/1/1992	NA	NA	NA	NA	NA	218	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	7/1/1992	NA	NA	NA	NA	NA	236	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	10/1/1992	NA	NA	NA	NA	NA	285	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	1/1/1993	NA	NA	NA	NA	NA	202	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	4/13/1993	NA	NA	NA	NA	NA	207	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	7/14/1993	NA	NA	NA	NA	NA	459	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	10/13/1993	NA	NA	NA	NA	NA	181	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	4/5/1994	NA	NA	NA	NA	NA	139	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	7/19/1994	NA	NA	NA	NA	NA	129	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	10/6/1994	NA	NA	NA	NA	NA	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	1/11/1995	NA	NA	NA	NA	NA	152	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	4/8/1995	NA	NA	NA	NA	NA	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	2/11/1997	NA	NA	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	7/18/1997	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	8/26/1998	NA	NA	NA	NA	NA	91	<0.005	0.8	NA	NA	NA	NA	7.1	<0.005	NA	140	650
MW-062	4/21/1999	NA	NA	NA	NA	NA	82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	550
MW-063	12/1/1991	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/1/1992	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	7/1/1992	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	10/1/1992	NA	NA	NA	NA	NA	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	1/1/1993	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/13/1993	NA	NA	NA	NA	NA	5.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	7/13/1993	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	10/12/1993	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	1/11/1994	NA	NA	NA	NA	NA	5.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/6/1994	NA	NA	NA	NA	NA	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	7/18/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	10/4/1994	NA	NA	NA	NA	NA	6.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	1/9/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/7/1995	NA	NA	NA	NA	NA	6.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	7/18/1995	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	10/10/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	1/18/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/17/1996	NA	NA	NA	NA	NA	10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	7/1/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	10/1/1996	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	2/5/1997	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	7/15/1997	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	10/15/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	6.6	<0.2	0.25	NA	NA	NA	NA	NA
MW-063	8/25/1998	NA	NA	NA	NA	NA	10	<0.005	0.4	NA	NA	NA	NA	7.4	0.005	NA	39	370
MW-063	10/11/1998	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	28.1	340
MW-064	12/1/1991	NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	4/1/1992	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	7/1/1992	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	10/1/1992	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	1/1/1993	NA	NA	NA	NA	NA	10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	4/13/1993	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-064	7/13/1993	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	10/13/1993	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	1/12/1994	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	4/8/1994	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	7/19/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	10/5/1994	NA	NA	NA	NA	NA	10.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	1/10/1995	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	4/7/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	7/19/1995	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	10/11/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	1/19/1996	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	4/18/1996	NA	NA	NA	NA	NA	11.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	2/11/1997	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	7/16/1997	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	8/23/1998	NA	NA	NA	NA	NA	15	<0.005	0.7	NA	NA	NA	NA	7.3	<0.005	NA	<5	600
MW-064	4/21/1999	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	530
MW-065	12/1/1991	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065	7/15/1993	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065	10/5/1994	NA	NA	NA	NA	NA	5.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065	7/1/1996	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065	10/1/1996	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065	2/11/1997	NA	NA	NA	NA	NA	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065	5/7/1997	NA	NA	NA	NA	NA	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	12/1/1991	NA	NA	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	4/1/1992	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	7/1/1992	NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	10/1/1992	NA	NA	NA	NA	NA	35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	1/1/1993	NA	NA	NA	NA	NA	35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	4/13/1993	NA	NA	NA	NA	NA	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	7/13/1993	NA	NA	NA	NA	NA	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	10/13/1993	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	1/11/1994	NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	4/5/1994	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	7/19/1994	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	10/6/1994	NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	1/11/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	4/8/1995	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	1/20/1996	NA	NA	NA	NA	NA	93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	4/18/1996	NA	NA	NA	NA	NA	12.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-065A	8/25/1998	NA	NA	NA	NA	NA	24	<0.005	0.7	NA	NA	NA	NA	7.2	0.005	NA	250	550
MW-066	12/1/1991	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/1/1992	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	7/1/1992	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	10/1/1992	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	1/1/1993	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/13/1993	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	7/13/1993	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	10/12/1993	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	1/11/1994	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/7/1994	NA	NA	NA	NA	NA	8.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	7/19/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	10/4/1994	NA	NA	NA	NA	NA	8.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	1/9/1995	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/11/1995	NA	NA	NA	NA	NA	8.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	7/19/1995	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	10/10/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	1/19/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/17/1996	NA	NA	NA	NA	NA	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	7/1/1996	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	10/1/1996	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	2/5/1997	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	5/6/1997	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	7/16/1997	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	10/15/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	0.33	<0.2	0.22	NA	NA	NA	NA	NA
MW-066	6/17/1998	NA	NA	NA	NA	NA	13	0.761	0.8	NA	NA	NA	NA	7.2	<0.005	NA	430	760
MW-066	4/21/1999	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	730
MW-067	12/1/1991	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	4/1/1992	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	7/1/1992	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	10/1/1992	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	1/1/1993	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	4/13/1993	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	7/13/1993	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	10/13/1993	NA	NA	NA	NA	NA	9.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	1/12/1994	NA	NA	NA	NA	NA	8.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	4/7/1994	NA	NA	NA	NA	NA	7.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	7/19/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	10/5/1994	NA	NA	NA	NA	NA	7.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	1/11/1995	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	4/7/1995	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	7/21/1995	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	10/11/1995	NA	NA	NA	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	1/19/1996	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	4/18/1996	NA	NA	NA	NA	NA	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	7/1/1996	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	2/10/1997	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	7/16/1997	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	8/24/1998	NA	NA	NA	NA	NA	11	<0.005	0.7	NA	NA	NA	NA	7.3	0.005	NA	140	480
MW-067	4/22/1999	NA	NA	NA	NA	NA	6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	460

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-068	12/1/1991	NA	NA	NA	NA	NA	39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	4/1/1992	NA	NA	NA	NA	NA	82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	7/1/1992	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	10/1/1992	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	1/1/1993	NA	NA	NA	NA	NA	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	4/13/1993	NA	NA	NA	NA	NA	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	7/13/1993	NA	NA	NA	NA	NA	28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	10/13/1993	NA	NA	NA	NA	NA	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	1/11/1994	NA	NA	NA	NA	NA	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	4/5/1994	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	7/19/1994	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	10/6/1994	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	1/11/1995	NA	NA	NA	NA	NA	34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-068	10/17/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	0.08	1.8	0.41	NA	NA	NA	NA	NA
MW-068	8/28/1998	NA	NA	NA	NA	NA	29	<0.005	0.6	NA	NA	NA	NA	7.3	0.025	NA	100	480
MW-068	10/12/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70	NA
MW-069	12/1/1991	NA	NA	NA	NA	NA	154	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-069	7/1/1992	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-069	10/1/1992	NA	NA	NA	NA	NA	43	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-069	2/7/1997	NA	NA	NA	NA	NA	70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-069	7/18/1997	NA	NA	NA	NA	NA	64	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-069	8/29/1998	NA	NA	NA	NA	NA	120	<0.005	0.3	NA	NA	NA	NA	6.9	0.015	NA	<5	860
MW-070	12/1/1991	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/1/1992	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	7/1/1992	NA	NA	NA	NA	NA	9.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	10/1/1992	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	1/1/1993	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/14/1993	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	7/13/1993	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	10/12/1993	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	1/11/1994	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/6/1994	NA	NA	NA	NA	NA	9.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	7/18/1994	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	10/4/1994	NA	NA	NA	NA	NA	9.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	1/9/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/5/1995	NA	NA	NA	NA	NA	9.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	7/18/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	10/10/1995	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	1/18/1996	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/17/1996	NA	NA	NA	NA	NA	9.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	7/1/1996	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	10/1/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	2/5/1997	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	10/15/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	2.7	<0.2	0.3	NA	NA	NA	NA	NA
MW-070	8/16/1998	NA	NA	NA	NA	NA	12	<0.005	0.6	NA	NA	NA	NA	7.5	<0.005	NA	80	370
MW-070	4/22/1999	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	310
MW-071	9/1/1993	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	10/12/1993	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	1/11/1994	NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	4/6/1994	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	7/18/1994	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	10/4/1994	NA	NA	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	1/10/1995	NA	NA	NA	NA	NA	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	6/23/1995	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	7/18/1995	NA	NA	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	10/10/1995	NA	NA	NA	NA	NA	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	1/18/1996	NA	NA	NA	NA	NA	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	4/17/1996	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	7/1/1996	NA	NA	NA	NA	NA	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	10/1/1996	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	2/9/1997	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	5/6/1997	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	7/17/1997	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	10/16/1997	0.63	NA	NA	NA	NA	NA	NA	NA	NA	0.06	0.6	0.18	NA	NA	NA	NA	NA
MW-071	6/19/1998	NA	NA	NA	NA	NA	4	<0.005	2.2	NA	NA	NA	NA	7.2	<0.005	NA	650	1100
MW-071	10/11/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	550	NA
MW-071	4/21/1999	NA	NA	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1100
MW-072	4/5/1994	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-072	7/19/1994	NA	NA	NA	NA	NA	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-072	1/11/1995	NA	NA	NA	NA	NA	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-072	6/30/1998	NA	NA	NA	NA	NA	49	<0.005	0.8	NA	NA	NA	NA	6.9	0.015	NA	530	890
MW-073	6/30/1998	NA	NA	NA	NA	NA	320	<0.005	1.3	NA	NA	NA	NA	6.9	<0.005	NA	2800	3700
MW-074	7/18/1997	NA	NA	NA	NA	NA	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-074	6/24/1998	NA	NA	NA	NA	NA	340	<0.005	1.1	NA	NA	NA	NA	7	0.025	NA	13	1500
MW-075	6/30/1998	NA	NA	NA	NA	NA	54	<0.005	1.2	NA	NA	NA	NA	7.3	0.077	NA	390	870
MW-076	6/29/1998	NA	NA	NA	NA	NA	23	<0.005	0.5	NA	NA	NA	NA	7.3	0.008	NA	51	400
MW-077	7/21/1995	NA	NA	NA	NA	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	1/20/1996	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	4/19/1996	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	7/1/1996	NA	NA	NA	NA	NA	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	10/1/1996	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	5/7/1997	NA	NA	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	7/18/1997	NA	NA	NA	NA	NA	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	10/1/1996	NA	NA	NA	NA	NA	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	2/10/1997	NA	NA	NA	NA	NA	75	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	5/7/1997	NA	NA	NA	NA	NA	59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	7/17/1997	NA	NA	NA	NA	NA	48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	6/19/1998	NA	NA	NA	NA	NA	47	<0.005	<0.2	NA	NA	NA	NA	7.1	<0.005	NA	<5	490
MW-078	4/22/1999	NA	NA	NA	NA	NA	42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	470

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
MW-079	1/11/1995	NA	NA	NA	NA	NA	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	4/6/1995	NA	NA	NA	NA	NA	33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	7/21/1995	NA	NA	NA	NA	NA	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	10/10/1995	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	1/18/1996	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	4/19/1996	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	7/1/1996	NA	NA	NA	NA	NA	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	10/1/1996	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	2/10/1997	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	5/7/1997	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	7/17/1997	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-081	6/29/1998	NA	NA	NA	NA	NA	16	<0.005	0.7	NA	NA	NA	NA	7.4	<0.005	NA	450	800
MW-082	10/11/1995	NA	NA	NA	NA	NA	76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-082	6/25/1998	NA	NA	NA	NA	NA	72	<0.005	0.7	NA	NA	NA	NA	7.1	0.006	NA	390	730
MW-082	10/12/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	190	NA
MW-083	6/25/1998	NA	NA	NA	NA	NA	49	<0.005	0.7	NA	NA	NA	NA	7.2	<0.005	NA	270	640
MW-084	6/23/1998	NA	NA	NA	NA	NA	7	<0.005	0.5	NA	NA	NA	NA	7.5	0.008	NA	<5	370
MW-085	6/23/1998	NA	NA	NA	NA	NA	120	<0.005	1.3	NA	NA	NA	NA	7.5	0.034	NA	<5	1100
MW-086	10/17/1997	2.77	NA	NA	NA	NA	NA	NA	NA	NA	1.91	14	0.5	NA	NA	NA	NA	NA
MW-086	6/26/1998	NA	NA	NA	NA	NA	330	<0.005	1.1	NA	NA	NA	NA	7	0.068	NA	29	1500
MW-087	8/1/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	810
MW-087	8/22/1996	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087	10/1/1996	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087	2/9/1997	NA	222	<0.3	NA	<1	11	NA	0.63	<1	NA	NA	NA	7.8	NA	814	230	580
MW-087	5/6/1997	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087	10/16/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	0.52	<0.2	0.06	NA	NA	NA	NA	NA
MW-087	6/19/1998	NA	NA	NA	NA	NA	13	<0.005	0.9	NA	NA	NA	NA	7.4	<0.005	NA	360	710
MW-087	10/12/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	260	NA
MW-087	4/20/1999	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	680
MW-087A	10/1/1996	NA	NA	NA	NA	NA	110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087A	2/9/1997	NA	352	1.2	NA	<1	150	NA	1.9	<1	NA	NA	NA	7.2	NA	3350	1900	3200
MW-087A	5/7/1997	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087A	10/16/1997	0.17	NA	NA	NA	NA	NA	NA	NA	NA	<0.06	0.9	0.09	NA	NA	NA	NA	NA
MW-088	2/5/1997	NA	NA	NA	NA	NA	30	NA	1.13	NA	NA	NA	NA	NA	NA	NA	390	970
MW-088	4/30/1997	NA	NA	NA	NA	NA	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-088	10/15/1997	1.2	NA	NA	NA	NA	NA	NA	NA	NA	<0.06	1.1	<0.5	NA	NA	NA	NA	NA
MW-088	6/18/1998	NA	NA	NA	NA	NA	22	<0.005	1.1	NA	NA	NA	NA	7.2	<0.005	NA	450	840
MW-088	4/21/1999	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	800
MW-089	8/1/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	900
MW-089	8/22/1996	NA	NA	NA	NA	NA	63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	10/1/1996	NA	NA	NA	NA	NA	63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	2/5/1997	NA	NA	NA	NA	NA	60	NA	0.8	NA	NA	NA	NA	NA	NA	NA	250	840
MW-089	4/30/1997	NA	NA	NA	NA	NA	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	10/15/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	<0.06	<0.2	0.24	NA	NA	NA	NA	NA
MW-089	6/17/1998	NA	NA	NA	NA	NA	61	0.247	0.7	NA	NA	NA	NA	7.1	<0.005	NA	340	780
MW-089	4/21/1999	NA	NA	NA	NA	NA	55	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	710
MW-090	2/10/1997	NA	370	NA	NA	<1	26	NA	0.36	<1	NA	NA	NA	7.4	NA	749	25	460
MW-090	5/7/1997	NA	NA	NA	NA	NA	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-090	7/17/1997	NA	NA	NA	NA	NA	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-090	6/17/1998	NA	NA	NA	NA	NA	35	<0.005	0.5	NA	NA	NA	NA	7.5	<0.005	NA	130	530
MW-090	4/23/1999	NA	NA	NA	NA	NA	51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	740
MW-091	2/11/1997	NA	510	0.5	NA	<1	80	NA	0.19	<1	NA	NA	NA	7.5	NA	1010	<5	590
MW-091	4/23/1999	NA	NA	NA	NA	NA	58	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	640
MW-094	10/17/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	2.4	<0.2	<0.05	NA	NA	NA	NA	NA
MW-094	6/26/1998	NA	NA	NA	NA	NA	24	<0.005	0.7	NA	NA	NA	NA	7.3	0.008	NA	240	600
MW-095	4/30/1997	NA	310	<0.3	31	1	NA	NA	0.4	<1	NA	NA	NA	7.3	NA	NA	19	370
MW-095	6/22/1998	NA	NA	NA	NA	NA	5	<0.005	0.4	NA	NA	NA	NA	7.5	<0.005	NA	21	360
MW-095	10/12/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	19	NA
MW-095	4/22/1999	NA	NA	NA	NA	NA	5.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	340
MW-096	4/30/1997	NA	300	<0.3	48	<1	NA	NA	0.8	<1	NA	NA	NA	7.1	NA	NA	160	560
MW-096	10/16/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	0.38	<0.2	0.08	NA	NA	NA	NA	NA
MW-096	6/21/1998	NA	NA	NA	NA	NA	14	<0.005	0.4	NA	NA	NA	NA	7.2	<0.005	NA	210	560
MW-096	4/22/1999	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	520
MW-097	4/30/1997	NA	270	<0.3	27	1	NA	NA	0.5	<1	NA	NA	NA	7.3	NA	NA	150	550
MW-097	10/17/1997	<0.03	NA	NA	NA	NA	NA	NA	NA	NA	1.71	<0.2	0.43	NA	NA	NA	NA	NA
MW-097	6/21/1998	NA	NA	NA	NA	NA	8	<0.005	0.7	NA	NA	NA	NA	7.2	<0.005	NA	190	520
MW-097	10/12/1998	NA	NA	NA	NA	NA	6.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	530
MW-098	4/30/1997	NA	240	<0.3	19	1	NA	NA	0.4	<1	NA	NA	NA	7.4	NA	NA	25	330
MW-098	6/29/1998	NA	NA	NA	NA	NA	14	<0.005	0.3	NA	NA	NA	NA	7.6	0.01	NA	32	310
MW-104	7/17/1997	NA	268	<0.3	NA	<1	11.6	NA	0.8	<1	0.72	NA	NA	7.6	NA	815	200	580
MW-104	6/21/1998	NA	NA	NA	NA	NA	14	<0.005	1.4	NA	NA	NA	NA	7.3	<0.005	NA	230	560
MW-106	2/11/1997	NA	315	<0.3	NA	<1	10	NA	0.24	<1	NA	NA	NA	7.4	NA	636	37	430
MW-106	5/7/1997	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	7/18/1997	NA	NA	NA	NA	NA	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	6/18/1998	NA	NA	NA	NA	NA	4	<0.005	0.3	NA	NA	NA	NA	7.3	<0.005	NA	33	380
MW-106	4/29/1999	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-108	7/17/1997	NA	297	<0.3	NA	<1	3.2	NA	0.4	<1	2.6	NA	NA	7.6	NA	585	33	360
MW-108	6/22/1998	NA	NA	NA	NA	NA	5	<0.005	0.4	NA	NA	NA	NA	7.4	<0.005	NA	35	340
MW-108	4/22/1999	NA	NA	NA	NA	NA	4.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	340
MW-110	6/30/1998	NA	NA	NA	NA	NA	54	<0.005	0.7	NA	NA	NA	NA	7.2	0.01	NA	130	600
MW-111	6/29/1998	NA	NA	NA	NA	NA	100	<0.005	0.7	NA	NA	NA	NA	7.2	<0.005	NA	310	900
MW-111	4/21/1999	NA	NA	NA	NA	NA	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	760
SW-01	7/1/1991	NA	NA	NA	NA	NA	19	NA	1.3	NA	3	NA	NA	NA	NA	NA	164	583
SW-01	4/1/1992	NA	NA	NA	NA	NA	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-01	7/1/1992	NA	NA	NA	NA	NA	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-01	10/1/1992	NA	NA	NA	NA	NA	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-01	4/15/1993	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-01	5/12/1993	NA	NA	NA	NA	NA	19.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-01	4/23/1999	NA	NA	NA	NA	NA	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	530

