

GW - _____ 21 _____

**INSPECTIONS &
DATA**

**3/22/2005 OCD
INSPECTION**



P.O. Box 3487
Houston, TX 77253-3487
5555 San Felipe Street
Houston, TX 77056-2799
Telephone 713/629-6600

June 13, 2005

CERTIFIED MAIL

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South Saint Francis Drive
Santa Fe, NM 87504

**RE: Response to March 22, 2005 Inspection
IBGP Discharge Plan GW-21
Marathon Oil Company**

Dear Mr. Wayne Price,

Please see attached responses to your inspection findings. These inspection findings were e-mailed to Marathon on March 28, 2005 with a request to follow-up by June 15, 2005.

If you have any questions or need more information please contact me at (713) 296-2213 or through e-mail at VKKurki@MarathonOil.Com.

Sincerely,

A handwritten signature in cursive script that reads 'Vijay Kurki'.

Vijay K. Kurki, P.E.
Senior HES Professional
Marathon Oil Corporation

Vijay K. Kurki, P.E.
Senior HES Professional
Southern Business Unit

Enclosure (4)

cc: Tom Breninger, IBGP Superintendent.



Marathon Oil Company

P.O. Box 3487/77253-3487
5555 San Felipe/77056-2725
Houston, TX
Telephone 713/296-2213
FAX 713/499-6746
Cellular 713/408-6775
Email VKKurki@marathonoil.com

1. One process area needs containment – see photos

This process area stores small amounts of amine in an above ground storage tank. This area currently has earthen dike around with concrete floor. Please note that this tank sits on concrete floor, any leakage would be detected if it starts to happen. The current dike capacity is larger than the storage tank capacity. Pictures showing earthen dike around the process area is enclosed.

2. Marathon needs to submit a closure plan for the old skimmer area – see photos

Marathon operates a new skimmer basin in the close vicinity of the old skimmer area. The old skimmer basin has been shut-in since 1996. Marathon proposes removal of all shut-in equipment from the old skimmer basin area (shown in pictures taken by OCD).

After shut-in equipment removal, the ground surface in the vicinity of the area will be graded to prevent pooling of surface water. Also, the underground concrete sump will be sealed to prevent occasional rainwater seepage into the sump.

The open top tank (fiberglass – shown in OCD pictures) at the old skimmer basin consists of small amount of sludge containing NORM material. This tank will be cleaned on site with the use of NORM licensed contractor. The tank has been out of service since 2003. All waste generated from this cleanup will be disposed of properly.

A detailed activity report will be submitted to the OCD after this closure work is complete.

3. Marathon to verify if new skimmer basin area sump has secondary containment.

Sumps in the new skimmer basin area were constructed with concrete and therefore have no secondary containment. Please note that these sumps are just underground concrete storage boxes. Integrity testing will be performed on an annual basis on these sumps by method approved by OCD (Marathon proposed method was approved by OCD on June 8, 2005).

4. On-site water well needs to be sampled and tested for BTEX, Gen Chem and Metals

Two water supply wells were sampled on May 25, 2005. Supply well SW-1 is located inside the plant between the main control room and the Cryo unit. Supply well SW-3 is located $\frac{3}{4}$ mile west of the plant (outside fenced area). SW-1 supplies water for plant use. SW-3 water is used to supply water for rancher use.

"CHECK
REPORT
LINE Blow-out
ASAP" Inspection

?

All samples were either non-detect or showed no contaminants of concern. A copy of laboratory report is attached.

5. Marathon should segregate sulfur disposal area from old landfill/farm and update plot plan showing this area.

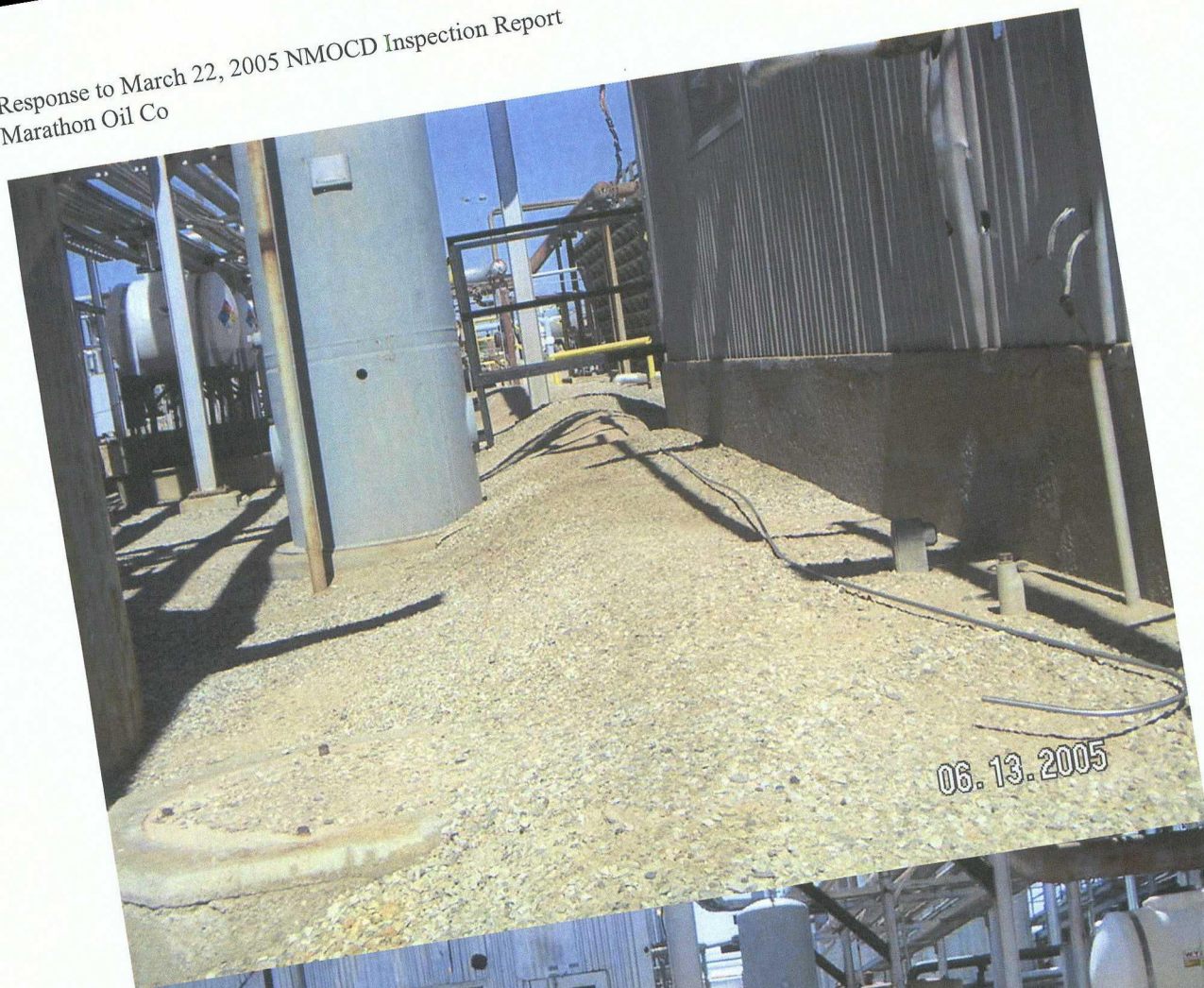
The former sulfur pit is shown on the plot plan submitted with the GW discharge plan revision request. This former pit consists of solid sulfur. Around this pit some powdered sulfur was observed during the inspection. This former sulfur disposal area is already segregated. The plot plan is revised to show the former sulfur disposal area located west of the Sulfur Recovery Unit (SRU). Please note that sulfur is not being placed in this area anymore. All sulfur is stored in the underground storage tank near the SRU and trucked off site as product. An updated plot plan showing sulfur disposal area is attached.

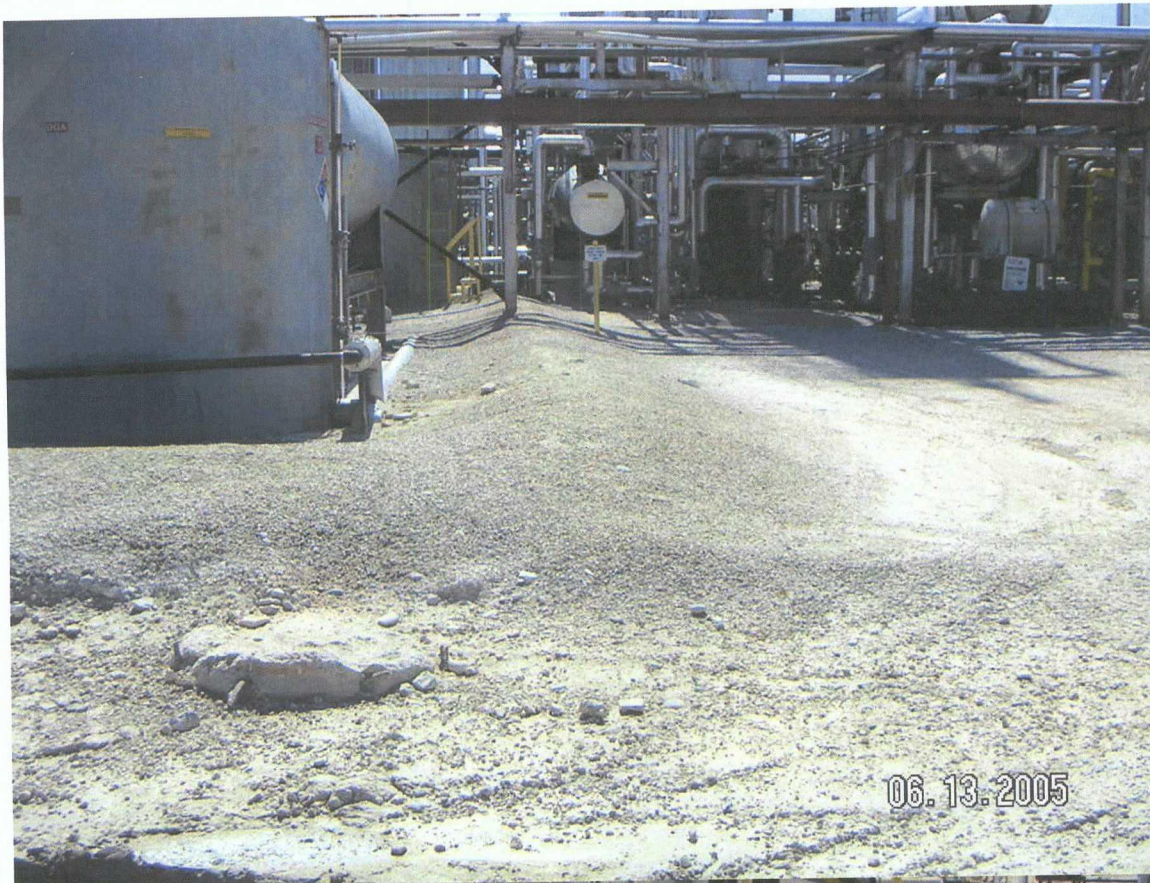
Attachment to OCD Inspection Report

Pictures of the Process Area showing earthen dike around the area
Indian Basin Gas Plant