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Appendix B
Historical General Chemistry Analytical Data
May 1991 - December 1999
Marathon Oil Company, Indian Basin Remediation Project, Eddy County, New Mexico

Station or Well Name	Sample Collection Date	Ammonia (as N)	Bicarbonate Alkalinity	Bromide	Carbon Dioxide	Carbonate Alkalinity	Chloride	Cyanide	Fluoride	Hydroxide	Nitrate	Nitrogen, Kjeldahl, total (as N)	Orthophosphate	pH*	Phenols, total	Specific conductivity**	Sulfate	Total dissolved solids (TDS)
SW-02	5/12/1993	NA	NA	NA	NA	NA	522	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-02	1/11/1995	NA	NA	NA	NA	NA	81	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-02	6/24/1998	NA	NA	NA	NA	NA	150	<0.005	0.5	NA	NA	NA	NA	7.2	<0.005	NA	120	730
SW-02	4/23/1999	NA	NA	NA	NA	NA	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	670
SW-03	7/1/1996	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-03	10/1/1996	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	380
SW-03	6/24/1998	NA	NA	NA	NA	NA	9	<0.005	0.7	NA	NA	NA	NA	7.5	<0.005	NA	110	410
SW-03	4/23/1999	NA	NA	NA	NA	NA	24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
IW-02	8/1/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	370
IW-02	8/22/1996	NA	NA	NA	NA	NA	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PIPELINE_4	5/1/1991	NA	NA	NA	NA	NA	9000	NA	NA	NA	NA	NA	NA	NA	NA	NA	1860	18500
SHAL-ZONE-MAX	4/1/1992	NA	NA	NA	NA	NA	1240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	7/1/1992	NA	NA	NA	NA	NA	455	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	10/1/1992	NA	NA	NA	NA	NA	420	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	1/1/1993	NA	NA	NA	NA	NA	544	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	4/1/1993	NA	NA	NA	NA	NA	955	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	7/1/1993	NA	NA	NA	NA	NA	445	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	10/1/1993	NA	NA	NA	NA	NA	543	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	1/1/1994	NA	NA	NA	NA	NA	490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	4/1/1994	NA	NA	NA	NA	NA	450	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	7/1/1994	NA	NA	NA	NA	NA	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	10/1/1994	NA	NA	NA	NA	NA	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	1/1/1995	NA	NA	NA	NA	NA	439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SHAL-ZONE-MAX	4/1/1995	NA	NA	NA	NA	NA	439	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	5/1/1991	NA	NA	NA	NA	NA	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	876
SUMP-16A	7/1/1991	NA	NA	NA	NA	NA	49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	263
SUMP-16A	12/1/1991	NA	NA	NA	NA	NA	683	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	4/1/1992	NA	NA	NA	NA	NA	522	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	7/1/1992	NA	NA	NA	NA	NA	82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	10/1/1992	NA	NA	NA	NA	NA	225	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	1/1/1993	NA	NA	NA	NA	NA	229	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	4/14/1993	NA	NA	NA	NA	NA	218	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	10/5/1994	NA	NA	NA	NA	NA	128	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	1/11/1995	NA	NA	NA	NA	NA	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	10/12/1995	NA	NA	NA	NA	NA	63	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-16A	7/1/1996	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-A10	4/1/1991	NA	NA	NA	NA	NA	17000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-A10	5/1/1991	NA	NA	NA	NA	NA	3750	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-A10	10/5/1994	NA	NA	NA	NA	NA	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SUMP-A10	10/12/1995	NA	NA	NA	NA	NA	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TH-21A	5/1/1991	NA	NA	NA	NA	NA	8250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16000
TH-21A	7/1/1991	NA	NA	NA	NA	NA	636	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TH-A11	4/1/1991	NA	NA	NA	NA	NA	12800	NA	NA	NA	NA	NA	NA	NA	NA	NA	613	26200
TH-A11	7/1/1991	NA	NA	NA	NA	NA	1470	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TH-A11	9/1/1991	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10	1050
TH-A11	12/1/1991	NA	NA	NA	NA	NA	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TH-A11	4/1/1992	NA	NA	NA	NA	NA	433	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TH-A11	7/1/1992	NA	NA	NA	NA	NA	60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TH-A11	10/1/1992	NA	NA	NA	NA	NA	124	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	7/1/1992	NA	NA	NA	NA	NA	8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	1/1/1993	NA	NA	NA	NA	NA	11.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	6/23/1994	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	1/11/1995	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	3/9/1995	NA	NA	NA	NA	NA	11.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	1/19/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	4/24/1996	NA	NA	NA	NA	NA	10.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	7/1/1996	NA	NA	NA	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	4/1/1992	NA	NA	NA	NA	NA	16.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	10/1/1992	NA	NA	NA	NA	NA	13.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	4/15/1993	NA	NA	NA	NA	NA	13.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	5/12/1993	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	6/28/1993	NA	NA	NA	NA	NA	11.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	7/15/1993	NA	NA	NA	NA	NA	12.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	8/3/1993	NA	NA	NA	NA	NA	11.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	9/21/1993	NA	NA	NA	NA	NA	11.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	10/14/1993	NA	NA	NA	NA	NA	10.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	11/10/1993	NA	NA	NA	NA	NA	493	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	12/6/1993	NA	NA	NA	NA	NA	10.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	3/16/1994	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	4/5/1994	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	7/21/1994	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	8/24/1994	NA	NA	NA	NA	NA	12.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	9/20/1994	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	10/6/1994	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	11/30/1994	NA	NA	NA	NA	NA	11.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	12/16/1994	NA	NA	NA	NA	NA	12.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	5/18/1995	NA	NA	NA	NA	NA	9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	7/21/1995	NA	NA	NA	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	10/12/1995	NA	NA	NA	NA	NA	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	10/1/1996	NA	NA	NA	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	2/10/1997	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	6/26/1998	NA	NA	NA	NA	NA	13	<0.005	0.7	NA	NA	NA	NA	7.2	0.006	NA	590	940
UIHS_ARROYO	1/13/1994	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	5/19/1994	NA	NA	NA	NA	NA	12.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	4/7/1995	NA	NA	NA	NA	NA	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
UIHS_ARROYO	2/9/1994	NA	NA	NA	NA	NA	11.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* Measured in standard units (su)
** Measured in micro-mhos per centimeter (umho/cm)
NA Not analyzed or not reported
< Constituent not detected above noted laboratory detection limit

Historical General Chemistry Analytical Data
January 2000 - December 2003

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
Polynuclear Aromatic Hydrocarbons

	Constituent	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene**	Benzo(a)pyrene	Benzo(b)fluoranthene**
	New Mexico Standards	--	--	--	--	tox	0.1	0.7	0.2
Station or Well Name	Sample Collection Date								
MW-014	4/18/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-014	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-014 (Dup-1)	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/28/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-043	4/17/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-043	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	4/28/2000	**3.9**	**0.75**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-046	4/17/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-049	4/27/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-049	4/17/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-049	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/27/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-050	4/17/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-050	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-054	4/18/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-054	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-055	4/24/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-055	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	5/4/2000	**0.47**	**0.28**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-057	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-057	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	5/4/2000	**110**	**120**	<2.2	**5.1**	<2.2	<2.2	<2.2	<2.2
MW-059	4/23/2002	NA	NA	<25	<25	<5	**0.97**	**1.25**	**1.38**
MW-059	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-059 (Dup-2)	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	5/1/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-060	4/23/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-060	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	5/3/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-061	4/19/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-061	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	5/3/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-061A	4/19/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-061A	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
Polynuclear Aromatic Hydrocarbons

	Constituent	Benzo(g,h,i)perylene	Benzo(k)fluoranthene**	Chrysene**	Dibenzo(a,h)anthracene**	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene**	Naphthalene	Phenanthrene	Pyrene
	New Mexico Standards	--	0.2	0.2	0.3	tox	tox	0.4	tox	tox	tox
Station or Well Name	Sample Collection Date										
MW-014	4/18/2002	<0.1	<0.1	<1	<0.1	**3.06**	**4.4**	<0.1	<5	**1.93**	<1
MW-014	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-014 (Dup-1)	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/28/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-043	4/17/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-043	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	4/28/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.76**	<0.1	<0.1
MW-046	4/17/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-049	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-049	4/17/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-049	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-050	4/17/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-050	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-054	4/18/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-054	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-055	4/24/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-055	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	5/4/2000	<0.1	<0.1	<0.1	<0.1	<0.1	**0.22**	<0.1	**0.25**	<0.1	<0.1
MW-057	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-057	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	5/4/2000	<2.2	<2.2	<2.2	<2.2	<2.2	**110**	<2.2	**17**	**9.3**	<2.2
MW-059	4/23/2002	**0.68**	**0.51**	<5	<0.5	**39.5**	**27.7**	**0.72**	<25	**25.7**	<5
MW-059	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059 (Dup-2)	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	5/1/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-060	4/23/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-060	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	5/3/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-061	4/19/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-061	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	5/3/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-061A	4/19/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-061A	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
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	Constituent	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene**	Benzo(a)pyrene	Benzo(b)fluoranthene**
	New Mexico Standards	--	--	--	--	tox	0.1	0.7	0.2
Station or Well Name	Sample Collection Date								
MW-062	5/3/2000	**0.46**	**0.25**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-062	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-062	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/27/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-063	4/18/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-063	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	5/3/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-064	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-064	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/27/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-066	4/19/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-066	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-067	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-067	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/27/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-070	4/18/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-070	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	4/28/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-071	4/23/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-071	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-073	5/4/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-073	4/24/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-073	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-074	5/4/2000	**2.9**	**1.6**	<0.56	**0.68**	<0.56	<0.56	<0.56	<0.56
MW-074	4/24/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-074	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-078	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-079	4/17/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-087	5/1/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-087	4/23/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-087	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-087A	5/1/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-087A	4/23/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-087A	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA

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	Constituent	Benzo(g,h,i)perylene	Benzo(k)fluoranthene**	Chrysene**	Dibenzo(a,h)anthracene**	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene**	Naphthalene	Phenanthrene	Pyrene
	New Mexico Standards	--	0.2	0.2	0.3	tox	tox	0.4	tox	tox	tox
Station or Well Name	Sample Collection Date										
MW-062	5/3/2000	<0.1	<0.1	<0.1	<0.1	<0.1	**0.71**	<0.1	<0.1	<0.1	<0.1
MW-062	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-062	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-063	4/18/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-063	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	5/3/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-064	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-064	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-066	4/19/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-066	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-067	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-067	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-070	4/18/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-070	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	4/28/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-071	4/23/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-071	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-073	5/4/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-073	4/24/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-073	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-074	5/4/2000	<0.56	<0.56	<0.56	<0.56	<0.56	**13**	<0.56	<0.56	<0.56	<0.56
MW-074	4/24/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-074	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-078	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-079	4/17/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-087	5/1/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-087	4/23/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-087	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087A	5/1/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-087A	4/23/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-087A	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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	Constituent	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene**	Benzo(a)pyrene	Benzo(b)fluoranthene**
	New Mexico Standards	--	--	--	--	tox	0.1	0.7	0.2
Station or Well Name	Sample Collection Date								
MW-088	4/28/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-088	4/19/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-088	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	4/27/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-089	4/19/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-089	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-090	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-090	4/18/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-090	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-091	4/18/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-091	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-094	5/3/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-094	4/24/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-094	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-095	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-095	4/23/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-095	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-096	5/10/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-096	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-096	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-097	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-097	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-097	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-098	5/2/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-098	4/23/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-098	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-104	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-104	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	5/1/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-106	4/17/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-106	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-108	5/4/2000	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-108	4/22/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-108	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-111	4/27/2000	**0.36**	**0.7**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-111	4/19/2002	NA	NA	<5	<5	<1	<0.1	<0.1	<0.1
MW-111	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