GW-21

June 13, 2005





ANALYTICAL REPORT

JOB NUMBER: 294556
Project ID: MARATHON INDIAN BASIN

Prepared For:

Marathon Oil Company

Houston, TX

Attention: Vijay Kurki

Date: 05/02/2005

Signature

Name: Sachin G. Kudchadkar

Title: Project Manager III

E-Mail: skudchadkar@stl-inc.com

Date

Severn Trent Laboratories
6310 Rothway Drive
Houston, TX 77040

PHONE: 713-690-4444

SAMPLE INFORMATION

Date: 05/02/2005

Job Number.: 294556
Customer...: Marathon Oil Company
Attn.....: Vijay Kurki

Project Number.....: 99005842
Customer Project ID....: MARATHON INDIAN BASIN
Project Description....: Marathon Indian Basin

Laboratory Sample ID	Customer Sample ID	Sample Matrix	Date Sampled	Time Sampled	Date Received	Time Received
294556-1	SW-1	Water	04/25/2005	14:30	04/26/2005	08:58
294556-2	SW-3	Water	04/25/2005	13:40	04/26/2005	08:58

LABORATORY TEST RESULTS									
Job Number: 294556					Date:05/02/2005				
CUSTOMER: Marathon Oil Company					ATTN: Vijay Kurki				
PROJECT: MARATHON INDIAN BASIN									
Customer Sample ID: SW-1 Date Sampled.....: 04/25/2005 Time Sampled.....: 14:30 Sample Matrix.....: Water Laboratory Sample ID: 294556-1 Date Received.....: 04/26/2005 Time Received.....: 08:58									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT DATE/TIME TECH
EPA 120.1	Specific Conductivity @ 25 degrees C, Water	795			1.0	1	umhos/cm	128106	04/28/05 1400 ras
EPA 130.2	Hardness, Total as CaCO3, Water	438		1.98	5.0	1	mg/L	127943	04/26/05 1730 sur
EPA 150.1	pH, Water	Complete			1e-02	1	pH Units	128138	04/28/05 0000 sed
EPA 160.1	Solids, Total Dissolved (TDS), Water	582		2.99	10	1	mg/L	127960	04/26/05 1600 sur
EPA 300.0	Chloride, Water	25.7		0.147	0.40	1	mg/L	128025	04/26/05 1724 ras
EPA 300.0	Fluoride (F), Water	0.696		0.051	0.30	1	mg/L	128025	04/26/05 1724 ras
EPA 300.0	Sulfate (SO4), Water	169		1.96	5.0	10	mg/L	128025	04/27/05 1450 ras
EPA 310.1	Alkalinity, Total as CaCO3, Water	250		1.55	5.0	1	mg/L CaCO	128117	04/28/05 1400 sur
EPA 310.1	Bicarbonate (HCO3), Water	250		1.55	5.0	1	mg/L CaCO	128117	04/28/05 1400 sur
EPA 310.1	Carbonate (CO3), Water	1.55	U	1.55	5.0	1	mg/L CaCO	128117	04/28/05 1400 sur
SW-846 6010B	Arsenic (As), Water	0.00340	U	0.00340	0.020	1	mg/L	128026	04/27/05 1203 drl
SW-846 6010B	Barium (Ba), Water	0.0266		0.00060	0.020	1	mg/L	128026	04/27/05 1203 drl
SW-846 6010B	Cadmium (Cd), Water	0.00050	U	0.00050	0.005	1	mg/L	128026	04/27/05 1203 drl
SW-846 6010B	Calcium (Ca), Water	101		0.01700	2.000	1	mg/L	128026	04/27/05 1203 drl
SW-846 6010B	Chromium (Cr), Water	0.00130	U	0.00130	0.010	1	mg/L	128026	04/27/05 1203 drl

* In Description = Dry Wgt.

LABORATORY TEST RESULTS											
Job Number: 294556						Date:05/02/2005					
CUSTOMER: Marathon Oil Company						ATTN: Vijay Kurki					
PROJECT: MARATHON INDIAN BASI											
Customer Sample ID: SW-1						Laboratory Sample ID: 294556-1					
Date Sampled.....: 04/25/2005						Date Received.....: 04/26/2005					
Time Sampled.....: 14:30						Time Received.....: 08:58					
Sample Matrix.....: Water											
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 6010B	Lead (Pb), Water	0.00210	U	0.00210	0.010	1	mg/L	128026		04/27/05 1203	drl
SW-846 6010B	Magnesium (Mg), Water	38.9		0.02700	2.000	1	mg/L	128026		04/27/05 1203	drl
SW-846 6010B	Potassium (K), Water	1.74	B	0.2123	2.000	1	mg/L	128049		04/27/05 1642	drl
SW-846 6010B	Selenium (Se), Water	0.00370	U	0.00370	0.040	1	mg/L	128026		04/27/05 1203	drl
SW-846 6010B	Silver (Ag), Water	0.00120	U	0.00120	0.010	1	mg/L	128026		04/27/05 1203	drl
SW-846 6010B	Sodium (Na), Water	14.2		0.03070	2.000	1	mg/L	128026		04/27/05 1203	drl
SW-846 7470A	Mercury (Hg), Water	0.053	U	0.053	0.20	1	ug/L	127937		04/26/05 1617	dcl
SW-846 3010A	Acid Digestion, Water	Complete				1		127944		04/26/05 1630	drl
EPA 300.0	Ion Chromatography Analysis - Short Hold Nitrogen, Nitrate as N (NO3-N), Water	2.08		0.057	0.20	1	mg/L	128025		04/26/05 1724	ras
SW-846 8260B	Volatile Organics										
	Benzene, Water	1.01	U	1.01	5	1.00000	ug/L	128239		04/29/05 1553	ydy
	Ethylbenzene, Water	0.76	U	0.76	5	1.00000	ug/L	128239		04/29/05 1553	ydy
	Toluene, Water	1.27	U	1.27	5	1.00000	ug/L	128239		04/29/05 1553	ydy
	Xylenes (total), Water	2.04	U	2.04	15	1.00000	ug/L	128239		04/29/05 1553	ydy

* In Description = Dry Wgt.

LABORATORY TEST RESULTS

Job Number: 294556

Date: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: VARATHON INDIAN BASI

ATTN: Vijay Kurki

Customer Sample ID: SW-3
Date Sampled.....: 04/25/2005
Time Sampled.....: 13:40
Sample Matrix.....: Water

Laboratory Sample ID: 294556-2
Date Received.....: 04/26/2005
Time Received.....: 08:58

TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	O FLAGS	MDI	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
EPA 120.1	Specific Conductivity @ 25 degrees C, Water	622			1.0	1	umhos/cm	128106		04/28/05 1400	ras
EPA 130.2	Hardness, Total as CaCO3, Water	318		1.98	5.0	1	mg/L	127943		04/26/05 1730	sur
EPA 150.1	pH, Water	Complete			1e-02	1	pH Units	128138		04/28/05 0000	sed
EPA 160.1	Solids, Total Dissolved (TDS), Water	423		2.99	10	1	mg/L	127960		04/26/05 1600	sur
EPA 300.0	Chloride, Water	14.6		0.147	0.40	1	mg/L	128025		04/26/05 1816	ras
EPA 300.0	Fluoride (F), Water	1.03		0.051	0.30	1	mg/L	128025		04/26/05 1816	ras
EPA 300.0	Sulfate (SO4), Water	78.5		1.96	5.0	10	mg/L	128025		04/27/05 1507	ras
EPA 310.1	Alkalinity, Total as CaCO3, Water	238		1.55	5.0	1	mg/L CaCO	128117		04/28/05 1400	sur
EPA 310.1	Bicarbonate (HCO3), Water	238		1.55	5.0	1	mg/L CaCO	128117		04/28/05 1400	sur
EPA 310.1	Carbonate (CO3), Water	1.55	U	1.55	5.0	1	mg/L CaCO	128117		04/28/05 1400	sur
SW-846 6010B	Arsenic (As), Water	0.00360	B	0.00340	0.020	1	mg/L	128026		04/27/05 1219	dr1
SW-846 6010B	Barium (Ba), Water	0.0504		0.00060	0.020	1	mg/L	128026		04/27/05 1219	dr1
SW-846 6010B	Cadmium (Cd), Water	0.00050	U	0.00050	0.005	1	mg/L	128026		04/27/05 1219	dr1
SW-846 6010B	Calcium (Ca), Water	65.3		0.01700	2.000	1	mg/L	128026		04/27/05 1219	dr1
SW-846 6010B	Chromium (Cr), Water	0.00137	B	0.00130	0.010	1	mg/L	128026		04/27/05 1219	dr1

* In Description = Dry Wgt.