NA	No analysis performed
ug/L	Micrograms per liter
mg/L	Milligrams per liter
WQCC	WQCC New Mexico Water Quality Control Commission
tox	A numerical standard has not been established, but the contaminant is listed in a narrative standard of toxic pollutant defined in WQCC regulations.
--	No standard published
**	Indicates standard used is the United States Environmental Protections Agency Maximum Contaminant Level
116	Indicates result at/above the applicable standard
9	Indicates result above the laboratory detection limit
<5	Indicates the result is below the specified laboratory detection limit

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	Constituent	Benzo(g,h,i)perylene	Benzo(k)fluoranthene**	Chrysene**	Dibenzo(a,h)anthracene**	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene**	Naphthalene	Phenanthrene	Pyrene
	New Mexico Standards	--	0.2	0.2	0.3	tox	tox	0.4	tox	tox	tox
Station or Well Name	Sample Collection Date										
MW-088	4/28/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-088	4/19/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-088	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.16**	<0.1	<0.1
MW-089	4/19/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-089	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-090	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-090	4/18/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-090	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-091	4/18/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-091	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-094	5/3/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-094	4/24/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-094	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-095	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-095	4/23/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-095	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-096	5/10/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.19**	<0.1	<0.1
MW-096	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-096	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-097	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-097	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-097	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-098	5/2/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-098	4/23/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-098	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-104	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-104	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	5/1/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-106	4/17/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-106	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-108	5/4/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MW-108	4/22/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-108	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-111	4/27/2000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1
MW-111	4/19/2002	<0.1	<0.1	<1	<0.1	<1	<1	<0.1	<5	<1	<1
MW-111	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

NA	No analysis performed
ug/L	Micrograms per liter
mg/L	Milligrams per liter
WQCC	WQCC New Mexico Water Quality Control Commission
tox	*A numerical standard has not been* established, but the contaminant is listed in a narrative standard of toxic pollutant defined in WQCC regulations.
--	No standard published
**	Indicates standard used is the United States Environmental Protections Agency Maximum Contaminant Level
116	Indicates result at/above the applicable standard
9	Indicates result above the laboratory detection limit
<5	Indicates the result is below the specified laboratory detection limit

Appendix B

Summary of Analytical Results for All Semi-Annual Sampling Events

1/1/2000 through 12/31/2003

WQCC Dissolved Metals and Wet Chemistry

		WQCC Dissolved Metals (mg/L)															
	Constituent	**Aluminum**	**Arsenic**	**Barium**	**Boron**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Iron**	**Lead**	**Manganese**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Zinc**
	New Mexico Standards	**5**	**0.1**	**1**	**0.75**	**0.01**	**0.05**	**0.05**	**1.3**	**1**	**0.05**	**0.2**	**1**	**0.2**	**0.05**	**0.05**	**10**
Station or Well Name	**Sample Collection Date**																
LYMAN	12/18/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-014	4/18/2002	<0.05	<0.02	**0.54**	**0.16**	<0.005	<0.01	<0.02	<0.01	**0.97**	<0.05	**0.25**	<0.05	**0.01**	<0.02	<0.01	**0.04**
MW-014	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-014 (Dup 1)	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/28/2000	<0.1	<0.005	**0.118**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.0219**	<0.02	<0.02	<0.005	<0.01	<0.02
MW-043	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-043	4/17/2002	<0.05	<0.02	**0.13**	**0.16**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.1**	<0.05	<0.01	<0.02	<0.01	**0.02**
MW-043	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	4/28/2000	<0.1	<0.005	**0.119**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.145**	<0.02	<0.02	<0.005	<0.01	<0.02
MW-046	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-046	4/17/2002	**0.3**	<0.02	**0.13**	**0.08**	<0.005	<0.01	<0.02	<0.01	**0.17**	<0.05	**0.23**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-049	4/27/2000	<0.1	**0.0057**	**0.0338**	**0.402**	<0.005	<0.01	<0.01	<0.01	**0.0206**	<0.005	**0.218**	<0.02	<0.02	**0.0638**	<0.01	**0.0205**
MW-049	4/17/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-049	4/17/2002	<0.05	<0.02	**0.05**	**0.44**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.16**	<0.05	<0.01	**0.05**	<0.01	<0.01
MW-049	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/27/2000	<0.1	**0.00709**	**0.0154**	**0.382**	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	**0.00636**	<0.01	<0.02
MW-050	4/17/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-050	4/17/2002	<0.05	<0.02	**0.01**	**0.32**	<0.005	<0.01	<0.02	**0.07**	<0.05	<0.05	**0.69**	<0.05	<0.02	**0.05**	<0.01	**0.05**
MW-050	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	5/2/2000	<0.1	<0.005	**0.0155**	**0.277**	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0286**
MW-054	4/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-054	4/18/2002	<0.05	<0.02	**0.02**	**0.33**	<0.005	<0.01	<0.02	<0.01	**0.25**	<0.05	**0.02**	<0.05	<0.01	**0.05**	**0.09**	<0.01
MW-054	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	5/2/2000	<0.1	<0.005	**0.194**	**0.244**	<0.005	<0.01	<0.01	<0.01	**0.0591**	<0.005	**0.0697**	<0.02	<0.02	<0.005	<0.01	<0.02
MW-055	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-055	4/24/2002	<0.05	<0.02	**0.22**	**0.19**	<0.005	<0.01	<0.02	<0.02	**0.34**	<0.05	**0.07**	<0.05	<0.01	<0.02	<0.02	<0.01
MW-055	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-057	5/4/2000	<0.1	<0.005	**0.228**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.134**	<0.02	<0.02	<0.005	<0.01	**0.0447**
MW-057	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

	Constituent	Total Dissolved Solids (TDS)	Chloride
	New Mexico Standards	1000	250
Station or Well Name	Sample Collection Date		
LYMAN	12/18/2000	NA	15
MW-014	4/18/2002	1200	300
MW-014	10/24/2003	1100	150
MW-014 (Dup 1)	10/24/2003	1000	140
MW-043	4/28/2000	827	68.9
MW-043	4/19/2001	730	79
MW-043	4/17/2002	640	51
MW-043	10/28/2003	1300	140
MW-046	4/28/2000	565	25.8
MW-046	4/19/2001	570	47
MW-046	4/17/2002	490	37
MW-049	4/27/2000	3320	379
MW-049	4/17/2001	3100	350
MW-049	4/17/2002	2600	450
MW-049	10/28/2003	2900	570
MW-050	4/27/2000	6510	345
MW-050	4/17/2001	6200	350
MW-050	4/17/2002	6900	360
MW-050	10/22/2003	6300	300
MW-054	5/2/2000	3230	138
MW-054	4/23/2001	4500	190
MW-054	4/18/2002	4500	180
MW-054	10/27/2003	4900	180
MW-055	5/2/2000	1020	138
MW-055	4/24/2001	920	130
MW-055	4/24/2002	720	79
MW-055	10/24/2003	1300	190
MW-057	5/4/2000	515	43.1
MW-057	4/24/2001	520	48

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

		WQCC Dissolved Metals (mg/L)															
	Constituent	**Aluminum**	**Arsenic**	**Barium**	**Boron**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Iron**	**Lead**	**Manganese**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Zinc**
	New Mexico Standards	**5**	**0.1**	**1**	**0.75**	**0.01**	**0.05**	**0.05**	**1.3**	**1**	**0.05**	**0.2**	**1**	**0.2**	**0.05**	**0.05**	**10**
MW-057	4/22/2002	<0.05	<0.02	**0.12**	**0.05**	<0.005	<0.01	<0.02	<0.01	**0.13**	<0.05	**0.12**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-057	10/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	5/4/2000	<0.1	**0.0191**	**0.0502**	<0.2	<0.005	<0.01	<0.01	<0.01	**0.094**	<0.005	**0.71**	<0.02	**0.0269**	<0.005	<0.01	<0.02
MW-059	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059	4/23/2002	**0.06**	<0.02	**0.02**	**0.27**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.15**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-059	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-059 (Dup-2)	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	5/1/2000	<0.1	<0.005	**0.0152**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0245**
MW-060	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-060	4/23/2002	<0.05	<0.02	**0.02**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	**0.01**
MW-060	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	5/3/2000	<0.1	<0.005	**0.0265**	**0.527**	<0.005	<0.01	<0.01	<0.01	**0.0395**	<0.005	**0.0128**	<0.02	<0.02	<0.005	<0.01	<0.02
MW-061	4/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061	4/19/2002	**0.25**	**0.06**	**0.02**	**0.57**	<0.005	<0.01	<0.02	**0.05**	**0.47**	<0.05	<0.01	<0.05	**0.03**	<0.04	**0.07**	**0.01**
MW-061	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	5/3/2000	<0.1	<0.005	**0.0241**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.129**	<0.02	<0.02	<0.005	<0.01	**0.0254**
MW-061A	4/18/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-061A	4/19/2002	<0.05	**0.04**	**0.01**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.12**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-061A	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	5/3/2000	<0.1	**0.00705**	**0.771**	<0.2	<0.005	<0.01	<0.01	<0.01	**0.0284**	<0.005	**0.374**	<0.02	<0.02	<0.005	<0.01	<0.02
MW-062	4/20/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-062	4/22/2002	<0.05	**0.03**	**0.86**	**0.11**	<0.005	<0.01	<0.02	<0.01	**0.88**	<0.05	**0.5**	<0.05	<0.01	**0.03**	<0.01	<0.01
MW-062	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/27/2000	<0.1	<0.005	**0.271**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	**0.00908**	<0.01	<0.02
MW-063	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-063	4/18/2002	<0.05	<0.02	**0.36**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	**0.02**
MW-063	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	5/3/2000	<0.1	<0.005	**0.0132**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0337**
MW-064	4/20/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-064	4/22/2002	<0.05	<0.02	**0.01**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	**0.02**
MW-064	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

	Constituent	**Total Dissolved Solids (TDS)**	**Chloride**
	New Mexico Standards	**1000**	**250**
MW-057	4/22/2002	**540**	**45**
MW-057	10/28/2003	**430**	**37**
MW-059	5/4/2000	**3300**	**196**
MW-059	4/19/2001	**2400**	**210**
MW-059	4/23/2002	**5800**	**470**
MW-059	10/24/2003	**6000**	**420**
MW-059 (Dup-2)	10/24/2003	**6100**	**420**
MW-060	5/1/2000	**790**	**8.61**
MW-060	4/19/2001	**720**	**9.4**
MW-060	4/23/2002	**710**	**9.7**
MW-060	10/23/2003	**640**	**12**
MW-061	5/3/2000	**3290**	**379**
MW-061	4/23/2001	**3100**	**430**
MW-061	4/19/2002	**3200**	**390**
MW-061	10/22/2003	**3300**	**440**
MW-061A	5/3/2000	**811**	**8.61**
MW-061A	4/18/2001	**720**	**9.5**
MW-061A	4/19/2002	**720**	**9.5**
MW-061A	10/22/2003	**730**	**10**
MW-062	5/3/2000	**695**	**99.9**
MW-062	4/20/2001	**700**	**130**
MW-062	4/22/2002	**670**	**93**
MW-062	10/27/2003	**610**	**82**
MW-063	4/27/2000	**395**	**10.3**
MW-063	4/24/2001	**370**	**12**
MW-063	4/18/2002	**320**	**14**
MW-063	10/24/2003	**370**	**8.2**
MW-064	5/3/2000	**611**	**13.8**
MW-064	4/20/2001	**540**	**13**
MW-064	4/22/2002	**520**	**14**
MW-064	10/22/2003	**580**	**13**

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

		WQCC Dissolved Metals (mg/L)															
	Constituent	**Aluminum**	**Arsenic**	**Barium**	**Boron**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Iron**	**Lead**	**Manganese**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Zinc**
	New Mexico Standards	**5**	**0.1**	**1**	**0.75**	**0.01**	**0.05**	**0.05**	**1.3**	**1**	**0.05**	**0.2**	**1**	**0.2**	**0.05**	**0.05**	**10**
MW-066	4/27/2000	<0.1	<0.005	**0.019**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-066	4/18/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-066	4/19/2002	<0.05	<0.02	<0.01	<0.05	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	<0.01	<0.05	<0.01	**0.12**	<0.02	<0.01
MW-066	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	5/2/2000	<0.1	<0.005	**0.0607**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.37**	<0.02	**0.0319**	<0.005	<0.01	**0.0225**
MW-067	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-067	4/22/2002	<0.05	<0.02	**0.04**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.02**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-067	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/27/2000	<0.1	<0.005	**0.0469**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	**0.0059**	<0.01	<0.02
MW-070	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-070	4/18/2002	<0.05	<0.02	**0.06**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	**0.02**
MW-070	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	4/28/2000	<0.1	<0.005	**0.0156**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	**0.0356**	**0.00724**	<0.01	<0.02
MW-071	4/18/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-071	4/23/2002	<0.05	<0.02	**0.01**	**0.18**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	**0.1**	<0.02	<0.01
MW-071	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-073	5/4/2000	<0.1	<0.005	**0.102**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.0822**	<0.02	<0.02	<0.005	<0.01	<0.02
MW-073	4/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-073	4/24/2002	<0.05	**0.02**	**0.06**	**0.12**	<0.005	<0.01	<0.02	<0.02	**0.16**	<0.05	**0.19**	<0.05	<0.02	**0.02**	<0.02	<0.01
MW-073	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-074	5/4/2000	<0.1	<0.005	**0.689**	<0.2	<0.005	<0.01	<0.01	<0.01	**3.49**	<0.005	**0.115**	<0.02	<0.02	<0.005	<0.01	**0.0888**
MW-074	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-074	4/24/2002	<0.05	<0.02	**0.71**	**0.19**	<0.005	<0.01	<0.02	<0.02	**1.9**	<0.05	**0.17**	<0.05	<0.01	<0.02	<0.02	<0.01
MW-074	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-077	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-078	4/22/2002	<0.05	<0.02	**1.12**	<0.05	<0.005	<0.01	<0.02	<0.01	**1.04**	<0.05	**2**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-078	10/24/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-079	5/2/2000	<0.1	<0.005	**0.0376**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-079	4/17/2002	<0.05	<0.02	**0.11**	**0.12**	<0.005	<0.01	**0.09**	<0.01	**0.1**	<0.05	**0.4**	<0.05	**0.08**	<0.02	<0.01	**0.02**
MW-087	5/1/2000	<0.1	<0.005	**0.0161**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-087	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

	Constituent	Total Dissolved Solids (TDS)	Chloride
	New Mexico Standards	**1000**	**250**
MW-066	4/27/2000	**848**	**8.61**
MW-066	4/18/2001	**660**	**9.3**
MW-066	4/19/2002	**790**	**8.8**
MW-066	10/22/2003	**770**	**8.4**
MW-067	5/2/2000	**537**	**8.61**
MW-067	4/19/2001	**470**	**6.5**
MW-067	4/22/2002	**420**	**5.7**
MW-067	10/22/2003	**400**	**4.7**
MW-070	4/27/2000	**385**	**8.61**
MW-070	4/24/2001	**270**	**9.8**
MW-070	4/18/2002	**310**	**15**
MW-070	10/23/2003	**350**	**10**
MW-071	4/28/2000	**1240**	**36.2**
MW-071	4/18/2001	**1100**	**67**
MW-071	4/23/2002	**1100**	**45**
MW-071	10/21/2003	**1100**	**77**
MW-073	5/4/2000	**1570**	**176**
MW-073	4/23/2001	**1900**	**170**
MW-073	4/24/2002	**1800**	**140**
MW-073	10/24/2003	**3200**	**260**
MW-074	5/4/2000	**466**	**146**
MW-074	4/24/2001	**850**	**130**
MW-074	4/24/2002	**730**	**100**
MW-074	10/23/2003	**840**	**170**
MW-077	10/24/2003	**590**	**57**
MW-078	4/22/2002	**450**	**35**
MW-078	10/24/2003	**440**	**22**
MW-079	5/2/2000	**563**	**39.6**
MW-079	4/17/2002	**490**	**37**
MW-087	5/1/2000	**690**	**10.3**
MW-087	4/19/2001	**680**	**1.2**