LABORATORY TEST RESULTS					Date:05/02/2005						
CUSTOMER: Marathon Oil Company			PROJECT: MARATHON INDIAN BASI			ATTN: Vijay Kurki					
Customer Sample ID: SW-3			Laboratory Sample ID: 294556-2								
Date Sampled.....: 04/25/2005			Date Received.....: 04/26/2005								
Time Sampled.....: 13:40			Time Received.....: 08:58								
Sample Matrix.....: Water											
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	O-FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
SW-846 6010B	Lead (Pb), Water	0.00210	U	0.00210	0.010	1	mg/L	128026		04/27/05 1219	drl
SW-846 6010B	Magnesium (Mg), Water	30.2		0.02700	2.000	1	mg/L	128026		04/27/05 1219	drl
SW-846 6010B	Potassium (K), Water	1.69	B	0.2123	2.000	1	mg/L	128049		04/27/05 1656	drl
SW-846 6010B	Selenium (Se), Water	0.00370	U	0.00370	0.040	1	mg/L	128026		04/27/05 1219	drl
SW-846 6010B	Silver (Ag), Water	0.00120	U	0.00120	0.010	1	mg/L	128026		04/27/05 1219	drl
SW-846 6010B	Sodium (Na), Water	15.6		0.03070	2.000	1	mg/L	128026		04/27/05 1219	drl
SW-846 7470A	Mercury (Hg), Water	0.053	U	0.053	0.20	1	ug/L	127937		04/26/05 1623	dcl
SW-846 3010A	Acid Digestion, Water	Complete				1		127944		04/26/05 1630	drl
EPA 300.0	Ion Chromatography Analysis - Short Hold										
	Nitrogen, Nitrate as N (NO3-N), Water	5.14		0.057	0.20	1	mg/L	128025		04/26/05 1816	ras
SW-846 8260B	Volatile Organics										
	Benzene, Water	1.01	U	1.01	5	1.00000	ug/L	128239		04/29/05 1620	yd
	Ethylbenzene, Water	0.76	U	0.76	5	1.00000	ug/L	128239		04/29/05 1620	yd
	Toluene, Water	1.27	U	1.27	5	1.00000	ug/L	128239		04/29/05 1620	yd
	Xylenes (total), Water	2.04	U	2.04	15	1.00000	ug/L	128239		04/29/05 1620	yd

* In Description = Dry Wgt.

Job Number.: 294556			QUALITY CONTROL RESULTS			Report Date.: 05/02/2005		
CUSTOMER: Marathon Oil Company			PROJECT: MARATHON INDIAN BASIN			ATTN: Vijay Kurki		

Test Method.....: EPA 310.1	Units.....: mg/L CaCO3	Analyst....: sur
Method Description.: Alkalinity	Batch(s)....: 128117	Test Code.: ALK
Parameter.....: Alkalinity, Total as CaCO3		

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
LCS	128117--21	WC3294	980.8		1000.0		98.1	90.0-110.		04/28/2005	1400
MS	294684-1	WC3298	388.5		200.000000	163.5	112.5	75-125		04/28/2005	1400
DU	294684-1		161.5			163.5	1.2	20		04/28/2005	1400
MB	128117--21		1.92							04/28/2005	1400

Test Method.....	EPA 300.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</
------------------	-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		WCS34779	20.793		20.00		104.0	90.0-110.		04/26/2005	1613
ICB			0.1805							04/26/2005	1631
MB			0.2099							04/26/2005	1648
LCS		WCS34779	20.791		20.00		104.0	90.0-110.		04/26/2005	1706
DU	294556-1		25.385			25.698	1.2	20		04/26/2005	1741
MS	294556-1	WCS34826	34.253		10.000000	25.698	85.5	80-120		04/26/2005	1759
DU	294483-1		2.8201			2.8019	0.6	20		04/26/2005	1852
MS	294483-1	WCS34826	12.769		10.000000	2.8019	99.7	80-120		04/26/2005	1909
CCV		WCS34779	20.964		20.00		104.8	90.0-110.		04/26/2005	1945
CCB			0							04/26/2005	2002
DU	294483-21		3.8579			3.9246	1.7	20		04/26/2005	2258
CCV		WCS34779	20.786		20.00		103.9	90.0-110.		04/26/2005	2316
CCB			0.1774							04/26/2005	2334
MS	294483-21	WCS34826	13.983		10.000000	3.9246	100.6	80-120		04/26/2005	2351
MB			0.1753							04/27/2005	0137
LCS		WCS34779	20.676		20.00		103.4	90.0-110.		04/27/2005	0155
CCV		WCS34779	21.651		20.00		108.3	90.0-110.		04/27/2005	0247
CCB			0.1857							04/27/2005	0305
CCV		WCS34779	20.762		20.00		103.8	90.0-110.		04/27/2005	0619
CCB			0.1902							04/27/2005	0636
CCV		WCS34779	20.763		20.00		103.8	90.0-110.		04/27/2005	0950
CCB			0.1893							04/27/2005	1008
MB			0.1754							04/27/2005	1025
LCS		WCS34779	20.624		20.00		103.1	90.0-110.		04/27/2005	1043
DU	294415-8		3.4276			3.5769	4.3	20		04/27/2005	1229
MS	294415-8	WCS34826	13.679		10.000000	3.5769	101.0	80-120		04/27/2005	1246
CCV		WCS34779	20.795		20.00		104.0	90.0-110.		04/27/2005	1322
CCB			0							04/27/2005	1339
DU	294384-2		18.884			19.339	2.4	20		04/27/2005	1618
MS	294384-2	WCS34826	28.128		10.000000	19.339	87.9	80-120		04/27/2005	1635
CCV		WCS34779	20.265		20.00		101.3	90.0-110.		04/27/2005	1653
CCB			0.1781							04/27/2005	1711

QUALITY CONTROL RESULTS

Job Number.: 294556

Report Date.: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: MARATHON INDIAN BASIN

ATTN: Vijay Kurki

Test Method..... EPA 300.0

Method Description.: Ion Chromatography Analysis

Parameter..... Fluoride (F)

Units..... mg/L

Batch(s).... 128025

Analyst.... ras

Test Code.: FL

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		WCS34779	9.0321		10.00		90.3	90.0-110.		04/26/2005	1613
ICB			0							04/26/2005	1631
MB			0							04/26/2005	1648
LCS		WCS34779	9.1349		10.00		91.3	90.0-110.		04/26/2005	1706
DU	294556-1		0.6942			0.6965	0.0023	0.3000		04/26/2005	1741
MS	294556-1	WCS34826	2.4754		2.000000	0.6965	88.9	80-120		04/26/2005	1759
DU	294483-1		0.1681			0.1710	0.0029	0.3000		04/26/2005	1852
MS	294483-1	WCS34826	1.8021		2.000000	0.1710	81.6	80-120		04/26/2005	1909
CCV		WCS34779	9.3254		10.00		93.3	90.0-110.		04/26/2005	1945
CCB			0							04/26/2005	2002
DU	294483-21		0			0	0	0		04/26/2005	2258
CCV		WCS34779	9.3138		10.00		93.1	90.0-110.		04/26/2005	2316
CCB			0							04/26/2005	2334
MS	294483-21	WCS34826	1.7209		2.000000	0	86.0	80-120		04/26/2005	2351
MB			0							04/27/2005	0137
LCS		WCS34779	9.2484		10.00		92.5	90.0-110.		04/27/2005	0155
DU	294323-1		0.6556			0.6491	0.0065	0.3000		04/27/2005	0230
CCV		WCS34779	9.2871		10.00		92.9	90.0-110.		04/27/2005	0247
CCB			0							04/27/2005	0305
MS	294323-1	WCS34826	2.1768		2.000000	0.6491	76.4	80-120	A	04/27/2005	0323
CCV		WCS34779	9.3573		10.00		93.6	90.0-110.		04/27/2005	0619
CCB			0							04/27/2005	0636
MS	294323-26	WCS34826	2.0444		2.000000	0.4926	77.6	80-120	A	04/27/2005	0822
MSD	294323-28	WCS34826	2.0736	2.0444	2.000000	0.4926	79.0	80-120	A	04/27/2005	0840
							1.8	20			
CCV		WCS34779	9.2317		10.00		92.3	90.0-110.		04/27/2005	0950
CCB			0							04/27/2005	1008
MB			0							04/27/2005	1025
LCS		WCS34779	9.2508		10.00		92.5	90.0-110.		04/27/2005	1043
DU	294415-8		0.3569			0.3157	0.0412	0.3000		04/27/2005	1229
MS	294415-8	WCS34826	2.1580		2.000000	0.3157	92.1	80-120		04/27/2005	1246
CCV		WCS34779	9.2663		10.00		92.7	90.0-110.		04/27/2005	1322
CCB			0							04/27/2005	1339
DU	294384-2		0			0	0	0		04/27/2005	1618
MS	294384-2	WCS34826	1.6784		2.000000	0	83.9	80-120		04/27/2005	1635
CCV		WCS34779	9.1780		10.00		91.8	90.0-110.		04/27/2005	1653
CCB			0							04/27/2005	1711

Test Method..... EPA 130.2

Method Description.: Hardness, as CaCO3 (Titration)

Parameter..... Hardness, Total as CaCO3

Units..... mg/L

Batch(s).... 127943

Analyst.... sur

Test Code.: HARD

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MS	294170-1	WC3133A	206.0		200.000000	10.0	98.0	75-125		04/26/2005	1730
MB	127943--21		0.00							04/26/2005	1730
MS	294556-2	WC3133A	514.0		200.000000	318.0	98.0	75-125		04/26/2005	1730
DU	294170-1		10.0			10.0	0.0	5.0		04/26/2005	1730
LCS	127943--21	WC3133A	1940.0		2000.0		97.0	90.0-110.		04/26/2005	1730
DU	294556-2		314.0			318.0	1.3	20		04/26/2005	1730