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

		WQCC Dissolved Metals (mg/L)															
	Constituent	**Aluminum**	**Arsenic**	**Barium**	**Boron**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Iron**	**Lead**	**Manganese**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Zinc**
	New Mexico Standards	**5**	**0.1**	**1**	**0.75**	**0.01**	**0.05**	**0.05**	**1.3**	**1**	**0.05**	**0.2**	**1**	**0.2**	**0.05**	**0.05**	**10**
MW-087	4/23/2002	<0.05	<0.02	**0.02**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	<0.01
MW-087	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087A	5/1/2000	<0.1	<0.005	**0.0278**	**0.343**	<0.005	<0.01	<0.01	<0.01	<0.02	**0.0103**	**0.018**	**0.0646**	<0.02	<0.005	<0.01	**0.122**
MW-087A	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-087A	4/23/2002	**0.1**	<0.02	<0.01	**0.28**	<0.005	**0.01**	<0.02	<0.02	<0.05	<0.05	<0.01	<0.05	<0.02	**0.29**	<0.02	<0.01
MW-087A	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-088	4/28/2000	<0.1	<0.005	**0.0187**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	**0.047**	<0.01	**0.0452**
MW-088	4/17/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-088	4/19/2002	**0.15**	**0.06**	<0.01	**0.08**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	**0.08**	<0.02	**0.01**
MW-088	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	4/27/2000	<0.1	<0.005	**0.017**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-089	4/18/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-089	4/19/2002	<0.05	<0.02	**0.01**	**0.06**	<0.005	<0.01	<0.02	<0.01	<0.05	**0.06**	<0.01	<0.05	<0.01	**0.07**	<0.01	<0.01
MW-089	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-090	5/2/2000	<0.1	**0.00869**	**0.0924**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0964**
MW-090	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-090	4/18/2002	<0.05	<0.02	**0.16**	**0.08**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.02**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-090	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-091	4/18/2002	<0.05	<0.02	**4.92**	**0.08**	<0.005	<0.01	<0.02	<0.01	**0.5**	<0.05	**0.28**	<0.05	**0.01**	<0.02	<0.01	<0.01
MW-091	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-094	5/3/2000	<0.1	<0.005	**0.0212**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-094	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-094	4/24/2002	<0.05	<0.02	**0.02**	<0.05	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	<0.02	<0.05	<0.01	**0.03**	<0.02	<0.01
MW-094	10/27/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-095	5/2/2000	<0.1	<0.005	**0.234**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-095	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-095	4/23/2002	**0.05**	<0.02	**0.28**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	**0.01**
MW-095	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-096	5/1/2000	<0.1	<0.005	**0.0178**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.0205**	<0.02	<0.02	<0.005	<0.01	**0.0216**
MW-096	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-096	4/22/2002	<0.05	<0.02	**0.01**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.02**	<0.05	<0.01	<0.02	<0.01	**0.01**

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

	Constituent	Total Dissolved Solids (TDS)	Chloride
	New Mexico Standards	**1000**	**250**
MW-087	4/23/2002	**670**	**9.9**
MW-087	10/23/2003	**600**	**14**
MW-087A	5/1/2000	**3290**	**127**
MW-087A	4/19/2001	**2900**	**130**
MW-087A	4/23/2002	**2700**	**130**
MW-087A	10/23/2003	**3500**	**120**
MW-088	4/28/2000	**876**	**43.1**
MW-088	4/17/2001	**770**	**23**
MW-088	4/19/2002	**750**	**35**
MW-088	10/21/2003	**810**	**22**
MW-089	4/27/2000	**850**	**50**
MW-089	4/18/2001	**760**	**52**
MW-089	4/19/2002	**730**	**48**
MW-089	10/22/2003	**770**	**50**
MW-090	5/2/2000	**422**	**17.2**
MW-090	4/24/2001	**360**	**21**
MW-090	4/18/2002	**380**	**24**
MW-090	10/23/2003	**450**	**20**
MW-091	4/18/2002	**560**	**55**
MW-091	10/23/2003	**450**	**49**
MW-094	5/3/2000	**721**	**24.1**
MW-094	4/24/2001	**560**	**21**
MW-094	4/24/2002	**550**	**20**
MW-094	10/27/2003	**580**	**27**
MW-095	5/2/2000	**349**	**3.45**
MW-095	4/24/2001	**320**	**3**
MW-095	4/23/2002	**330**	**23**
MW-095	10/23/2003	**410**	**2.8**
MW-096	5/1/2000	**600**	**12.1**
MW-096	4/19/2001	**570**	**12**
MW-096	4/22/2002	**520**	**13**

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

		WQCC Dissolved Metals (mg/L)															
	Constituent	**Aluminum**	**Arsenic**	**Barium**	**Boron**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Iron**	**Lead**	**Manganese**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Zinc**
	New Mexico Standards	**5**	**0.1**	**1**	**0.75**	**0.01**	**0.05**	**0.05**	**1.3**	**1**	**0.05**	**0.2**	**1**	**0.2**	**0.05**	**0.05**	**10**
MW-096	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-097	5/2/2000	<0.1	<0.005	**0.0475**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0255**
MW-097	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-097	4/22/2002	<0.05	<0.02	**0.05**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	<0.01
MW-097	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-098	5/2/2000	<0.1	<0.005	**0.147**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	<0.02
MW-098	4/24/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-098	4/23/2002	<0.05	<0.02	**0.19**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	<0.01
MW-098	10/23/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-104	4/23/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-104	4/22/2002	<0.05	<0.02	**0.02**	<0.05	<0.005	<0.01	<0.02	<0.02	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.02	<0.01
MW-104	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	5/1/2000	<0.1	<0.005	**0.197**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0691**
MW-106	4/18/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-106	4/17/2002	<0.05	<0.02	**0.26**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	**0.04**	<0.05	<0.01	<0.02	<0.01	<0.01
MW-106	10/21/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-108	5/4/2000	<0.1	<0.005	**0.0729**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	<0.005	<0.02	<0.02	<0.005	<0.01	**0.0475**
MW-108	4/19/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-108	4/22/2002	<0.05	<0.02	**0.1**	<0.05	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	<0.02	<0.01	<0.01
MW-108	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-111	4/27/2000	<0.1	<0.005	**0.0181**	<0.2	<0.005	<0.01	<0.01	<0.01	<0.02	<0.005	**0.00964**	<0.02	<0.02	**0.0123**	<0.01	<0.02
MW-111	4/18/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-111	4/19/2002	<0.05	<0.02	**0.01**	**0.07**	<0.005	<0.01	<0.02	<0.01	<0.05	<0.05	<0.01	<0.05	<0.01	**0.05**	<0.01	**0.02**
MW-111	10/22/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Appendix B
Summary of Analytical Results for All Semi-Annual Sampling Events
1/1/2000 through 12/31/2003
WQCC Dissolved Metals and Wet Chemistry

	Constituent	**Total Dissolved Solids (TDS)**	**Chloride**
	New Mexico Standards	**1000**	**250**
MW-096	10/22/2003	**560**	**12**
MW-097	5/2/2000	**533**	**5.17**
MW-097	4/19/2001	**440**	**4.6**
MW-097	4/22/2002	**450**	**4.8**
MW-097	10/21/2003	**440**	**4.1**
MW-098	5/2/2000	**324**	**12.1**
MW-098	4/24/2001	**300**	**16**
MW-098	4/23/2002	**330**	**14**
MW-098	10/23/2003	**310**	**14**
MW-104	4/23/2001	**520**	**15**
MW-104	4/22/2002	**500**	**15**
MW-104	10/22/2003	**580**	**13**
MW-106	5/1/2000	**350**	**3.45**
MW-106	4/18/2001	**340**	**5.6**
MW-106	4/17/2002	**350**	**12**
MW-106	10/21/2003	**350**	**3.1**
MW-108	5/4/2000	**370**	**3.45**
MW-108	4/19/2001	**360**	**3.4**
MW-108	4/22/2002	**330**	**3.4**
MW-108	10/22/2003	**330**	**2.6**
MW-111	4/27/2000	**994**	**103**
MW-111	4/18/2001	**800**	**100**
MW-111	4/19/2002	**750**	**100**
MW-111	10/22/2003	**800**	**98**

Appendix C

Laboratory Analytical Reports
(CD-ROM)

- Monthly Air Stripper Sampling, 2003
- April 2003 Groundwater Sampling Event
- October 2003 Groundwater Sampling Event

Appendix D

Laboratory Analytical Reports

- Monthly VES Air Sampling, 2003

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

2/4/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on January 31, 2003 for your project; Indian Basin Remediation Project.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC77-32064

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-300 MW-85	VES-800 MW-120	VES-700 MW-131	VES-900 MW-124	VES-1000 MW-113	VES-100 MW-123	VES-200 MW-68	VES-1100 MW-126	VES-600 MW-110	MDL
HEXANE	2.20	2.89	2.60	0.92	0.62	0.66	2.88	0.36	4.84	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	**ND	**ND	ND	ND	ND	ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOTAL C3-C14 *	173.04	207.00	163.72	30.55	27.80	30.03	94.33	30.97	198.89	0.07
FILE NAME	V26A3.31A	V26A3.32A	V26A3.33A	V26A3.34A	V26A3.35A	V26A3.36A	V26A3.37A	V26A3.38A	V26A3.39A	
DATE SAMPLED	01/23/03	01/23/03	01/23/03	01/23/03	01/23/03	01/23/03	01/23/03	01/23/03	01/23/03	
DATE RECEIVED	01/31/03	01/31/03	01/31/03	01/31/03	01/31/03	01/31/03	01/31/03	01/31/03	01/31/03	
DATE ANALYZED	02/01/03	02/01/03	02/01/03	02/01/03	02/01/03	02/01/03	02/01/03	02/01/03	02/01/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

04-Feb-03

Reviewed by

Vaportech Services, Inc.

-32064

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V26A3.29A V26A3.30A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	110.38	8.21
BENZENE	1.25	1.29	2.88
TOLUENE	1.06	1.09	3.21
ETHYL BENZENE	0.92	0.96	3.80
M&P XYLENE	1.84	1.92	4.08
O-XYLENE	0.92	0.95	3.37

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V26A3.28A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.65	0.07

ND denotes 'Not Detected' above the lower method detection limit

04-Feb-03

Reviewed by

MOC 27 - 52064

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. BOX 522
City: MIDLAND State: TX Zip: 79702
Proj. Manager: PAUL PEACOCK
Proj. Location: INDIAN BASIN Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature : Rigo Aguilera

MPPeacock@marathonoil.com

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 -C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1- DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis A	B	C	D	(Other) E	Remarks
1-22-03	8:30 AM	2	AIR	VES-300 MW-85	H	F			HEXANE	(C3-C14)
	8:45 AM			VES-800 MW-120						
	8:50 AM			VES-700 MW-131						
	9:15 AM			VES-900 MW-124						
	9:25 AM			VES-1000 MW-113						
	9:35 AM			VES-100 MW-123						
	10:06 AM			VES-200 MW-68						
	10:14 AM			VES-1100 MW-126						
	10:20 AM			VES-600 MW-110						

Results to : MARATHON OIL Co
P.O. BOX 522 MIDLAND TX 79702

Invoice to : email invoice to Paul / mail to Houston

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Rigo Aguilera	MOC	1-23-03	11:30 AM	[illegible]	Vaportech	1/31/03	1000.
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

2/24/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on February 20, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC78-32114

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-300 MW-85	VES-800 MW-120	VES-700 MW-74	VES-900 MW-124	VES-1000 MW-130	VES-100 MW-123	VES-200 MW-68	VES-1100 MW-126	VES-600 MW-110	MDL
HEXANE	2.43	1.81	3.19	0.54	0.53	0.50	2.76	0.38	5.10	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	**ND	**ND	ND	ND	ND	ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOTAL C3-C14 *	173.67	181.55	191.57	19.70	23.57	21.69	82.81	29.56	230.08	0.07
FILE NAME	V26A4.41A	V26A4.42A	V26A4.43A	V26A4.44A	V26A4.45A	V26A4.46A	V26A4.47A	V26A4.48A	V26A4.49A	
DATE SAMPLED	02/12/03	02/12/03	02/12/03	02/12/03	02/12/03	02/12/03	02/12/03	02/12/03	02/12/03	
DATE RECEIVED	02/20/03	02/20/03	02/20/03	02/20/03	02/20/03	02/20/03	02/20/03	02/20/03	02/20/03	
DATE ANALYZED	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	02/21/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

24-Feb-03

Reviewed by

Vaportech Services, Inc.

MOC78-32114

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V26A4.32A V26A4.33A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	107.43	5.33
BENZENE	1.25	1.24	0.56
TOLUENE	1.06	1.09	2.83
ETHYL BENZENE	0.92	0.94	1.85
M&P XYLENE	1.84	1.88	2.12
O-XYLENE	0.92	0.94	2.61

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V26A3.28A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.65	0.07

ND denotes 'Not Detected' above the lower method detection limit

24-Feb-03

Reviewed by

MOC78-32114

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. BOX 522
City: MIDLAND State: TX Zip: 79702
Proj. Manager: PAUL PEACOCK
Proj. Location: INDIAN BASIN Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: Rigo Aguilera

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
2-12-03	10:15 AM	2	AIR	VES-300 MW-85	H	E			HEXANE	(C3 - C14)
	10:25 AM			VES-800 MW-120						
	10:29 AM			VES-700 MW-74						
	10:35 AM			VES-900 MW-124						
	10:47 AM			VES-1000 MW-130						
	10:56 AM			VES-100 MW-123						
	11:05 AM			VES-200 MW-68						
	11:14 AM			VES-1100 MW-126						
	11:25 AM			VES-600 MW-110						

Results to : MARATHON OIL Co
P.O. BOX 522 MIDLAND TX 79702

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Rigo Aguilera	MOC	2-12-03	12:30 PM	[illegible]	[illegible]	2/20/03	1000
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

3/25/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on March 20, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC79-32178

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-300 MW-85	VES-800 MW-120	VES-700 MW-74	VES-900 MW-124	VES-1000 MW-130	VES-100 MW-19	VES-200 MW-68	VES-600 MW-110	MDL
HEXANE	1.30	1.42	0.50	0.48	0.76	2.40	2.54	3.86	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	ND	ND	ND	ND	**ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOTAL C3-C14 *	95.45	126.18	44.37	13.27	30.66	185.94	76.54	192.92	0.07
FILE NAME	V27A1.85A	V27A1.86A	V27A1.87A	V27A1.88A	V27A1.89A	V27A1.90A	V27A1.91A	V27A1.92A	
DATE SAMPLED	03/10/03	03/10/03	03/10/03	03/10/03	03/10/03	03/10/03	03/10/03	03/10/03	
DATE RECEIVED	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	
DATE ANALYZED	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	03/20/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

25-Mar-03

Reviewed by

Vaportech Services, Inc.