Job Number.: 294556

QUALITY CONTROL RESULTS

Report Date.: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: MARATHON INDIAN BASIN

ATTN: Vijay Kurki

Test Method.....: EPA 160.1

Method Description.: Solids, Total Dissolved (TDS)

Units.....: mg/L

Analyst....: sur

Test Code.: TDS

Parameter.....: Solids, Total Dissolved (TDS)

Batch(s)....: 127960

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
DU	294610-3		681.00			684.00	0.4	10.0		04/26/2005	1600
DU	294556-2		419.00			423.00	1.0	10.0		04/26/2005	1600
MB	127960--21		1.00							04/26/2005	1600
LCS	127960--21	WCS34094	3726.00		3600		103.5	90.0-110.		04/26/2005	1600

Test Method.....: EPA 120.1

Method Description.: Specific Conductance @ 25 degrees C

Units.....: umhos/cm

Analyst....: ras

Test Code.: COND

Parameter.....: Specific Conductivity @ 25 degrees C

Batch(s)....: 128106

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MB			0.20							04/28/2005	1400
LCS		WC3320	9.06		10		90.6	90.0-110.		04/28/2005	1400
CCB			0.19							04/28/2005	1400
CCV		WC3321	93.91		100		93.9	90.0-110.		04/28/2005	1400
CCV		WC3322	940		1000		94.0	90.0-110.		04/28/2005	1400
DU	294404-9		3030			3030	0.0	20		04/28/2005	1400
MS	294404-9	WC3243	3120		100.000000	3030	90.0	75-125		04/28/2005	1400
CCV		WC3321	94.2		100		94.2	90.0-110.		04/28/2005	1400
CCB			0.20							04/28/2005	1400
MS	294404-24	WC3243	3870		100.000000	3840	30.0	75-125		04/28/2005	1400
MSD	294404-25	WC3243	3870	3870	100.000000	3840	30.0	75-125		04/28/2005	1400
							0.0	20			
CCV		WC3322	942		1000		94.2	90.0-110.		04/28/2005	1400

Test Method.....: EPA 300.0

Method Description.: Ion Chromatography Analysis

Units.....: mg/L

Analyst....: ras

Test Code.: SO4

Parameter.....: Sulfate (SO4)

Batch(s)....: 128025

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
ICV		WCS34779	20.766		20.00		103.8	90.0-110.		04/26/2005	1613
ICB			0							04/26/2005	1631
MB			0							04/26/2005	1648
LCS		WCS34779	20.160		20.00		100.8	90.0-110.		04/26/2005	1706
DU	294483-1		1.3586			1.4538	0.0952	0.5000		04/26/2005	1852
MS	294483-1	WCS34826	11.150		10.000000	1.4538	97.0	80-120		04/26/2005	1909
CCV		WCS34779	20.069		20.00		100.3	90.0-110.		04/26/2005	1945
CCB			0							04/26/2005	2002
DU	294483-21		0.9368			0.9272	0.0096	0.5000		04/26/2005	2258
CCV		WCS34779	19.980		20.00		99.9	90.0-110.		04/26/2005	2316
CCB			0							04/26/2005	2334
MS	294483-21	WCS34826	10.688		10.000000	0.9272	97.6	80-120		04/26/2005	2351
MB			0							04/27/2005	0137
LCS		WCS34779	20.123		20.00		100.6	90.0-110.		04/27/2005	0155
DU	294323-1		24.784			24.702	0.3	20		04/27/2005	0230
CCV		WCS34779	20.015		20.00		100.1	90.0-110.		04/27/2005	0247
CCB			0							04/27/2005	0305
MS	294323-1	WCS34826	33.176		10.000000	24.702	84.7	80-120		04/27/2005	0323
CCV		WCS34779	19.943		20.00		99.7	90.0-110.		04/27/2005	0619
CCB			0							04/27/2005	0636

QUALITY CONTROL RESULTS			Job Number.: 294556	Report Date.: 05/02/2005
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN		ATTN: Vijay Kurki

Test Method.....: EPA 300.0	Analyst....: ras
Method Description.: Ion Chromatography Analysis	Units.....: mg/L
Parameter.....: Sulfate (SO4)	Batch(s)....: 128025
	Test Code.: S04

QC	Lab ID	Reagent	QC Result	QC Result	True Value	Orig. Value	Calc. Result *	Limits	F	Date	Time
MS	294323-26	WCS34826	17.006		10.000000	6.6262	103.8	80-120		04/27/2005	0822
MSD	294323-28	WCS34826	16.663	17.006	10.000000	6.6262	100.4	80-120		04/27/2005	0840
							3.3	20			
CCV		WCS34779	20.059		20.00		100.3	90.0-110.		04/27/2005	0950
CCB			0							04/27/2005	1008
MB			0							04/27/2005	1025
LCS		WCS34779	19.917		20.00		99.6	90.0-110.		04/27/2005	1043
DU	294415-8		23.593			23.204	1.7	20		04/27/2005	1229
MS	294415-8	WCS34826	33.293		10.000000	23.204	100.9	80-120		04/27/2005	1246
CCV		WCS34779	20.220		20.00		101.1	90.0-110.		04/27/2005	1322
CCB			0							04/27/2005	1339
DU	294384-2		0.4273			0.3836	0.0437	0.5000		04/27/2005	1618
MS	294384-2	WCS34826	9.7274		10.000000	0.3836	93.4	80-120		04/27/2005	1635
CCV		WCS34779	19.338		20.00		96.7	90.0-110.		04/27/2005	1653
CCB			0							04/27/2005	1711

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN: Vijay Kurki		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
CCB	Continuing Calibration Blank				04/27/2005	1008	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4)	0						
Fluoride (F)	0						
Bromide (Br)	0						
Chloride	0.1893						
Nitrogen, Nitrate as N (NO3-N)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
CCB	Continuing Calibration Blank				04/27/2005	1339	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	0						
Bromide (Br)	0						
Fluoride (F)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
CCB	Continuing Calibration Blank				04/27/2005	1711	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4)	0						
Fluoride (F)	0						
Chloride	0.1781						
Nitrogen, Nitrite as N (NO2-N)	0						
CCV	Continuing Calibration Verification	WCS34779				04/26/2005	1945
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F)	9.3254		10.00		93.3	90.0-110.0	
Sulfate (SO4)	20.069		20.00		100.3	90.0-110.0	
Bromide (Br)	20.286		20.00		101.4	90.0-110.0	
Chloride	20.964		20.00		104.8	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.081		10.00		100.8	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.374		10.00		103.7	90.0-110.0	
CCV	Continuing Calibration Verification	WCS34779				04/26/2005	2316
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	20.786		20.00		103.9	90.0-110.0	
Bromide (Br)	20.079		20.00		100.4	90.0-110.0	
Fluoride (F)	9.3138		10.00		93.1	90.0-110.0	
Sulfate (SO4)	19.980		20.00		99.9	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.075		10.00		100.8	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.242		10.00		102.4	90.0-110.0	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN: Vijay Kurki		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
CCV	Continuing Calibration Verification	WCS34779			04/27/2005	0247	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	21.651		20.00		108.3	90.0-110.0	
Fluoride (F)	9.2871		10.00		92.9	90.0-110.0	
Bromide (Br)	20.282		20.00		101.4	90.0-110.0	
Sulfate (SO4)	20.015		20.00		100.1	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.098		10.00		101.0	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.284		10.00		102.8	90.0-110.0	
CCV	Continuing Calibration Verification	WCS34779				04/27/2005 0619	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	20.375		20.00		101.9	90.0-110.0	
Sulfate (SO4)	19.943		20.00		99.7	90.0-110.0	
Fluoride (F)	9.3573		10.00		93.6	90.0-110.0	
Chloride	20.762		20.00		103.8	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.070		10.00		100.7	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.240		10.00		102.4	90.0-110.0	
CCV	Continuing Calibration Verification	WCS34779				04/27/2005 0950	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	20.763		20.00		103.8	90.0-110.0	
Fluoride (F)	9.2317		10.00		92.3	90.0-110.0	
Bromide (Br)	20.456		20.00		102.3	90.0-110.0	
Sulfate (SO4)	20.059		20.00		100.3	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.262		10.00		102.6	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.350		10.00		103.5	90.0-110.0	
CCV	Continuing Calibration Verification	WCS34779				04/27/2005 1322	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	20.188		20.00		100.9	90.0-110.0	
Sulfate (SO4)	20.220		20.00		101.1	90.0-110.0	
Fluoride (F)	9.2663		10.00		92.7	90.0-110.0	
Chloride	20.795		20.00		104.0	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.064		10.00		100.6	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.229		10.00		102.3	90.0-110.0	
CCV	Continuing Calibration Verification	WCS34779				04/27/2005 1653	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	20.265		20.00		101.3	90.0-110.0	
Fluoride (F)	9.1780		10.00		91.8	90.0-110.0	
Sulfate (SO4)	19.338		20.00		96.7	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.011		10.00		100.1	90.0-110.0	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN: Vijay Kurki		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
DU	Method Duplicate		294556-1		04/26/2005	1741	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Water	0.6942			0.6965	0.0023	0.3000	
Chloride, Water	25.385			25.698	1.2	20	
Bromide (Br), Water	0.1580			0.2619	0.1039	0.6000	
Nitrogen, Nitrate as N (NO3-N), Water	2.0631			2.0841	1.0	20	
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0	
DU	Method Duplicate		294483-1	10		04/26/2005	1852
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4), Soil	1.3586			1.4538	0.0952	0.5000	
Bromide (Br), Soil	0			0	0	1	
Chloride, Soil	2.8201			2.8019	0.6	20	
Fluoride (F), Soil	0.1681			0.1710	0.0029	0.3000	
Nitrogen, Nitrate as N (NO3-N), Soil	0			0	0	0	
Nitrogen, Nitrite as N (NO2-N), Soil	0			0	0	0	
DU	Method Duplicate		294483-21	10		04/26/2005	2258
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br), Soil	0			0	0	1	
Fluoride (F), Soil	0			0	0	0	
Chloride, Soil	3.8579			3.9246	1.7	20	
Sulfate (SO4), Soil	0.9368			0.9272	0.0096	0.5000	
Nitrogen, Nitrate as N (NO3-N), Soil	0			0	0	0	
Nitrogen, Nitrite as N (NO2-N), Soil	0			0	0	0	
DU	Method Duplicate		294323-1			04/27/2005	0230
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4), Water	24.784			24.702	0.3	20	
Fluoride (F), Water	0.6556			0.6491	0.0065	0.3000	
Bromide (Br), Water	1.3236			1.2809	0.0427	0.6000	
Nitrogen, Nitrate as N (NO3-N), Water	0.1376			0.1371	0.0005	0.2000	
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0	
DU	Method Duplicate		294415-8			04/27/2005	1229
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Water	0.3569			0.3157	0.0412	0.3000	
Sulfate (SO4), Water	23.593			23.204	1.7	20	
Chloride, Water	3.4276			3.5769	4.3	20	
Bromide (Br), Water	0			0	0	1	
Nitrogen, Nitrate as N (NO3-N), Water	2.1529			2.1414	0.5	20	
Nitrogen, Nitrite as N (NO2-N), Water	0			0	0	0	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
DU	Method Duplicate		294384-2	100	04/27/2005	1618	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Water	0			0	0	0	
Chloride, Water	18.884			19.339	2.4	20	
Sulfate (SO4), Water	0.4273			0.3836	0.0437	0.5000	
ICB	Initial Calibration Blank					04/26/2005	1631
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4)	0						
Chloride	0.1805						
Fluoride (F)	0						
Bromide (Br)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
ICV	Initial Calibration Verification	WCS34779				04/26/2005	1613
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4)	20.766		20.00		103.8	90.0-110.0	
Chloride	20.793		20.00		104.0	90.0-110.0	
Fluoride (F)	9.0321		10.00		90.3	90.0-110.0	
Bromide (Br)	20.136		20.00		100.7	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.062		10.00		100.6	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.270		10.00		102.7	90.0-110.0	
LCS	Laboratory Control Sample	WCS34779				04/26/2005	1706
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F)	9.1349		10.00		91.3	90.0-110.0	
Sulfate (SO4)	20.160		20.00		100.8	90.0-110.0	
Bromide (Br)	20.047		20.00		100.2	90.0-110.0	
Chloride	20.791		20.00		104.0	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.170		10.00		101.7	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.278		10.00		102.8	90.0-110.0	
LCS	Laboratory Control Sample	WCS34779				04/27/2005	0155
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	20.676		20.00		103.4	90.0-110.0	
Fluoride (F)	9.2484		10.00		92.5	90.0-110.0	
Bromide (Br)	20.165		20.00		100.8	90.0-110.0	
Sulfate (SO4)	20.123		20.00		100.6	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	10.084		10.00		100.8	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.266		10.00		102.7	90.0-110.0	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
LCS	Laboratory Control Sample	WCS34779			04/27/2005	1043	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4)	19.917		20.00		99.6	90.0-110.0	
Bromide (Br)	20.164		20.00		100.8	90.0-110.0	
Chloride	20.624		20.00		103.1	90.0-110.0	
Fluoride (F)	9.2508		10.00		92.5	90.0-110.0	
Nitrogen, Nitrate as N (NO3-N)	9.9839		10.00		99.8	90.0-110.0	
Nitrogen, Nitrite as N (NO2-N)	10.151		10.00		101.5	90.0-110.0	
MB	Method Blank				04/26/2005	1648	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Bromide (Br)	0						
Chloride	0.2099						
Fluoride (F)	0						
Sulfate (SO4)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
MB	Method Blank				04/27/2005	0137	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F)	0						
Bromide (Br)	0						
Chloride	0.1753						
Sulfate (SO4)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
MB	Method Blank				04/27/2005	1025	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride	0.1754						
Fluoride (F)	0						
Sulfate (SO4)	0						
Bromide (Br)	0						
Nitrogen, Nitrate as N (NO3-N)	0						
Nitrogen, Nitrite as N (NO2-N)	0						
MS	Matrix Spike	WCS34826	294556-1		04/26/2005	1759	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride, Water	34.253		10.000000	25.698	85.5	80-120	
Bromide (Br), Water	9.8040		10.000000	0.2619	95.4	80-120	
Fluoride (F), Water	2.4754		2.000000	0.6965	88.9	80-120	
Nitrogen, Nitrate as N (NO3-N), Water	3.8275		2.000000	2.0841	87.2	80-120	
Nitrogen, Nitrite as N (NO2-N), Water	2.0641		2.000000	0	103.2	80-120	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
MS	Matrix Spike	WCS34826	294483-1	10	04/26/2005	1909	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4), Soil	11.150		10.000000	1.4538	97.0	80-120	
Chloride, Soil	12.769		10.000000	2.8019	99.7	80-120	
Fluoride (F), Soil	1.8021		2.000000	0.1710	81.6	80-120	
Bromide (Br), Soil	9.7403		10.000000	0	97.4	80-120	
Nitrogen, Nitrate as N (NO3-N), Soil	1.8914		2.000000	0	94.6	80-120	
Nitrogen, Nitrite as N (NO2-N), Soil	1.9676		2.000000	0	98.4	80-120	
MS	Matrix Spike	WCS34826	294483-21	10	04/26/2005	2351	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Soil	1.7209		2.000000	0	86.0	80-120	
Chloride, Soil	13.983		10.000000	3.9246	100.6	80-120	
Sulfate (SO4), Soil	10.688		10.000000	0.9272	97.6	80-120	
Bromide (Br), Soil	9.8332		10.000000	0	98.3	80-120	
Nitrogen, Nitrate as N (NO3-N), Soil	1.9069		2.000000	0	95.3	80-120	
Nitrogen, Nitrite as N (NO2-N), Soil	1.9736		2.000000	0	98.7	80-120	
MS	Matrix Spike	WCS34826	294323-1		04/27/2005	0323	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Water	2.1768		2.000000	0.6491	76.4	80-120	A
Bromide (Br), Water	10.549		10.000000	1.2809	92.7	80-120	
Sulfate (SO4), Water	33.176		10.000000	24.702	84.7	80-120	
Nitrogen, Nitrate as N (NO3-N), Water	1.8489		2.000000	0.1371	85.6	80-120	
Nitrogen, Nitrite as N (NO2-N), Water	1.5533		2.000000	0	77.7	80-120	A
MS	Matrix Spike	WCS34826	294323-26		04/27/2005	0822	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Water	2.0444		2.000000	0.4926	77.6	80-120	A
Sulfate (SO4), Water	17.006		10.000000	6.6262	103.8	80-120	
Bromide (Br), Water	13.761		10.000000	3.8286	99.3	80-120	
Nitrogen, Nitrate as N (NO3-N), Water	1.8943		2.000000	0	94.7	80-120	
Nitrogen, Nitrite as N (NO2-N), Water	1.5735		2.000000	0	78.7	80-120	A
MS	Matrix Spike	WCS34826	294415-8		04/27/2005	1246	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sulfate (SO4), Water	33.293		10.000000	23.204	100.9	80-120	
Bromide (Br), Water	10.016		10.000000	0	100.2	80-120	
Chloride, Water	13.679		10.000000	3.5769	101.0	80-120	
Fluoride (F), Water	2.1580		2.000000	0.3157	92.1	80-120	
Nitrogen, Nitrate as N (NO3-N), Water	4.0201		2.000000	2.1414	93.9	80-120	
Nitrogen, Nitrite as N (NO2-N), Water	2.0779		2.000000	0	103.9	80-120	

Job Number.: 294556	QUALITY CONTROL RESULTS	Report Date.: 05/02/2005
---------------------	-------------------------	--------------------------

CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

MS	Matrix Spike	WCS34826	294384-2	100	04/27/2005	1635
----	--------------	----------	----------	-----	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chloride, Water	28.128		10.000000	19.339	87.9	80-120	
Fluoride (F), Water	1.6784		2.000000	0	83.9	80-120	
Sulfate (SO4), Water	9.7274		10.000000	0.3836	93.4	80-120	

MSD	Matrix Spike Duplicate	WCS34826	294323-28		04/27/2005	0840
-----	------------------------	----------	-----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Fluoride (F), Water	2.0736	2.0444	2.000000	0.4926	79.0	80-120	A
					1.8	20	
Bromide (Br), Water	13.322	13.761	10.000000	3.8286	94.9	80-120	
					4.5	20	
Sulfate (SO4), Water	16.663	17.006	10.000000	6.6262	100.4	80-120	
					3.3	20	
Nitrogen, Nitrate as N (NO3-N), Water	1.8314	1.8943	2.000000	0	91.6	80-120	
					3.3	20	
Nitrogen, Nitrite as N (NO2-N), Water	1.4963	1.5735	2.000000	0	74.8	80-120	A
					5.1	20	

Test Method.....: SW-846 7470A	Units.....: ug/L	Analyst....: dcl
Method Description.: Mercury (CVAA)	Batch(s)....: 127937	

CCB	Continuing Calibration Blank				04/26/2005	1543
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	-0.0082280						

CCB	Continuing Calibration Blank				04/26/2005	1601
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	-0.0088810						

CCB	Continuing Calibration Blank				04/26/2005	1621
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	-0.0000057						

CCB	Continuing Calibration Blank				04/26/2005	1635
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)	-0.0052241						