MOC79-32178

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V27A1.83A V27A1.84A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	108.47	6.34
BENZENE	1.25	1.31	4.80
TOLUENE	1.06	1.11	4.62
ETHYL BENZENE	0.92	0.97	5.43
M&P XYLENE	1.84	1.97	6.85
O-XYLENE	0.92	0.97	5.43

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V27A1.72A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	1.13	0.07

ND - denotes 'Not Detected' above the lower method detection limit

25-Mar-03

Reviewed by

MOC79-32178

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL Company
Address: P.O. BOX 552
City: MIDLAND State: TX Zip: 79702
Proj. Manager: PAUL PEACOCK
Proj. Location: INDIAN BASIN Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: Beto Aguilera

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	I	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	L	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
3-10-03	8:30 AM	2	AIR	VES-300 MW-85	H	F			Hexane	(C3-C14)
	8:40 AM			VES-800 MW-120						
	8:45 AM			VES-700 MW-74						
	8:55 AM			VES-900 MW-124						
	9:01 AM			VES-1000 MW-130						
	9:10 AM			VES-100 MW-19						
	9:25 AM			VES-200 MW-68						
	9:33 AM			VES-1100 MW-126	→					Sample Received with VACUUM
	9:45 AM			VES-600 MW-110						DFM

Results to :

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Beto Aguilera	MOC	3-10-03	11:00 AM	D.F. Mendez	VAPORTECH	3-20-03	1015
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

4/23/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on April 18, 2003 for your project; Indian Basin Remediation Project.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC80-32262

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-600 MW-110	VES-300 MW-85	VES-700 MW-74	VES-1000 MW-130	VES-800 MW-120	VES-100 VE-19	VES-200 MW-126	VES-1100 MW-129	MDL
HEXANE	3.96	15.69	3.56	4.48	6.23	3.79	0.09	36.18	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	**ND	**ND	**ND	**ND	**ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	0.11	0.21	ND	0.21	0.07
TOTAL C3-C14 *	316.45	573.14	344.83	145.13	551.06	562.58	3.92	1005.76	0.07
FILE NAME	V27A4.71A	V27A4.72A	V27A4.73A	V27A4.74A	V27A4.75A	V27A4.76A	V27A4.77A	V27A4.78A	
DATE SAMPLED	04/10/03	04/10/03	04/10/03	04/10/03	04/10/03	04/10/03	04/10/03	04/10/03	
DATE RECEIVED	04/18/03	04/18/03	04/18/03	04/18/03	04/18/03	04/18/03	04/18/03	04/18/03	
DATE ANALYZED	04/22/03	04/22/03	04/22/03	04/22/03	04/22/03	04/22/03	04/22/03	04/22/03	

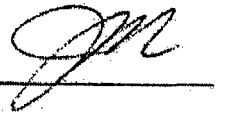
* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

23-Apr-03

Reviewed by 

Vaportech Services, Inc.

IOC80-32262

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V27A4.66A V27A4.69A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	105.87	3.79
BENZENE	1.25	1.28	2.08
TOLUENE	1.06	1.10	4.15
ETHYL BENZENE	0.92	0.96	4.46
M&P XYLENE	1.84	1.95	6.14
O-XYLENE	0.92	0.98	5.98

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V27A4.65A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.43	0.07

ND - denotes 'Not Detected' above the lower method detection limit

23-Apr-03

Reviewed by

DC 80 - 32262

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: MR Paul Peacock
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: J Eustace

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	I	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	L	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
4/10/03	9:40am	2	Air	VES - ~~110~~ (MW-110)	A	F			HEXANE	C_3-C_{12} Range
4-10-03	1030Am	2	Air	VES 300 (MW-85)	H	F			HEXANE	
4-10-03	1045AM	2	AIR	VES 700 (MW-74)	H	F			HEXANE	
4-10-03	1055Am	2	AIR	VES700 * (MW-120)	H	F			HEXANE	* VES-800 (LAB-11A)
4-10-03	1140Am	2	AIR	VES 1000 (MW-130)	H	F			HEXANE	
4-10-03	1120Am	2	AIR	VES 100 (VE-19)	H	F			HEXANE	
4-10-03	1140Am	2	AIR	VES 200 (MW-126)	H	F			HEXANE	
4-10-03	1145Am	2	AIR	VES 1100 (MW-129)	H	F			HEXANE	

Results to : Paul Peacock

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
J Eustace	MOC	4-14-03	1100		VAPortech	4/18/03	1000
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

5/27/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on May 21, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC81-32359

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-1100 MW-129	VES-200 MW-126	VES-600 MW-110	VES-300 MW-85	VES-800 MW-120	VES-1000 MW-112	VES-100 VE-19	VES-900 MW-113	MDL
HEXANE	33.01	ND	3.31	4.54	6.59	7.10	0.58	43.67	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	ND	0.19	**ND	**ND	ND	**ND	**ND	0.07
O-XYLENE	0.21	ND	ND	ND	0.08	ND	ND	0.09	0.07
TOTAL C3-C14 *	948.63	2.48	266.62	359.44	466.17	168.59	76.24	821.32	0.07
FILE NAME	V28A2.38A	V28A2.39A	V28A2.40A	V28A2.41A	V28A2.42A	V28A2.43A	V28A2.44A	V28A2.45A	
DATE SAMPLED	05/14/03	05/14/03	05/15/03	05/15/03	05/15/03	05/15/03	05/15/03	05/15/03	
DATE RECEIVED	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	05/21/03	
DATE ANALYZED	05/22/03	05/22/03	05/22/03	05/22/03	05/22/03	05/22/03	05/22/03	05/22/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

27-May-03

Reviewed by

Vaportech Services, Inc.

MOC81-32359

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V28A2.31A V28A2.32A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	102.92	0.90
BENZENE	1.25	1.31	4.56
TOLUENE	1.06	1.12	5.85
ETHYL BENZENE	0.92	0.95	3.15
M&P XYLENE	1.84	1.89	2.50
O-XYLENE	0.92	0.95	2.72

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V28A2.30A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	1.27	0.07

ND - denotes 'Not Detected' above the lower method detection limit

27-May-03

Reviewed by

MOC 81-32359

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: Paul Peacock
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: J E Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Others)	Remarks
5/14	1030	2	AIR	VES100 MW129	H	F			HEXANE	(C3 - C14)
5/14	1045			VES200 MW126						
5/15	1145			VES 600 MW110						
5/15	1215			VES 300 MW85						
5/15	1230			VES 800 MW120						
5/15	1245			VES 1000 MW112						
5/15	1300			VES 100 VE19						
5/15	1445			VES 900 MW113						

Results to : MARATHON OIL COMPANY
P.O. Box 522, Midland, TX 79702

Invoice to : Same

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
J E Wilson	MOC	5/16/03	2:30pm		Vaportech	5/21/03	1000
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH Services, Inc.

Analytical Laboratory & Geoprobe Sampling

5/28/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on May 28, 2003 for your project; Indian Basin Remediation Project.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC82-32372

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-800 MW-74	MDL
HEXANE	0.14	0.07
BENZENE	ND	0.07
TOLUENE	**ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14 *	18.70	0.07

FILE NAME	V28A2.98A
DATE SAMPLED	05/21/03
DATE RECEIVED	05/28/03
DATE ANALYZED	05/29/03

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

29-May-03

Reviewed by

10C 82-32372

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P. O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: MR. Paul Peacock
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140
Sampler's signature: J E Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, Iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC's: 1,1-DCB, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform, 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
5/21/03	10:05	2	AIR	VES 800 (MW74)	H	F			HEXANE	$C_3 - C_{12}$ Range $\frac{5}{30}$
										$C_3 - C_{14}$ Rang

Results to : MR Paul Peacock MARATHON OIL CO
P.O. Box 522 Midland, TX 79702

Invoice to :

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
J E Wilson	MOC	5/22/03	2300m	Maxine	VAPORTECH	5/28/03	7:00
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

6/12/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on June 10, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC83-32407

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-300 MW-85	VES-800 MW-72	VES-1100 MW-129	VES-200 MW-126	VES-600 MW-110	VES-900 MW-113	VES-1000 MW-112	VES-100 VE-19	MDL
HEXANE	6.33	ND	32.38	0.07	3.31	7.75	8.73	1.01	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	ND	**ND	ND	**ND	**ND	**ND	**ND	0.07
O-XYLENE	ND	ND	0.21	ND	ND	ND	ND	0.08	0.07
TOTAL C3-C14 *	477.81	7.70	941.79	2.73	327.72	210.86	222.37	187.76	0.07
FILE NAME	V28A4.07A	V28A4.08A	V28A4.09A	V28A4.10A	V28A4.11A	V28A4.12A	V28A4.13A	V28A4.14A	
DATE SAMPLED	06/04/03	06/04/03	06/04/03	06/04/03	06/04/03	06/04/03	06/04/03	06/04/03	
DATE RECEIVED	06/10/03	06/10/03	06/10/03	06/10/03	06/10/03	06/10/03	06/10/03	06/10/03	
DATE ANALYZED	06/11/03	06/11/03	06/11/03	06/11/03	06/11/03	06/11/03	06/11/03	06/11/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

12-Jun-03

Reviewed by

LW-03-32407

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL Company
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: Mr. Paul Pescock
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: J Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	E	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				Other	Remarks
6/4/03	830	2	AIR	VES 300 MW85	H	F			HEXANE	C3 - C14 Range
	845			VES 800 MW72						
	915			VES 1100 MW129 *						* Vial Labelled MW113
	930			VES 200 MW126						
	950			VES 600 MW110						
	1230			VES 900 MW113						
	1240			VES 1000 MW112						
6/4/03	1255	2	AIR	VES 100 VE19	H	F			HEXANE	C3 - C14 RANGE

Results to: Mr Paul Pescock
P.O. Box 522 Midland, TX 79702

Invoice to:

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
J Wilson	MOC	6/5/03	2:00pm		Vaportech	6/10/03	7:21
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

8/19/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on August 13, 2003 for your project; Indian Basin Remediation Project.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC85-32579

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES1100 MW129	VES200 MW68	VES800 MW72	VES900 MW112	VES1000 MW65A	VES100 VE19	MDL
HEXANE	29.66	4.65	ND	10.84	2.72	1.40	0.07
BENZENE	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	ND	ND	**ND	**ND	**ND	0.07
O-XYLENE	1.05	ND	ND	ND	ND	0.11	0.07
TOTAL C3-C14 *	700.34	142.98	16.97	230.09	155.35	163.72	0.07
FILE NAME	V29A4.47A	V29A4.48A	V29A4.49A	V29A4.50A	V29A4.51A	V29A4.52A	
DATE SAMPLED	08/07/03	08/07/03	08/07/03	08/07/03	08/07/03	08/07/03	
DATE RECEIVED	08/13/03	08/13/03	08/13/03	08/13/03	08/13/03	08/13/03	
DATE ANALYZED	08/13/03	08/13/03	08/13/03	08/13/03	08/13/03	08/13/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

19-Aug-03

Reviewed by

Vaportech Services, Inc.

MOC85-32579

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V29A4.28A V29A4.13A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	96.38	5.51
BENZENE	1.25	1.25	0.32
TOLUENE	1.06	1.09	2.55
ETHYL BENZENE	0.92	0.93	0.76
M&P XYLENE	1.84	1.84	0.22
O-XYLENE	0.92	0.93	1.09

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V29A4.27A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	1.33	0.07

ND - denotes 'Not Detected' above the lower method detection limit

19-Aug-03

Reviewed by

MOC85-32579

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: MR. PAUL PEACOCK
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: JEWilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	B	BTEX
F	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCB, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
8/7/03	1005	2	AIR	VES 1100 (MW129)	H	F			HEXANE	$C_3 - C_{14}$
	1015			VES 200 (MW 68)						
	1025			VES 800 (MW 72)						
	1040			VES 900 (MW112)						
	1045			VES 1000 (MW65A)						
8/7/03	1050	2	AIR	VES 100 (VE19)	H	F			HEXANE	$C_3 - C_{14}$

Results to: Paul Peacock, Midland, TX

Invoice to: MOC P.O. Box 522 Midland, TX 79702

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
JEWilson	MOC	8/8/03	2:00 PM	Vaportech		8/13/03	1000
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

9/19/03

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Paul:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on September 16, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC86-32657

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-200 MW-68	VES-1100 MW-129	VES-800 MW-72	VES-900 MW-113	VES-1000 MW-65A	VES-100 VE19	VES-300 MW-85	VES-600 MW-110	MDL
HEXANE	1.69	17.37	ND	9.85	0.97	0.75	6.73	7.09	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	ND	**ND	ND	**ND	**ND	**ND	**ND	**ND	0.07
O-XYLENE	ND	0.12	ND	ND	ND	ND	**ND	**ND	0.07
TOTAL C3-C14 *	70.75	440.92	2.97	209.48	57.87	79.05	324.10	422.69	0.07
FILE NAME	V30A1.89A	V30A1.90A	V30A1.91A	V30A1.92A	V30A1.93A	V30A1.94A	V30A1.95A	V30A1.96A	
DATE SAMPLED	09/10/03	09/10/03	09/10/03	09/10/03	09/10/03	09/10/03	09/11/03	09/11/03	
DATE RECEIVED	09/16/03	09/16/03	09/16/03	09/16/03	09/16/03	09/16/03	09/16/03	09/16/03	
DATE ANALYZED	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03	09/17/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

19-Sep-03

Reviewed by

Vaportech Services, Inc.

MOC86-32657

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V30A1.81A V30A1.82A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	98.65	3.28
BENZENE	1.25	1.29	3.12
TOLUENE	1.06	1.08	1.98
ETHYL BENZENE	0.92	0.94	1.63
M&P XYLENE	1.84	1.87	1.79
O-XYLENE	0.92	0.97	5.54

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V30A1.80A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	1.33	0.07

ND - denotes 'Not Detected' above the lower method detection limit

19-Sep-03

Reviewed by

MOC 86 - 32657

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: MR. Paul Peacock
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature : JE Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 -C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1- DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
9-10-03	0910	2	AIR	VES 200 (MW 68)	H	F			HEXANE	$C_3 - C_{14}$
	0920			VES 1100 (MW 129)						
	0950			VES 800 (MW 72)						
	1045			VES 900 (MW 113)						
	1055			VES 1000 (MW 65A)						
9-10-03	1105			VES ~~1000~~ 100 (VE 19)						
9-11-03	0800			VES 300 (MW 85)						
9-11-03	0830			VES 600 (MW 110)	H	F			HEXANE	$C_3 - C_{14}$

Results to : MR Paul Peacock Midland, TX

Invoice to : MOC P.O. Box 522 Midland, TX 79702

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
JE Wilson	MOC	9-11-03	200Pm	[illegible]	Vaportech	4/16 03	1000
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

10/6/03

Mr. Vijay Kurki
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Vijay:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on October 2, 2003 for your project; Indian Basin Remdiation Project.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

14OC87-32705

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-700 MW-121	VES-800 MW-120	MDL
HEXANE	0.12	4.35	0.07
BENZENE	ND	ND	0.07
TOLUENE	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	0.07
M&P XYLENE	ND	**ND	0.07
O-XYLENE	ND	ND	0.07
TOTAL C3-C14 *	8.83	353.15	0.07
FILE NAME	V30A3.74A	V30A3.75A	
DATE SAMPLED	09/24/03	09/24/03	
DATE RECEIVED	10/02/03	10/02/03	
DATE ANALYZED	10/03/03	10/03/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

L - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

06-Oct-03

Reviewed by

Vaportech Services, Inc.

MOC87-32705

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V30A3.68A V30A3.69A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	98.21	3.72
BENZENE	1.25	1.18	5.60
TOLUENE	1.06	1.03	3.21
ETHYL BENZENE	0.92	0.89	3.48
M&P XYLENE	1.84	1.79	2.55
O-XYLENE	0.92	0.89	3.26

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V30A3.67A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.73	0.07

- denotes 'Not Detected' above the lower method detection limit

06-Oct-03

Reviewed by

DC87-32705

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: MR. VIJAY Kurki-Gowdra
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: J.E. Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	E	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
O	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				Other	Remarks
9/24/03	930	2	AIR	VES 700 (MW121)	H	E			HEXANE	C_3-C_{14}
9/24/03	1230	2	AIR	VES 800 (MW120)	H	E			HEXANE	C_3-C_{14}

Results to: MR Vijay Kurki-Gowdra Midland TX

Invoice to: MOC POBox522 Midland, TX 79702

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
J.E. Wilson	MOC	9/25/03	230PM	Montone	Vaportech	10/02/03	1000
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

10/21/03

Mr. Vijay Kurki-Gowdra
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Vijay:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on October 16, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC88-32758

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-100 VE-19	VES-1000 MW-65A	VES-900 MW-113	VES-800 MW-120	VES-700 MW-121	VES-300 MW-65	VES-1100 MW-129	VES-200 MW-68	VES-600 MW-110	MDL
HEXANE	0.93	0.76	9.09	5.51	0.09	0.53	23.46	5.94	2.66	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	**ND	**ND	**ND	ND	**ND	**ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	ND	**ND	**ND	ND	**ND	0.07
TOTAL C3-C14 *	111.71	62.41	178.31	465.77	6.66	68.05	619.90	205.95	361.33	0.07
FILE NAME	V30A4.78A	V30A4.79A	V30A4.80A	V30A4.81A	V30A4.82A	V30A4.83A	V30A4.84A	V30A4.85A	V30A4.86A	
DATE SAMPLED	10/08/03	10/08/03	10/08/03	10/08/03	10/08/03	10/08/03	10/08/03	10/08/03	10/08/03	
DATE RECEIVED	10/16/03	10/16/03	10/16/03	10/16/03	10/16/03	10/16/03	10/16/03	10/16/03	10/16/03	
DATE ANALYZED	10/16/03	10/16/03	10/16/03	10/16/03	10/16/03	10/17/03	10/17/03	10/17/03	10/17/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

21-Oct-03

Reviewed by

Vaportech Services, Inc.

MOC88-32758

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V30A4.76A V30A4.77A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	102.72	0.71
BENZENE	1.25	1.24	0.88
TOLUENE	1.06	1.04	1.51
ETHYL BENZENE	0.92	0.91	0.76
M&P XYLENE	1.84	1.86	1.30
O-XYLENE	0.92	0.93	0.76

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V30A4.75A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.52	0.07

'D - denotes 'Not Detected' above the lower method detection limit

21-Oct-03

Reviewed by

1C-88-32758

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON Oil Company
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: MR Vijay Kurki-Gowdra
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: James E Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propene, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10s: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				Other	Remarks
10-8-03	9:00	2	AIR	VES100 (VES100-VE-19)	H	F			HEXANE	C_3-C_{14}
	9:15			VES1000 (MW65A)						
	10:00			VES900 (MW113)						
	10:20			VES 800 (MW120)						
	10:30			VES 700 (MW121)						
	10:50			VES 300 (MW 85)						
	11:30			VES 1100 (MW 129)						
	11:40			VES 200 (MW 68)						
10-8-03	11:50	2	AIR	VES 600 (MW110)	H	F			HEXANE	C_3-C_{14}

Results to : MR VIJAY Kurki-Gowdra Midland, TX

Invoice to : MOC P.O. Box 522 Midland, TX 79702

Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
James E Wilson	MOC	10/9/03	2:30pm		Vaportech	10/16/03	7:00
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :
Relinquished by :	Company :	Date :	Time :	Received by :	Company :	Date :	Time :

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

11/21/03

Mr. Vijay Kurki-Gowdra
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Vijay:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on November 11, 2003 for your project; Indian Basin.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC89-32825

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	MW-113 VES 900	MW-65A VES 1000	VE19 VES 100	MW-120 VES 800	MW-121 VES 700	MW-85 VES 300	MW-68 VES 200	MW-129 VES 1100	MW-110 VES 600	MDL
HEXANE	10.95	0.12	0.75	3.63	ND	0.35	7.08	15.96	2.83	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	ND	**ND	**ND	ND	ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	**ND	**ND	**ND	ND	**ND	ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOTAL C3-C14 *	230.60	15.85	116.22	303.02	6.21	57.79	259.61	422.75	387.06	0.07
FILE NAME	V31A1.41A	V31A1.42A	V31A1.43A	V31A1.44A	V31A1.45A	V31A1.46A	V31A1.47A	V31A1.48A	V31A1.49A	
DATE SAMPLED	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	
DATE RECEIVED	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	
DATE ANALYZED	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

21-Nov-03

Reviewed by

Vaportech Services, Inc.

MOC89-32825

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V31A1.30A V31A1.32A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	103.68	1.65
BENZENE	1.25	1.25	0.16
TOLUENE	1.06	1.09	2.45
ETHYL BENZENE	0.92	0.94	1.96
M&P XYLENE	1.84	1.92	4.35
O-XYLENE	0.92	0.96	4.24

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V31A1.29A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.92	0.07

ND - denotes 'Not Detected' above the lower method detection limit

21-Nov-03

Reviewed by

CHAIN-OF-CUSTODY RECORD

MOC89-32825

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: Mr. Vijay Kurki
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140
Sampler's signature: JE Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	E	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
11-5-03	9:10	2	AIR	VES900 MW113	H	F			HEXANE	C3 - C14
	9:15			VES1000 MW65A						
	9:25			VES100 VE19						Sample ID's ADDED to COC. BY LAB DOM
	10:10			VES800 MW120						
	10:20			VES700 MW121						
	10:40			VES300 MW85						
	11:00			VES200 MW68						
	11:10			VES1100 MW129						
11-5-03	11:40	2	AIR	VES600 MW110	H	F			HEXANE	C3 - C14

Results to: MR Vijay Kurki Midland, TX

Invoice to: MOC P.O. Box 522 Midland TX 79702

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
JE Wilson	MOC	11/6/03	2:30pm	D.S. Mac	VAPORTECH	11/11/03	10:30
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY - Submitter

VAPORTECH
Services, Inc.

Analytical Laboratory & Geoprobe Sampling

11/21/03

Mr. Vijay Kurki-Gowdra
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Vijay:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on November 11, 2003 for your project; Indian Basin.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vapor Tech Services, Inc.

MOC89-32825

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	MW-113 VES 900	MW-65A VES 1000	VE19 VES 100	MW-120 VES 800	MW-121 VES 700	MW-85 VES 300	MW-68 VES 200	MW-129 VES 1100	MW-110 VES 600	MDL
HEXANE	10.95	0.12	0.75	3.63	ND	0.35	7.08	15.96	2.83	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	ND	**ND	**ND	ND	ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	**ND	**ND	**ND	**ND	ND	**ND	ND	ND	**ND	0.07
O-XYLENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOTAL C3-C14 *	230.60	15.85	116.22	303.02	6.21	57.79	259.61	422.75	387.06	0.07
FILE NAME	V31A1.41A	V31A1.42A	V31A1.43A	V31A1.44A	V31A1.45A	V31A1.46A	V31A1.47A	V31A1.48A	V31A1.49A	
DATE SAMPLED	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	11/05/03	
DATE RECEIVED	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	11/11/03	
DATE ANALYZED	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	11/12/03	

* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

21-Nov-03

Reviewed by

Vaportech Services, Inc.

C89-32825

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V31A1.30A V31A1.32A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	103.68	1.65
BENZENE	1.25	1.25	0.16
TOLUENE	1.06	1.09	2.45
ETHYL BENZENE	0.92	0.94	1.96
M&P XYLENE	1.84	1.92	4.35
O-XYLENE	0.92	0.96	4.24

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V31A1.29A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.92	0.07

denotes 'Not Detected' above the lower method detection limit

21-Nov-03

Reviewed by

CHAIN-OF-CUSTODY RECORD

MOC89-32825

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON OIL COMPANY
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: Mr. Vijay Kurki
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140

Sampler's signature: J E Wilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	J	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
11-5-03	9:10	2	AIR	VES900 MW113	H	F			HEXANE	$C_3 - C_{14}$
	9:15			VES1000 MW65A						
	9:25			VES100 VE19						Sample ID's ADDED to COC. BY LAB DOM
	10:10			VES800 MW120						
	10:20			VES700 MW121						
	10:40			VES300 MW85						
	11:00			VES200 MW68						
	11:10			VES1100 MW129						
11-5-03	11:40	2	AIR	VES600 MW110	H	F			HEXANE	$C_3 - C_{14}$

Results to: MR Vijay Kurki Midland, TX

Invoice to: MOC P.O. Box 522 Midland, TX 79702

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
J E Wilson	MOC	11/6/03	2:30 Pm	D. Mack	VAPORTECH	11/11/03	10:30
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

VAPORTECH Services, Inc.

Analytical Laboratory & Geoprobe Sampling

12/11/03

Mr. Vijay Kurki-Gowdra
Marathon Oil Company
P.O. Box 552
Midland, TX 79702

Dear Vijay:

Enclosed are the sample data report, chain of custody record and quality control data for the samples received on December 9, 2003 for your project; Indian Basin Remediation.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

David J. Masdea

Enclosure:

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel.: 724-898-2622 • Fax: 724-898-2633

Vaportech Services, Inc.

MOC90-32897

Marathon Oil Company
Project: Indian Basin Remediation Project

CONCENTRATIONS IN PPMV

COMPOUND	VES-200 MW-68	VES-1100 MW-129	VES-600 MW-110	VES-300 MW-85	VES-800 MW-120	VES-100 VE-19	VES-1000 MW-112	VES-900 MW-113	MDL
HEXANE	4.05	25.11	2.19	0.34	2.65	0.45	24.36	6.10	0.07
BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
TOLUENE	**ND	**ND	**ND	**ND	1.11	**ND	ND	**ND	0.07
ETHYL BENZENE	ND	ND	ND	ND	ND	ND	ND	ND	0.07
M&P XYLENE	ND	**ND	**ND	**ND	0.50	ND	ND	ND	0.07
O-XYLENE	ND	0.13	ND	ND	ND	ND	ND	ND	0.07
TOTAL C3-C14 *	158.47	621.83	351.18	53.24	317.61	86.41	403.05	114.50	0.07
FILE NAME	V31A3.68A	V31A3.69A	V31A3.70A	V31A3.71A	V31A3.72A	V31A3.73A	V31A3.74A	V31A3.75A	
DATE SAMPLED	12/03/03	12/03/03	12/03/03	12/03/03	12/03/03	12/03/03	12/03/03	12/03/03	
DATE RECEIVED	12/09/03	12/09/03	12/09/03	12/09/03	12/09/03	12/09/03	12/09/03	12/09/03	
DATE ANALYZED	12/10/03	12/10/03	12/10/03	12/10/03	12/10/03	12/10/03	12/10/03	12/10/03	

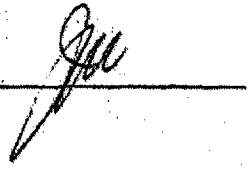
* Includes the total of all identified and unidentified compounds in the C3-C14 hydrocarbon range, calculated using the sensitivity of hexane

MDL - Lower 'Method Detection Limit'

ND - 'Not Detected' at or above the lower method detection limit

** Target analyte coelutes with interfering unidentified compound.

11-Dec-03

Reviewed by: 

Vaportech Services, Inc.

OC90-32897

Marathon Oil Company
Project: Indian Basin Remediation Project

QUALITY CONTROL

CONTINUING CALIBRATION CHECK

STANDARDS: V21-R4 STD 220
FILE NAME: V31A3.54A V31A3.67A

COMPOUND	KNOWN (PPMV)	RESULT (PPMV)	PERCENT DIFFERENCE
HEXANE	102.00	100.33	1.64
BENZENE	1.25	1.28	2.24
TOLUENE	1.06	1.08	2.26
ETHYL BENZENE	0.92	0.94	1.96
M&P XYLENE	1.84	1.89	2.50
O-XYLENE	0.92	0.96	4.24

LABORATORY BLANK RESULTS

BLANK: N2 IN VIAL
FILE NAME: V31A3.66A

COMPOUND	BLANK (PPMV)	METHOD DETECTION LIMIT (PPMV)
HEXANE	ND	0.07
BENZENE	ND	0.07
TOLUENE	ND	0.07
ETHYL BENZENE	ND	0.07
M&P XYLENE	ND	0.07
O-XYLENE	ND	0.07
TOTAL C3-C14	0.92	0.07

) - denotes 'Not Detected' above the lower method detection limit

11-Dec-03

Reviewed by

10-90 - 32897

CHAIN-OF-CUSTODY RECORD

VAPORTECH Services, Inc.

1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059
Tel: 724-898-2622 • Fax: 724-898-2633

Company Name: MARATHON Oil Company
Address: P.O. Box 522
City: Midland State: TX Zip: 79702
Proj. Manager: Mr. Vijay Kurki
Proj. Location: Indian Basin Remediation Project
Proj. Number:
Phone #: 915-687-8140 Fax #: 915-687-8140
Sampler's signature: JEWilson

Analysis Options: Enter letters in Requested Analysis columns below.

A	Light Hydrocarbons	F	BTEX
B	Permanent Gases	G	BTEX & C5 - C10
C	Methane	H	TPH (C4 - C12 range)
D	Methane, Ethane, Ethylene	I	Chlorinated Hydrocarbons
E	Hydrogen	J	624 Compound List

Light Hydrocarbons: Methane, Ethane, Ethylene, Propane, Propylene, iso-Butane, n-Butane
Permanent Gases: Carbon Dioxide, Oxygen, Nitrogen, Methane, Carbon Monoxide
BTEX: Benzene, Toluene, Ethyl Benzene, m & p -Xylene, o-Xylene
C5-C10: Pentane, Hexane, Heptane, Octane, Nonane, Decane
Chlorinated HC: 1,1-DCE, 1,1-DCA, Methylene Chloride, trans-1,2-DCE, cis-1,2-DCE, Chloroform 1,1,1-TCA, Carbon Tetrachloride, Trichloroethylene (TCE), Tetrachloroethylene (PCE)

Collection Date	Collection Time	Number of Containers	Sample Type	Sample Identification	Requested Analysis				(Other)	Remarks
12/3/03	0850	2	AIR	VES 200 MW 68	H	F			HEXANE	$C_3 - C_{14}$
	0855			VES 1100 MW 129						
	0920			VES 600 MW 110						
	0940			VES 300 MW 85						
	0950			VES 800 MW 120						
	1050			VES 100 VE-19						
	1055			VES 1000 MW 112						
12/3/03	1100	2	AIR	VES 900 MW 113	H	F			HEXANE	$C_3 - C_{14}$

Results to: Mr. Vijay Kurki Midland Texas

Invoice to: MOC P.O. Box 522 Midland TX 79702

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
JEWilson	MOC	12/4/03	230PM	Joe Martinez	VAPORTECH	12/9/03	1000
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

WHITE COPY : Laboratory to return. YELLOW COPY : Laboratory PINK COPY : Submitter

Appendix E

USEPA Low-flow Purging and Sampling Procedures

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION II

GROUND WATER SAMPLING PROCEDURE
LOW STRESS (Low Flow) PURGING AND SAMPLING

I. SCOPE & APPLICATION

This Low Stress (or Low-Flow) Purging and Sampling Procedure is the EPA Region II standard method for collecting low stress (low flow) ground water samples from monitoring wells. Low stress Purging and Sampling results in collection of ground water samples from monitoring wells that are representative of ground water conditions in the geological formation. This is accomplished by minimizing stress on the geological formation and minimizing disturbance of sediment that has collected in the well. The procedure applies to monitoring wells that have an inner casing with a diameter of 2.0 inches or greater, and maximum screened intervals of ten feet unless multiple intervals are sampled. The procedure is appropriate for collection of ground water samples that will be analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs), pesticides, polychlorinated biphenyls (PCBs), metals, and microbiological and other contaminants in association with all EPA programs.