QUALITY CONTROL RESULTS								
Job Number.: 294556					Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company			PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time		
CCV	Continuing Calibration Verification	MSHGICV2			04/26/2005	1541		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		2.99501552		3.00		99.8	90.0-110.0	
CCV	Continuing Calibration Verification	MSHGICV2			04/26/2005	1559		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		2.96591536		3.00		98.9	90.0-110.0	
CCV	Continuing Calibration Verification	MSHGICV2			04/26/2005	1619		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		2.95307367		3.00		98.4	90.0-110.0	
CCV	Continuing Calibration Verification	MSHGICV2			04/26/2005	1632		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		2.94168117		3.00		98.1	90.0-110.0	
CRA	Contract Required Detection Limit	MSHGCRA			04/26/2005	1539		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		0.19147595		0.200		95.7	50.0-150.0	
EB	Extraction Blank		127890		04/26/2005	1549		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		0.28635948						
EB	Extraction Blank		127890		04/26/2005	1550		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		-0.0377146						
ICB	Initial Calibration Blank				04/26/2005	1537		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Mercury (Hg)		-0.0127892						

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
ICV	Initial Calibration Verification	MSHGICV2			04/26/2005	1535	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		3.01268495		3.00		100.4	95.0-105.0
LCS	Laboratory Control Sample	MSHGICV2	127890				04/26/2005 1546
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		2.95567223		3.00		98.5	90.0-110.0
MD	Method Duplicate		294466-1				04/26/2005 1603
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), TCLP		0.01461776	0.01035248		0.01035248	0.00426528	0.20000000
MD	Method Duplicate		294554-3				04/26/2005 1611
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), Water		0.00472784	0.00499040		0.00499040	0.00026256	0.20000000
MS	Matrix Spike	MSHGICV2	294466-1				04/26/2005 1605
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), TCLP		2.88412288		3.00	0.01035248	95.8	75-125
MS	Matrix Spike	MSHGICV2	294554-3				04/26/2005 1613
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), Water		2.77770904		3.00	0.00499040	92.4	75-125
MSD	Matrix Spike Duplicate	MSHGICV2	294466-1				04/26/2005 1607
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), TCLP		2.93650365	2.88412288	3.00	0.01035248	97.5 1.8	75-125 20
MSD	Matrix Spike Duplicate	MSHGICV2	294554-3				04/26/2005 1615
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), Water		2.75844706	2.77770904	3.00	0.00499040	91.8 0.7	75-125 20

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
PB	Prep. Blank		127890		04/26/2005	1545	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		-0.0188139					
PDS	Post-Digestion Spike	MSHGICV2	294554-3		04/26/2005	1628	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg), Water		3.28780415		3.00	0.00499040	109.4	75-125
S0	Calibration Blank				04/26/2005	1521	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		0					
S0.2	Calibration Standard				04/26/2005	1523	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		0					
S0.5	Calibration Standard				04/26/2005	1525	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		0					
S1.0	Calibration Standard				04/26/2005	1526	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		0					
S10.0	Calibration Standard				04/26/2005	1533	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		0					
S2.0	Calibration Standard				04/26/2005	1528	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Mercury (Hg)		0					

Job Number.: 294556		QUALITY CONTROL RESULTS				Report Date.: 05/02/2005	
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN				ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
SS:0	Calibration Standard				04/26/2005	1530	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F	
Mercury (Hg)		0					
SD	Serial Dilution		294554-3	5	04/26/2005	1631	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F	
Mercury (Hg), Water		-0.0035269			0.00499040		
Test Method.....: SW-846 6010B		Units.....: mg/L		Analyst....: drl			
Method Description.: Metals Analysis (ICAP Trace)		Batch(s)....: 128026 128049					
CCB	Continuing Calibration Blank				04/27/2005	1148	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F	
Arsenic (As)		0.00036					
Barium (Ba)		0.00029					
Cadmium (Cd)		0.00005					
Calcium (Ca)		0.01358					
Chromium (Cr)		0.00063					
Lead (Pb)		0.00092					
Magnesium (Mg)		-0.03074					
Selenium (Se)		-0.00063					
Silver (Ag)		-0.00024					
Sodium (Na)		0.02323					
CCB	Continuing Calibration Blank				04/27/2005	1235	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F	
Arsenic (As)		0.00106					
Barium (Ba)		-0.00007					
Cadmium (Cd)		-0.00079					
Calcium (Ca)		0.00461					
Chromium (Cr)		-0.00171					
Lead (Pb)		0.00043					
Magnesium (Mg)		-0.05086					
Selenium (Se)		0.00192					
Silver (Ag)		-0.00379					
Sodium (Na)		0.03057					
CCB	Continuing Calibration Blank				04/27/2005	1322	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result * Limits F	
Arsenic (As)		0.00242					
Barium (Ba)		0.00022					
Cadmium (Cd)		-0.00015					
Calcium (Ca)		0.00252					

Job Number.: 294556

QUALITY CONTROL RESULTS

Report Date.: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: MARATHON INDIAN BASIN

ATIN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
---------	-------------	------------	--------	-----------------	------	------

CCB	Continuing Calibration Blank				04/27/2005	1322
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Chromium (Cr)	0.00098						
Lead (Pb)	0.00043						
Magnesium (Mg)	-0.06608						
Selenium (Se)	-0.00147						
Silver (Ag)	-0.00141						
Sodium (Na)	0.02109						

CCB	Continuing Calibration Blank				04/27/2005	1409
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	-0.00053						
Barium (Ba)	0.00029						
Cadmium (Cd)	-0.00038						
Calcium (Ca)	0.00966						
Chromium (Cr)	-0.00023						
Lead (Pb)	0.00231						
Magnesium (Mg)	-0.03465						
Selenium (Se)	-0.00046						
Silver (Ag)	0.00057						
Sodium (Na)	0.02978						

CCB	Continuing Calibration Blank				04/27/2005	1456
-----	------------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.00151						
Barium (Ba)	0.00007						
Cadmium (Cd)	-0.00001						
Calcium (Ca)	-0.01014						
Chromium (Cr)	-0.00073						
Lead (Pb)	0.00107						
Magnesium (Mg)	-0.09931						
Selenium (Se)	-0.00167						
Silver (Ag)	-0.00196						
Sodium (Na)	0.09943						

CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1144
-----	-------------------------------------	------------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.50217		0.500		100.4	90.0-110.0	
Barium (Ba)	0.50670		0.500		101.3	90.0-110.0	
Cadmium (Cd)	0.50477		0.500		101.0	90.0-110.0	
Calcium (Ca)	12.87974		12.50		103.0	90.0-110.0	
Chromium (Cr)	0.50234		0.500		100.5	90.0-110.0	
Lead (Pb)	0.50374		0.500		100.7	90.0-110.0	
Magnesium (Mg)	4.92917		5.000		98.6	90.0-110.0	
Selenium (Se)	0.50519		0.500		101.0	90.0-110.0	
Silver (Ag)	0.24616		0.25		98.5	90.0-110.0	
Sodium (Na)	11.89671		12.50		95.2	90.0-110.0	

Job Number.: 294556		QUALITY CONTROL RESULTS			Report Date.: 05/02/2005	
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1231
-----	-------------------------------------	------------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.48880		0.500		97.8	90.0-110.0	
Barium (Ba)	0.49777		0.500		99.6	90.0-110.0	
Cadmium (Cd)	0.49021		0.500		98.0	90.0-110.0	
Calcium (Ca)	12.55159		12.50		100.4	90.0-110.0	
Chromium (Cr)	0.49124		0.500		98.2	90.0-110.0	
Lead (Pb)	0.48567		0.500		97.1	90.0-110.0	
Magnesium (Mg)	4.77337		5.000		95.5	90.0-110.0	
Selenium (Se)	0.49043		0.500		98.1	90.0-110.0	
Silver (Ag)	0.24148		0.25		96.6	90.0-110.0	
Sodium (Na)	11.72506		12.50		93.8	90.0-110.0	

CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1318
-----	-------------------------------------	------------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.48484		0.500		97.0	90.0-110.0	
Barium (Ba)	0.50124		0.500		100.2	90.0-110.0	
Cadmium (Cd)	0.48266		0.500		96.5	90.0-110.0	
Calcium (Ca)	12.28098		12.50		98.2	90.0-110.0	
Chromium (Cr)	0.48509		0.500		97.0	90.0-110.0	
Lead (Pb)	0.47889		0.500		95.8	90.0-110.0	
Magnesium (Mg)	4.66798		5.000		93.4	90.0-110.0	
Selenium (Se)	0.49109		0.500		98.2	90.0-110.0	
Silver (Ag)	0.24129		0.25		96.5	90.0-110.0	
Sodium (Na)	12.04018		12.50		96.3	90.0-110.0	

CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1405
-----	-------------------------------------	------------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.49082		0.500		98.2	90.0-110.0	
Barium (Ba)	0.49990		0.500		100.0	90.0-110.0	
Cadmium (Cd)	0.48641		0.500		97.3	90.0-110.0	
Calcium (Ca)	12.41197		12.50		99.3	90.0-110.0	
Chromium (Cr)	0.48613		0.500		97.2	90.0-110.0	
Lead (Pb)	0.48078		0.500		96.2	90.0-110.0	
Magnesium (Mg)	4.72607		5.000		94.5	90.0-110.0	
Selenium (Se)	0.49435		0.500		98.9	90.0-110.0	
Silver (Ag)	0.24095		0.25		96.4	90.0-110.0	
Sodium (Na)	11.92637		12.50		95.4	90.0-110.0	

CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1452
-----	-------------------------------------	------------	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.47243		0.500		94.5	90.0-110.0	
Barium (Ba)	0.49581		0.500		99.2	90.0-110.0	
Cadmium (Cd)	0.46915		0.500		93.8	90.0-110.0	
Calcium (Ca)	11.98950		12.50		95.9	90.0-110.0	
Chromium (Cr)	0.47757		0.500		95.5	90.0-110.0	
Lead (Pb)	0.46682		0.500		93.4	90.0-110.0	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1452	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Magnesium (Mg)	4.57712		5.000		91.5	90.0-110.0	
Selenium (Se)	0.48393		0.500		96.8	90.0-110.0	
Silver (Ag)	0.23980		0.25		95.9	90.0-110.0	
Sodium (Na)	12.11495		12.50		96.9	90.0-110.0	
CH1	Calibration check standard 1	MS041305T1				04/27/2005	1128
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.01110		0.0100		111.0	50.0-150.0	
Barium (Ba)	0.01004		0.0100		100.4	50.0-150.0	
Cadmium (Cd)	0.00461		0.00500		92.2	50.0-150.0	
Calcium (Ca)	0.10238		0.1000		102.4	50.0-150.0	
Chromium (Cr)	0.00973		0.0100		97.3	50.0-150.0	
Lead (Pb)	0.01243		0.0100		124.3	50.0-150.0	
Magnesium (Mg)	0.09233		0.1000		92.3	50.0-150.0	
Selenium (Se)	0.00967		0.0100		96.7	50.0-150.0	
Silver (Ag)	0.00400		0.00500		80.0	50.0-150.0	
Sodium (Na)	0.54266		0.60000		90.4	50.0-150.0	
CH3	Standard Check for ICAP	MS042005T3				04/27/2005	1116
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	1.99537		2.00		99.8	95.0-105.0	
Barium (Ba)	2.00669		2.00		100.3	95.0-105.0	
Cadmium (Cd)	0.99348		1.00		99.3	95.0-105.0	
Calcium (Ca)	19.81324		20.00		99.1	95.0-105.0	
Chromium (Cr)	1.98272		2.00		99.1	95.0-105.0	
Lead (Pb)	1.98524		2.00		99.3	95.0-105.0	
Magnesium (Mg)	19.80281		20.00		99.0	95.0-105.0	
Selenium (Se)	2.00744		2.00		100.4	95.0-105.0	
Silver (Ag)	0.99944		1.00		99.9	95.0-105.0	
Sodium (Na)	20.23323		20.00		101.2	95.0-105.0	
CRI	Contract Required Detection Limits	MS042205CR				04/27/2005	1132
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.02036		0.0200		101.8	50.0-150.0	
Cadmium (Cd)	0.00971		0.010		97.1	50.0-150.0	
Chromium (Cr)	0.01871		0.0200		93.5	50.0-150.0	
Lead (Pb)	0.00606		0.0060		101.0	50.0-150.0	
Selenium (Se)	0.00933		0.010		93.3	50.0-150.0	
Silver (Ag)	0.01759		0.0200		88.0	50.0-150.0	

Job Number.: 294556

QUALITY CONTROL RESULTS

Report Date.: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: MARATHON INDIAN BASIN

ATTN:

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
---------	-------------	------------	--------	-----------------	------	------

EB	Extraction Blank		127878-3		04/27/2005	1329
----	------------------	--	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), SPLP	0.00137						
Barium (Ba), SPLP	0.00043						
Cadmium (Cd), SPLP	0.00007						
Calcium (Ca), SPLP	0.10040						
Chromium (Cr), SPLP	-0.00000						
Lead (Pb), SPLP	-0.00168						
Magnesium (Mg), SPLP	-0.08228						
Selenium (Se), SPLP	0.00001						
Silver (Ag), SPLP	-0.00116						

EB	Extraction Blank		127863-1		04/27/2005	1353
----	------------------	--	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), TCLP	0.00183						
Barium (Ba), TCLP	0.00142						
Cadmium (Cd), TCLP	-0.00016						
Calcium (Ca), TCLP	-0.03457						
Chromium (Cr), TCLP	-0.00060						
Lead (Pb), TCLP	-0.00181						
Selenium (Se), TCLP	-0.00059						
Silver (Ag), TCLP	-0.00004						

EB	Extraction Blank		127863-4		04/27/2005	1357
----	------------------	--	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), TCLP	0.00108						
Barium (Ba), TCLP	0.00021						
Cadmium (Cd), TCLP	-0.00020						
Calcium (Ca), TCLP	0.00028						
Chromium (Cr), TCLP	0.00004						
Lead (Pb), TCLP	0.00157						
Magnesium (Mg), TCLP	-0.07628						
Selenium (Se), TCLP	-0.00133						
Silver (Ag), TCLP	-0.00023						

ICB	Initial Calibration Blank				04/27/2005	1124
-----	---------------------------	--	--	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.00159						
Barium (Ba)	-0.00007						
Cadmium (Cd)	-0.00001						
Calcium (Ca)	-0.00063						
Chromium (Cr)	-0.00000						
Lead (Pb)	-0.00002						
Magnesium (Mg)	-0.02351						
Selenium (Se)	0.00191						
Silver (Ag)	-0.00135						
Sodium (Na)	0.00107						

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
ICV	Initial Calibration Verification	MS042005CC			04/27/2005	1120	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.48528		0.500		97.1	95.0-105.0	
Barium (Ba)	0.49847		0.500		99.7	95.0-105.0	
Cadmium (Cd)	0.49189		0.500		98.4	95.0-105.0	
Calcium (Ca)	12.56966		12.50		100.6	95.0-105.0	
Chromium (Cr)	0.48913		0.500		97.8	95.0-105.0	
Lead (Pb)	0.48616		0.500		97.2	95.0-105.0	
Magnesium (Mg)	4.77284		5.000		95.5	95.0-105.0	
Selenium (Se)	0.48712		0.500		97.4	95.0-105.0	
Silver (Ag)	0.24005		0.25		96.0	95.0-105.0	
Sodium (Na)	11.80158		12.50		94.4	95.0-105.0	G
ISA	Interference Check Sample A	MS041305IA				04/27/2005	1136
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.00445		0.0				
Barium (Ba)	0.00212		0.0				
Cadmium (Cd)	0.00196		0.0				
Calcium (Ca)	502.06945		500.0		100.4	80-120	
Chromium (Cr)	0.00343		0.0				
Lead (Pb)	0.00501		0.0				
Magnesium (Mg)	550.70532		500.0		110.1	80-120	
Selenium (Se)	0.01841		0.0				
Silver (Ag)	-0.00031		0.0				
ISB	Interference Check Sample B	MS041305IB				04/27/2005	1140
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.98578		1.00		98.6	80.0-120.0	
Barium (Ba)	1.06533		1.00		106.5	80.0-120.0	
Cadmium (Cd)	0.49484		0.500		99.0	80.0-120.0	
Calcium (Ca)	516.29870		510.0		101.2	80.0-120.0	
Chromium (Cr)	1.02843		1.00		102.8	80.0-120.0	
Lead (Pb)	1.03569		1.00		103.6	80.0-120.0	
Magnesium (Mg)	564.99353		510.0		110.8	80.0-120.0	
Selenium (Se)	0.99844		1.00		99.8	80.0-120.0	
Silver (Ag)	0.56447		0.500		112.9	80.0-120.0	
LCS	Laboratory Control Sample	MSPIKE3	127944			04/27/2005	1155
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	0.98420		1.00		98.4	85.0-115.0	
Barium (Ba)	0.97544		1.00		97.5	85.0-115.0	
Cadmium (Cd)	0.48793		0.500		97.6	85.0-115.0	
Calcium (Ca)	9.68419		10.00		96.8	85.0-115.0	
Chromium (Cr)	0.96606		1.00		96.6	85.0-115.0	
Lead (Pb)	0.97679		1.00		97.7	85.0-115.0	
Magnesium (Mg)	9.51307		10.00		95.1	85.0-115.0	
Selenium (Se)	0.98533		1.00		98.5	85.0-115.0	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
LCS	Laboratory Control Sample	MSPIKE3	127944		04/27/2005	1155	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Silver (Ag)	0.48282		0.500		96.6	85.0-115.0	
Sodium (Na)	9.51325		10.00		95.1	85.0-115.0	
MD	Method Duplicate		294556-1			04/27/2005	1207
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	0.00081	0.00049		0.00049	0.00032	0.02000	
Barium (Ba), Water	0.02729	0.02662		0.02662	0.00067	0.02000	
Cadmium (Cd), Water	0.00013	-0.00035		-0.00035	0.00048	0.00500	
Calcium (Ca), Water	105.46829	101.29122		101.29122	4.0	20	
Chromium (Cr), Water	0.00161	0.00005		0.00005	0.00156	0.01000	
Lead (Pb), Water	-0.00144	0.00018		0.00018	0.00162	0.01000	
Magnesium (Mg), Water	40.26901	38.93759		38.93759	3.4	20	
Selenium (Se), Water	0.00007	0.00093		0.00093	0.00086	0.04000	
Silver (Ag), Water	-0.00082	-0.00099		-0.00099	0.00017	0.01000	
Sodium (Na), Water	14.41111	14.19970		14.19970	1.5	20	
MD	Method Duplicate		294603-1			04/27/2005	1250
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	0.00445	0.00330		0.00330	0.00115	0.02000	
Barium (Ba), Water	0.06017	0.05810		0.05810	0.00207	0.02000	
Cadmium (Cd), Water	-0.00019	-0.00006		-0.00006	0.00013	0.00500	
Calcium (Ca), Water	59.45545	57.52993		57.52993	3.3	20	
Chromium (Cr), Water	0.00336	0.00154		0.00154	0.00182	0.01000	
Lead (Pb), Water	0.00257	0.00350		0.00350	0.00093	0.01000	
Magnesium (Mg), Water	4.12176	3.98957		3.98957	0.13219	2.00000	
Selenium (Se), Water	0.00068	0.00092		0.00092	0.00024	0.04000	
Silver (Ag), Water	-0.00059	-0.00063		-0.00063	0.00004	0.01000	
MD	Method Duplicate		294104-3			04/27/2005	1337
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), SPLP	0.02492	0.02675		0.02675	0.00183	0.02000	
Barium (Ba), SPLP	0.90732	0.91523		0.91523	0.9	20	
Cadmium (Cd), SPLP	-0.00020	0.00005		0.00005	0.00025	0.00500	
Calcium (Ca), SPLP	39.52930	39.12049		39.12049	1.0	20	
Chromium (Cr), SPLP	0.16437	0.17040		0.17040	3.6	20	
Lead (Pb), SPLP	0.17578	0.17218		0.17218	2.1	20	
Magnesium (Mg), SPLP	41.73294	41.80142		41.80142	0.2	20	
Selenium (Se), SPLP	0.01398	0.01146		0.01146	0.00252	0.04000	
Silver (Ag), SPLP	-0.00077	-0.00032		-0.00032	0.00045	0.01000	