This procedure does not address the collection of light or dense non-aqueous phase liquids (LNAPL or DNAPL) samples, and should be used for aqueous samples only. For sampling NAPLs, the reader is referred to the following EPA publications: DNAPL Site Evaluation (Cohen & Mercer, 1993) and the RCRA Ground-Water Monitoring: Draft Technical Guidance (EPA/530-R-93-001), and references therein.

II. METHOD SUMMARY

The purpose of the low stress purging and sampling procedure is to collect ground water samples from monitoring wells that are representative of ground water conditions in the geological formation. This is accomplished by setting the intake velocity of the sampling pump to a flow rate that limits drawdown inside the well casing.

Sampling at the prescribed (low) flow rate has three primary benefits. First, it minimizes disturbance of sediment in the bottom of the well,

thereby producing a sample with low turbidity (i.e., low concentration of suspended particles). Typically, this saves time and analytical costs by eliminating the need for collecting and analyzing an additional filtered sample from the same well. Second, this procedure minimizes aeration of the ground water during sample collection, which improves the sample quality for VOC analysis. Third, in most cases the procedure significantly reduces the volume of ground water purged from a well and the costs associated with its proper treatment and disposal.

III. ADDRESSING POTENTIAL PROBLEMS

Problems that may be encountered using this technique include a) difficulty in sampling wells with insufficient yield; b) failure of one or more key indicator parameters to stabilize; c) cascading of water and/or formation of air bubbles in the tubing; and d) cross-contamination between wells.

Insufficient Yield

Wells with insufficient yield (i.e., low recharge rate of the well) may dewater during purging. Care should be taken to avoid loss of pressure in the tubing line due to dewatering of the well below the level of the pump's intake. Purging should be interrupted before the water level in the well drops below the top of the pump, as this may induce cascading of the sand pack. Pumping the well dry should therefore be avoided to the extent possible in all cases. Sampling should commence as soon as the volume in the well has recovered sufficiently to allow collection of samples. Alternatively, ground water samples may be obtained with techniques designed for the unsaturated zone, such as lysimeters.

Failure to Stabilize Key Indicator Parameters

If one or more key indicator parameters fails to stabilize after 4 hours, one of four options should be considered: a) continue purging in an attempt to achieve stabilization; b) discontinue purging, do not collect samples, and document attempts to reach stabilization in the log book; c) discontinue purging, collect samples, and document attempts to reach stabilization in the log book; or d) Secure the well, purge and collect samples the next day (preferred). The key indicator parameter for samples to be analyzed for VOCs is dissolved

oxygen. The key indicator parameter for all other samples is turbidity.

Cascading

To prevent cascading and/or air bubble formation in the tubing, care should be taken to ensure that the flow rate is sufficient to maintain pump suction. Minimize the length and diameter of tubing (i.e., 1/4 or 3/8 inch ID) to ensure that the tubing remains filled with ground water during sampling.

Cross-Contamination

To prevent cross-contamination between wells, it is strongly recommended that dedicated, in-place pumps be used. As an alternative, the potential for cross-contamination can be reduced by performing the more thorough ``daily'' decontamination procedures between sampling of each well in addition to the start of each sampling day (see Section VII, below).

Equipment Failure

Adequate equipment should be on-hand so that equipment failures do not adversely impact sampling activities.

IV. PLANNING DOCUMENTATION AND EQUIPMENT

- Approved site-specific Field Sampling Plan/Quality Assurance Project Plan (QAPP). This plan must specify the type of pump and other equipment to be used. The QAPP must also specify the depth to which the pump intake should be lowered in each well. Generally, the target depth will correspond to the mid-point of the most permeable zone in the screened interval. Borehole geologic and geophysical logs can be used to help select the most permeable zone. However, in some cases, other criteria may be used to select the target depth for the pump intake. In all cases, the target depth must be approved by the EPA hydrogeologist or EPA project scientist.

- Well construction data, location map, field data from last sampling event.

- Polyethylene sheeting.

- Flame Ionization Detector (FID) and Photo Ionization Detector (PID).
- Adjustable rate, positive displacement ground water sampling pump (e.g., centrifugal or bladder pumps constructed of stainless steel or Teflon). A peristaltic pump may only be used for inorganic sample collection.
- Interface probe or equivalent device for determining the presence or absence of NAPL.
- Teflon or Teflon-lined polyethylene tubing to collect samples for organic analysis. Teflon or Teflon-lined polyethylene, PVC, Tygon or polyethylene tubing to collect samples for inorganic analysis. Sufficient tubing of the appropriate material must be available so that each well has dedicated tubing.
- Water level measuring device, minimum 0.01 foot accuracy, (electronic preferred for tracking water level drawdown during all pumping operations).
- Flow measurement supplies (e.g., graduated cylinder and stop watch or in-line flow meter).
- Power source (generator, nitrogen tank, etc.).
- Monitoring instruments for indicator parameters. Eh and dissolved oxygen must be monitored in-line using an instrument with a continuous readout display. Specific conductance, pH, and temperature may be monitored either in-line or using separate probes. A nephalometer is used to measure turbidity.
- Decontamination supplies (see Section VII, below).
- Logbook (see Section VIII, below).
- Sample bottles.
- Sample preservation supplies (as required by the analytical methods).
- Sample tags or labels, chain of custody.

V. SAMPLING PROCEDURES

Pre-Sampling Activities

1. Start at the well known or believed to have the least contaminated ground water and proceed systematically to the well with the most contaminated ground water. Check the well, the lock, and the locking cap for damage or evidence of tampering. Record observations.

2. Lay out sheet of polyethylene for placement of monitoring and sampling equipment.

3. Measure VOCs at the rim of the unopened well with a PID and FID instrument and record the reading in the field log book.

4. Remove well cap.

5. Measure VOCs at the rim of the opened well with a PID and an FID instrument and record the reading in the field log book.

6. If the well casing does not have a reference point (usually a V-cut or indelible mark in the well casing), make one. Note that the reference point should be surveyed for correction of ground water elevations to the mean geodesic datum (MSL).

7. Measure and record the depth to water (to 0.01 ft) in all wells to be sampled prior to purging. Care should be taken to minimize disturbance in the water column and dislodging of any particulate matter attached to the sides or settled at the bottom of the well.

8. If desired, measure and record the depth of any NAPLs using an interface probe. Care should be taken to minimize disturbance of any sediment that has accumulated at the bottom of the well. Record the observations in the log book. If LNAPLs and/or DNAPLs are detected, install the pump at this time, as described in step 9, below. Allow the well to sit for several days between the measurement or sampling of any DNAPLs and the low-stress purging and sampling of the ground water.

Sampling Procedures

9. Install Pump: Slowly lower the pump, safety cable, tubing and electrical lines into the well to the depth specified for that well in the EPA-approved QAPP or a depth otherwise approved by the EPA hydrogeologist or EPA project scientist. The pump intake must be kept at least two (2) feet above the bottom of the well to prevent disturbance and resuspension of any sediment or NAPL present in the bottom of the well. Record the depth to which the pump is lowered.

10. Measure Water Level: Before starting the pump, measure the water level again with the pump in the well. Leave the water level measuring device in the well.

11. Purge Well: Start pumping the well at 200 to 500 milliliters per minute (ml/min). The water level should be monitored approximately every five minutes. Ideally, a steady flow rate should be maintained that results in a stabilized water level (drawdown of 0.3 ft or less). Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. As noted above, care should be taken to maintain pump suction and to avoid entrainment of air in the tubing. Record each adjustment made to the pumping rate and the water level measured immediately after each adjustment.

12. Monitor Indicator Parameters: During purging of the well, monitor and record the field indicator parameters (turbidity, temperature, specific conductance, pH, Eh, and DO) approximately every five minutes. The well is considered stabilized and ready for sample collection when the indicator parameters have stabilized for three consecutive readings as follows (Puls and Barcelona, 1996):

    ±0.1 for pH
    ±3% for specific conductance (conductivity)
    ±10 mv for redox potential
    ±10% for DO and turbidity

    Dissolved oxygen and turbidity usually require the longest time to achieve stabilization. The pump must not be removed from the well between purging and sampling.

13. Collect Samples: Collect samples at a flow rate between 100 and 250 ml/min and such that drawdown of the water level within the well does not exceed the maximum allowable drawdown of 0.3 ft. VOC samples must be collected first and directly into sample

containers. All sample containers should be filled with minimal turbulence by allowing the ground water to flow from the tubing gently down the inside of the container.

Ground water samples to be analyzed for volatile organic compounds (VOCs) require pH adjustment. The appropriate EPA Program Guidance should be consulted to determine whether pH adjustment is necessary. If pH adjustment is necessary for VOC sample preservation, the amount of acid to be added to each sample vial prior to sampling should be determined, drop by drop, on a separate and equal volume of water (e.g., 40 ml). Ground water purged from the well prior to sampling can be used for this purpose.

14. Remove Pump and Tubing: After collection of the samples, the tubing, unless permanently installed, must be properly discarded or dedicated to the well for resampling by hanging the tubing inside the well.

15. Measure and record well depth.

16. Close and lock the well.

VI. FIELD QUALITY CONTROL SAMPLES

Quality control samples must be collected to determine if sample collection and handling procedures have adversely affected the quality of the ground water samples. The appropriate EPA Program Guidance should be consulted in preparing the field QC sample requirements of the site-specific QAPP.

All field quality control samples must be prepared exactly as regular investigation samples with regard to sample volume, containers, and preservation. The following quality control samples should be collected during the sampling event:

- Field duplicates
- Trip blanks for VOCs only
- Equipment blank (not necessary if equipment is dedicated to the well)

As noted above, ground water samples should be collected systematically from wells with the lowest level of contamination through to wells with highest level of contamination. The equipment

blank should be collected after sampling from the most contaminated well.

VII. DECONTAMINATION

Non-disposable sampling equipment, including the pump and support cable and electrical wires which contact the sample, must be decontaminated thoroughly each day before use (``daily decon'') and after each well is sampled (``between-well decon''). Dedicated, in-place pumps and tubing must be thoroughly decontaminated using ``daily decon'' procedures (see #17, below) prior to their initial use. For centrifugal pumps, it is strongly recommended that non-disposable sampling equipment, including the pump and support cable and electrical wires in contact with the sample, be decontaminated thoroughly each day before use (``daily decon'').

EPA's field experience indicates that the life of centrifugal pumps may be extended by removing entrained grit. This also permits inspection and replacement of the cooling water in centrifugal pumps. All non-dedicated sampling equipment (pumps, tubing, etc.) must be decontaminated after each well is sampled (``between-well decon,'' see #18 below).

17. Daily Decon

A) Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

B) Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5 minutes and flush other equipment with fresh detergent solution for 5 minutes. Use the detergent sparingly.

C) Rinse: Operate pump in a deep basin of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

D) Disassemble pump.

E) Wash pump parts: Place the disassembled parts of the pump into a deep basin containing 8 to 10 gallons of non-phosphate

detergent solution. Scrub all pump parts with a test tube brush.

F) Rinse pump parts with potable water.

G) Rinse the following pump parts with distilled/ deionized water: inlet screen, the shaft, the suction interconnector, the motor lead assembly, and the stator housing.

H) Place impeller assembly in a large glass beaker and rinse with 1% nitric acid (HNO_3).

I) Rinse impeller assembly with potable water.

J) Place impeller assembly in a large glass bleaker and rinse with isopropanol.

K) Rinse impeller assembly with distilled/deionized water.

18. Between-Well Decon

A) Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

B) Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5 minutes and flush other equipment with fresh detergent solution for 5 minutes. Use the detergent sparingly.

C) Rinse: Operate pump in a deep basin of potable water for 5 minutes and flush other equipment with potable water for 5 minutes.

D) Final Rinse: Operate pump in a deep basin of distilled/deionized water to pump out 1 to 2 gallons of this final rinse water.

VIII. FIELD LOG BOOK

A field log book must be kept each time ground water monitoring activities are conducted in the field. The field log book should document the following:

- Well identification number and physical condition.
- Well depth, and measurement technique.
- Static water level depth, date, time, and measurement technique.
- Presence and thickness of immiscible liquid layers and detection method.
- Collection method for immiscible liquid layers.
- Pumping rate, drawdown, indicator parameters values, and clock time, at three to five minute intervals; calculate or measure total volume pumped.
- Well sampling sequence and time of sample collection.
- Types of sample bottles used and sample identification numbers.
- Preservatives used.
- Parameters requested for analysis.
- Field observations of sampling event.
- Name of sample collector(s).
- Weather conditions.
- QA/QC data for field instruments.

IX. REFERENCES

Cohen, R.M. and J.W. Mercer, 1993, DNAPL Site Evaluation, C.K. Smoley Press, Boca Raton, Florida.

Puls, R.W. and M.J. Barcelona, 1996, Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures, EPA/540/S-95/504.

U.S. EPA, 1993, RCRA Ground-Water Monitoring: Draft Technical Guidance, EPA/530-R-93-001.

U.S. EPA Region II, 1989, CERCLA Quality Assurance Manual.

Appendix F

OCD Corresondence dated February 3, 2003

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

February 3, 2003

CERTIFIED MAIL
RETURN RECEIPT NO. 7001-1940-0004-7923-0674

Mr. Paul Peacock
Marathon Oil Company
P.O. Box 552
Midland, Texas 79702-0552

RE: GROUND WATER REMEDIATION PROJECT
MARATHON INDIAN BASIN GAS PLANT (GW-21)

Dear Mr. Peacock:

The New Mexico Oil Conservation Division (OCD) has reviewed Marathon Oil Company's (MOC) December 4, 2002 "PETITION TO DISCONTINUE GROUNDWATER EXTRACTION OPERATIONS, INDIAN BASIN REMEDIATION PROJECT" and April 29, 2002 "ANNUAL GROUNDWATER MONITORING REPORT, JANUARY – DECEMBER 2001, INDIAN BASIN REMEDIATION PROJECT". These documents contain the results of MOC's remediation and monitoring of hydrocarbon contaminated ground water at MOC's Indian Basin Gas Plant, and requests permission to plug and abandon certain shallow zone monitor wells and use low-flow sampling techniques during future sampling events. The documents also request approval to discontinue the ground water pump and treat system in lieu of remediating ground water with the ongoing vapor extraction system.

The above-referenced requests are approved with the following conditions:

1. MOC shall not plug and abandon shallow zone monitor wells MW-17, MW-32 AND MW-47.

2. The OCD defers comment on dismantling the ground water extraction system until the OCD has the opportunity to evaluate the future performance of ground water remediation activities.

Please be advised that OCD approval does not relieve MOC of responsibility if the system fails to adequately remediate or monitor contamination related to MOC's activities, or if contamination exists which is outside the scope of the plan. In addition, OCD approval does not relieve MOC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please contact me at (505) 476-3491.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Tim Gum, OCD Artesia District Supervisor

Appendix G

State of New Mexico Well Plugging Reports
March – April 2003

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
City: _____ State: __ Zip: _____

4. DRILLING RECORD Well No.-MW-1

Drilling began: 4/26/91 ; Completed: 4/26/91 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 15.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 11.26 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John W. White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump Mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	13.8	16.98
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-1

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD Well No. #MW-2

Drilling began: 5/2/91 ; Completed: 5/2/91 ; Type tools: _____ ;
Size of hole: 7 3/8 in.; Total depth of well: 13.9 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John W. White-WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	13.70	16.86
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-2

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD Well No. #MW-3

Drilling began: 5/2/91 ; Completed: 5/2/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 14.80 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company/John W. White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump Mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	14.80	18.21
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-3
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD Well No. #MW-5

Drilling began: 5/5/91 ; Completed: 5/5/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 11.20 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John W. White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	11.20	13.78
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-5

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD Well No. #MW-6

Drilling began: 5/5/91 ; Completed: 5/5/91 ; Type tools: _____ ;
Size of hole: 7 3/8 in.; Total depth of well: 12.01 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John W. White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	12.01	14.78
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-6
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/7/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
City: _____ State: __ Zip: _____

4. DRILLING RECORD Well No. #MW-7

Drilling began: 5/6/91 ; Completed: 5/6/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 16.25 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	16.25	20.0
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-7
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced by 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-8

Drilling began: 5/6/91 ; Completed: 5/6/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 15.5 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	15.5	19.07
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-8

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Rd., Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-9

Drilling began: 5/7/91 ; Completed: 5/7/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 11.4 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company/John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	11.4	14.03
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-9

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/7/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-15

Drilling began: 5/11/91 ; Completed: 5/12/91 ; Type tools: _____;
Size of hole: 7 3/8in.; Total depth of well: 17.38ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmiepipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	17.38	21.39
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-15

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-18

Drilling began: 5/14/91 ; Completed: 5/14/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 15.1 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 13.9 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	15.1	18.58
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-18

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/7/03 (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___1/4 ___1/4 ___1/4 Section:___ Township:___ Range:___ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-20

Drilling began: 5/16/91 ; Completed: 5/16/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 14.1 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	14.1	17.35
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-20

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 2/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-21

Drilling began: 5/16/91 ; Completed: 5/16/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 21.2 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 20.44 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	21.2	26.09
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-21

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-23

Drilling began: 5/18/91; Completed: 5/18/91; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 10.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	10.0	12.31
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-23

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___1/4 ___1/4 ___1/4 Section: ___ Township: ___ Range: ___ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-25

Drilling began: 5/18/03 ; Completed: 5/18/03 ; Type tools: _____ ;
Size of hole: 7 3/8 in.; Total depth of well: 8.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	8.0	9.85
2			
3			
4			
5			

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-25

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/7/03 (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-27

Drilling began: 5/19/91 ; Completed: 5/19/91 ; Type tools: _____ ;
Size of hole: 7 3/8 in.; Total depth of well: 15.3 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/25/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	15.3	18.83
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-27
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/7/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-28

Drilling began: 5/20/91 ; Completed: 5/20/91 ; Type tools: _____;
Size of hole:7 3/8 in.; Total depth of well: 16.46 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	16.46	20.26
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-28

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___1/4 ___1/4 ___1/4 Section: ___ Township: ___ Range: ___ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-29

Drilling began: 5/20/91 ; Completed: 5/20/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 12.70 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	12.70	15.63
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-29
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD MW-30

Drilling began: 5/21/91 ; Completed: 5/21/91 ; Type tools: _____ ;
Size of hole: 7 3/8 in.; Total depth of well: 12.52 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	12.52	15.41
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-30

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-31

Drilling began: 5/22/91 ; Completed: 5/22/91 ; Type tools: _____;
Size of hole: 10 5/8 in.; Total depth of well: 17.48 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 16.96 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc.
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	17.48	59.13
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-31

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/7/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-33

Drilling began: 5/23/91 ; Completed: 5/24/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 18.71 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 18.21 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc:/John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	18.71	23.02
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-33

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-34

Drilling began: 5/24/91 ; Completed: 5/24/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 17.67 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	17.67	21.75
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-34

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/8/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-35

Drilling began: 5/25/91 ; Completed: 5/25/91 ; Type tools: _____ ;
Size of hole: 10 5/8in.; Total depth of well: 18.90 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 17.37 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	18.90	63.94
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-35

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/8/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-36

Drilling began: 4/30/91 ; Completed: 4/30/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 7.23 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	7.23	8.90
2			
3			
4			
5			

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-36

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-37

Drilling began: 5/28/91 ; Completed: 5/28/91 ; Type tools: _____;
Size of hole: 10 5/8in.; Total depth of well: 18.92 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 12.05 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	18.92	64.00
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-37

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

Form: wr-20

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-38

Drilling began: 5/27/91 ; Completed: 5/27/91 ; Type tools: _____;
Size of hole: 10 5/8 in.; Total depth of well: 18.75 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 14.95 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	18.75	63.43
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-38
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:
well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; **FWL** ____; **FSL** ____; **Use** _____; **Location No.** _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-39

Drilling began: 5/28/91 ; Completed: 5/28/91 ; Type tools: _____ ;
Size of hole: 10 5/8in.; Total depth of well: 19.74 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 14.3 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	19.74	66.78
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-39

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

Form: wr-20

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-40

Drilling began: 5/29/91 ; Completed: 5/29/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 12.07 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	12.07	14.86
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-40

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller _____ 4/8/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-42

Drilling began: 5/30/91 ; Completed: 5/30/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 21.56 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

FFICE OF THE STATE ENGINEER
WELL RECORD

scription of ter-bearing formation	Estimated Yield (GPM)

th in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	To

NG

ks mud	Cubic Feet of Cement	Method of Placement

rilling Company, Inc./John White #WD-1456
x 906, Clyde, TX 79510
x with tremmie pipe

State Engineer Representative

Feet ttom	Cubic Feetof Cement
21.56	26.54

Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-42

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___1/4 ___1/4 ___1/4 Section:___ Township:___ Range:___ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-44

Drilling began: 6/1/91 ; Completed: 6/1/91 ; Type tools: _____;
Size of hole: 10 5/8in.; Total depth of well: 22.2 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 14.3 ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	22.2	75.10
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-44

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/8/03 (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-52

Drilling began: 6/7/91 ; Completed: 6/7/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 19.25 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./JOhn White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	19.25	23.69
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-52
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/a
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-53

Drilling began: 6/7/91 ; Completed: 6/7/91 ; Type tools: _____;
Size of hole: 7 3/8 in.; Total depth of well: 12.90 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	12.90	15.88
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-53
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____ Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: WT Water Well Service Work Phone: _____
Agent: Roy Spruill Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-80

Drilling began: 12/14/94 ; Completed: 12/15/94 ; Type tools: _____ ;
Size of hole: 7.875 in.; Total depth of well: 90.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	90.0	304.45
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-80
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-92

Drilling began: 1/14/97 ; Completed: 1/14/97 ; Type tools: _____ ;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-92
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-93

Drilling began: 1/13/97 ; Completed: 1/13/97 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-93

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-99

Drilling began: 1/13/97 ; Completed: 1/13/97 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/29/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-99
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____ Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-101

Drilling began: 1/11/97 ; Completed: 1/11/97 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-101
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-102

Drilling began: 1/9/97 ; Completed: 1/9/97 ; Type tools: _____;
Size of hole: 7 5/8in.; Total depth of well: 80.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	80.0	270.63
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-102
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-103

Drilling began: 1/10/97 ; Completed: 1/10/97 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-103
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

==========

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): MarathonOil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-107

Drilling began: 1/10/97 ; Completed: 1/10/97 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-107

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____ Trn Number: _____

Form: wr-20 page 3 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): MarathonOil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: PC Exploration Work Phone: _____
Agent: S. Mott Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-107

Drilling began: 1/10/97 ; Completed: 1/10/97 ; Type tools: _____;
Size of hole: 7 5/8 in.; Total depth of well: 70.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0								

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	70.0	236.80
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#BH117-B
9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____ Trn Number: _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.

B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: N/A
Name: _____ Work Phone: _____
Agent: _____ Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #BH117-B

Drilling began: N/A ; Completed: _____; Type tools: _____;
Size of hole: 10.0 in.; Total depth of well: 2.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: dry ft.

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: White Drilling Company, Inc./John White #WD-1456
Address: P.O. Box 906, Clyde, TX 79510
Plugging Method: Pump mix with tremmie pipe
Date Well Plugged: 3/28/03

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1	0.0	2.0	n/a
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

#MW-107

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well replaced with a 4'x4'x6" surface slab

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ 4/8/03
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

AMENDED AMENDED AMENDED

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Marathon Oil Company Work Phone: _____
Contact: _____ Home Phone: _____
Address: P.O. Box 3128
_____
City: Houston State: TX Zip: 77253-3128

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 27 m 47.3 s Longitude: 104 d 33 m 55.0 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: Site: 329 Marathon Road, Lakewood, NM 88251

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): Marathon Oil Company

3. DRILLING CONTRACTOR

License Number: _____
Name: Lariat Drilling Work Phone: _____
Agent: R.B. Davis Home Phone: _____
Mailing Address: _____
_____
City: _____ State: __ Zip: _____

4. DRILLING RECORD #MW-126

Drilling began: 12/6/99 ; Completed: 12/6/99 ; Type tools: _____ ;
Size of hole: 7 5/8 in.; Total depth of well: _____ ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 65.0 ft.

RECEIVED
APR 29 2003
ARCADIS Geraghty & Miller

File Number: _____ Trn Number: _____
Form: wr-20 page 1 of 4

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD MW-126

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4.0		4	-2.0	52.0	54.0	sch. 40 riser		
4.0		4	52.0	77.0	25.0	slot .040 scrn.		

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____

State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feetof Cement
1			
2			
3			
4			
5			

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD MW-12C

9. LOG OF HOLE N/A

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD MW-12

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

well was drilled on 12/6/99 with no casing installed. On 3/25/03 White Drilling Company installed casing inside this boring.

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

_____ Driller

4/29/03 (mm/dd/year)

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FOR STATE ENGINEER USE ONLY

Quad _____; FWL _____; FSL _____; Use _____; Location No. _____

Appendix H

MW-126 Well Log

WELL LOG

WELL NO. MW-126

ARCADIS 1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432/687-5400 Fax: 432/687-5401

PROJECT NUMBER: NP000443.0005
CLIENT NAME: MARATHON OIL COMPANY
PROJECT NAME: INDIAN BASIN
SITE LOCATION: INDIAN BASIN GAS PLANT
CARLSBAD, NEW MEXICO
DRILLING CO: LARIAT DRILLING/WHITE DRILLING
DRILLING METHOD: AIR ROTARY/AIR HAMMER/AUGER
SAMPLING METHOD: SHOVEL
DATE BEGUN: 12-6-99 DATE COMPLETED: 3/26/2003
DRILLER: R.B. DAVIS ELEVATION (SURF.): —
LOGGER: D. McNEESE ELEVATION (T.O.C.): —
FILE NAME: MW-126.DAT UNIQUE NUMBER: 31-009-00069

STATIC WATER LEVEL: 53.08' MEAS. PT.: T.O.C. DATE: —
HOLE SIZE(S): 12-1/4", 6-3/4" TOTAL DEPTH: 77'
SURFACE COMPLETION: —

	TYPES	DEPTHS
GROUT TYPE:	PORTLAND CEMENT	SURFACE TO -30.0'
SEAL TYPE:	BENTONITE	SURFACE TO -42.0'
SCREEN PACK:	8/16" BRADY SAND	-42.0' TO -77.0'
CASING TYPE:	7-5/8" DIAMETER STEEL CASING	SURFACE TO -30.0'
	4" DIAMETER SCH. 40 PVC BLANK	2.0' TO -52.0'
	—	—
WELL SCREEN:	4" DIAMETER SCH. 40 PVC, 0.040" SLOTS	-52.0' TO -77.0'
PLUG BACK:		

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	OVM READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION
0									
5		Shovel		Dry		0.0			SILTY SAND
10		Shovel		Dry		0.0			DOLOMITE: 5YR 7/2, pink, gray, very fine crystalline, dense, trace concoidal fracture.
15		Shovel		Damp		22.0			
20		Shovel		Damp		11.0			DOLOMITE: 5YR 7/2, pink, gray, some loose GRAVEL, damp, moderate odor, gray stain. Note - strong water flow @ 17' into well.
25		Shovel		Dry		5.0			
				Damp					SAND: 5YR 4/1, dark gray, very fine grained, loose, unconsolidated, quartz grains, moderate odor, moist, silty.
30		Shovel		Moist		5.0			NONE: Very wet - concrete did not set inside casing, need water to lift cuttings until 50', but still heavy from concrete above so no sample until 60'.
35									

WELL INSTALLATION

WELL LOG

WELL NO. MW-126

ARCADIS 1004 N. Big Spring St. Suite 300, Midland, TX 79701-3383 Tel: 432/687-5400 Fax: 432/687-5401

PROJECT NUMBER: NP000443.0005
CLIENT NAME: MARATHON OIL COMPANY
PROJECT NAME: INDIAN BASIN
SITE LOCATION: INDIAN BASIN GAS PLANT
CARLSBAD, NEW MEXICO
DRILLING CO: LARIAT DRILLING/WHITE DRILLING
DRILLING METHOD: AIR ROTARY/AIR HAMMER/AUGER
SAMPLING METHOD: SHOVEL
DATE BEGUN: 12-6-99 DATE COMPLETED: 3/26/2003
DRILLER: R.B. DAVIS ELEVATION (SURF.): —
LOGGER: D. McNEESE ELEVATION (T.O.C.): —
FILE NAME: MW-126.DAT UNIQUE NUMBER: 31-009-00069

STATIC WATER LEVEL: 53.08' MEAS. PT.: T.O.C. DATE: —
HOLE SIZE(S): 12-1/4", 6-3/4" TOTAL DEPTH: 77'
SURFACE COMPLETION: —

	TYPES	DEPTHS
GROUT TYPE:	PORTLAND CEMENT	SURFACE TO -30.0'
SEAL TYPE:	BENTONITE	SURFACE TO -42.0'
SCREEN PACK:	8/16" BRADY SAND	-42.0' TO -77.0'
CASING TYPE:	7-5/8" DIAMETER STEEL CASING	SURFACE TO -30.0'
	4" DIAMETER SCH. 40 PVC BLANK	2.0' TO -52.0'
	—	—
WELL SCREEN:	4" DIAMETER SCH. 40 PVC, 0.040" SLOTS	-52.0' TO -77.0'
PLUG BACK:		

DEPTH	SAMPLED	SAMPLING METHOD	ANALYZED	MOISTURE	RECOVERY	OVM READING	U.S.C.S. CLASS	LITHOLOGY	DESCRIPTION	WELL INSTALLATION
40										
45										
50										
55										
60									DOLOMITE: 5YR 7/2, pinkish gray, crystalline, some concoidal fracture (at 60-65'). Water at 65' strong hydrocarbon odor approximately 6" thickness then crystalline DOLOMITE for approximately 9', terminated drilling @ 70'.	
65										
70									NONE: No geologic data available.	
75										