QUALITY CONTROL RESULTS						
Job Number.: 294556			Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

MD	Method Duplicate		294104-3		04/27/2005	1349
----	------------------	--	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), SPLP	0.02186			0.02675	0.00489	0.02000	
Barium (Ba), SPLP	0.91952			0.91523	0.5	20	
Cadmium (Cd), SPLP	-0.00039			0.00005	0.00044	0.00500	
Calcium (Ca), SPLP	39.57562			39.12049	1.2	20	
Chromium (Cr), SPLP	0.17385			0.17040	2.0	20	
Lead (Pb), SPLP	0.17333			0.17218	0.7	20	
Magnesium (Mg), SPLP	42.28850			41.80142	1.2	20	
Selenium (Se), SPLP	0.01276			0.01146	0.00130	0.04000	
Silver (Ag), SPLP	-0.00104			-0.00032	0.00072	0.01000	

MD	Method Duplicate		294463-1		04/27/2005	1424
----	------------------	--	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), TCLP	0.00824	0.00618		0.00618	0.00206	0.02000	
Barium (Ba), TCLP	0.40395	0.40309		0.40309	0.2	20	
Cadmium (Cd), TCLP	-0.00018	0.00027		0.00027	0.00045	0.00500	
Calcium (Ca), TCLP	27.75025	27.74774		27.74774	0.0	20	
Chromium (Cr), TCLP	0.35976	0.35949		0.35949	0.1	20	
Lead (Pb), TCLP	0.03292	0.03211		0.03211	0.00081	0.01000	
Magnesium (Mg), TCLP	12.29477	12.31621		12.31621	0.2	20	
Selenium (Se), TCLP	0.00465	0.00309		0.00309	0.00156	0.04000	
Silver (Ag), TCLP	-0.00051	-0.00167		-0.00167	0.00116	0.01000	

MS	Matrix Spike	MSPIKE3	294556-1		04/27/2005	1211
----	--------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	0.98500		1.00	0.00049	98.5	75-125	
Barium (Ba), Water	1.02389		1.00	0.02662	99.7	75-125	
Cadmium (Cd), Water	0.48090		0.500	-0.00035	96.2	75-125	
Calcium (Ca), Water	110.74433		10.00	101.29122	94.5	75-125	
Chromium (Cr), Water	0.97135		1.00	0.00005	97.1	75-125	
Lead (Pb), Water	0.97590		1.00	0.00018	97.6	75-125	
Magnesium (Mg), Water	49.08692		10.00	38.93759	101.5	75-125	
Selenium (Se), Water	0.99290		1.00	0.00093	99.2	75-125	
Silver (Ag), Water	0.44365		0.500	-0.00099	88.9	75-125	
Sodium (Na), Water	24.85192		10.00	14.19970	106.5	75-125	

MS	Matrix Spike	MSPIKE3	294603-1		04/27/2005	1254
----	--------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	1.02022		1.00	0.00330	101.7	75-125	
Barium (Ba), Water	1.07696		1.00	0.05810	101.9	75-125	
Cadmium (Cd), Water	0.49909		0.500	-0.00006	99.8	75-125	
Calcium (Ca), Water	71.25081		10.00	57.52993	137.2	75-125	
Chromium (Cr), Water	1.00858		1.00	0.00154	100.7	75-125	
Lead (Pb), Water	1.01295		1.00	0.00350	100.9	75-125	
Magnesium (Mg), Water	14.38228		10.00	3.98957	103.9	75-125	
Selenium (Se), Water	1.02572		1.00	0.00092	102.5	75-125	

QUALITY CONTROL RESULTS						
Job Number.: 294556			Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time

MS	Matrix Spike	MSPIKE3	294603-1		04/27/2005	1254
----	--------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Silver (Ag), Water	0.45225		0.500	-0.00063	90.6	75-125	

MS	Matrix Spike	MSPIKE3	294104-3		04/27/2005	1341
----	--------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), SPLP	0.97253		1.00	0.02675	94.6	75-125	
Barium (Ba), SPLP	1.93829		1.00	0.91523	102.3	75-125	
Cadmium (Cd), SPLP	0.47450		0.500	0.00005	94.9	75-125	
Calcium (Ca), SPLP	49.04092		10.00	39.12049	99.2	75-125	
Chromium (Cr), SPLP	1.14386		1.00	0.17040	97.3	75-125	
Lead (Pb), SPLP	1.13575		1.00	0.17218	96.4	75-125	
Magnesium (Mg), SPLP	52.86661		10.00	41.80142	110.7	75-125	
Selenium (Se), SPLP	0.98844		1.00	0.01146	97.7	75-125	
Silver (Ag), SPLP	0.50109		0.500	-0.00032	100.3	75-125	

MS	Matrix Spike	MSPIKE3	294463-1		04/27/2005	1428
----	--------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), TCLP	0.96370		1.00	0.00618	95.8	75-125	
Barium (Ba), TCLP	1.48927		1.00	0.40309	108.6	75-125	
Cadmium (Cd), TCLP	0.47925		0.500	0.00027	95.8	75-125	
Calcium (Ca), TCLP	38.52567		10.00	27.74774	107.8	75-125	
Chromium (Cr), TCLP	1.39773		1.00	0.35949	103.8	75-125	
Lead (Pb), TCLP	1.05374		1.00	0.03211	102.2	75-125	
Magnesium (Mg), TCLP	23.93666		10.00	12.31621	116.2	75-125	
Selenium (Se), TCLP	0.99940		1.00	0.00309	99.6	75-125	
Silver (Ag), TCLP	0.58084		0.500	-0.00167	116.5	75-125	

MSD	Matrix Spike Duplicate	MSPIKE3	294556-1		04/27/2005	1215
-----	------------------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	1.01869	0.98500	1.00	0.00049	101.8	75-125	
					3.3	20	
Barium (Ba), Water	1.03310	1.02389	1.00	0.02662	100.6	75-125	
					0.9	20	
Cadmium (Cd), Water	0.49302	0.48090	0.500	-0.00035	98.7	75-125	
					2.6	20	
Calcium (Ca), Water	113.59703	110.74433	10.00	101.29122	123.1	75-125	
					26.3	20	
Chromium (Cr), Water	0.99238	0.97135	1.00	0.00005	99.2	75-125	
					2.1	20	
Lead (Pb), Water	1.00282	0.97590	1.00	0.00018	100.3	75-125	
					2.7	20	
Magnesium (Mg), Water	49.96289	49.08692	10.00	38.93759	110.3	75-125	
					8.3	20	
Selenium (Se), Water	1.03846	0.99290	1.00	0.00093	103.8	75-125	
					4.5	20	
Silver (Ag), Water	0.39422	0.44365	0.500	-0.00099	79.0	75-125	
					11.8	20	

Job Number.: 294556	QUALITY CONTROL RESULTS	Report Date.: 05/02/2005
---------------------	-------------------------	--------------------------

CUSTOMER: Marathon Oil Company	PROJECT: MARATHON INDIAN BASIN	ATTN:
--------------------------------	--------------------------------	-------

QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time
---------	-------------	------------	--------	-----------------	------	------

MSD	Matrix Spike Duplicate	MSPIKE3	294556-1		04/27/2005	1215
-----	------------------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Sodium (Na), Water	24.60279	24.85192	10.00	14.19970	104.0 2.4	75-125 20	

MSD	Matrix Spike Duplicate	MSPIKE3	294603-1		04/27/2005	1258
-----	------------------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	1.01324	1.02022	1.00	0.00330	101.0 0.7	75-125 20	
Barium (Ba), Water	1.07810	1.07696	1.00	0.05810	102.0 0.1	75-125 20	
Cadmium (Cd), Water	0.49781	0.49909	0.500	-0.00006	99.6 0.2	75-125 20	
Calcium (Ca), Water	71.67671	71.25081	10.00	57.52993	141.5 3.1	75-125 20	
Chromium (Cr), Water	1.00847	1.00858	1.00	0.00154	100.7 0.0	75-125 20	
Lead (Pb), Water	1.00629	1.01295	1.00	0.00350	100.3 0.6	75-125 20	
Magnesium (Mg), Water	14.37306	14.38228	10.00	3.98957	103.8 0.1	75-125 20	
Selenium (Se), Water	1.01736	1.02572	1.00	0.00092	101.6 0.9	75-125 20	
Silver (Ag), Water	0.45955	0.45225	0.500	-0.00063	92.0 1.5	75-125 20	

MSD	Matrix Spike Duplicate	MSPIKE3	294104-3		04/27/2005	1345
-----	------------------------	---------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), SPLP	0.96137	0.97253	1.00	0.02675	93.5 1.2	75-125 20	
Barium (Ba), SPLP	1.91046	1.93829	1.00	0.91523	99.5 2.8	75-125 20	
Cadmium (Cd), SPLP	0.46313	0.47450	0.500	0.00005	92.6 2.5	75-125 20	
Calcium (Ca), SPLP	47.94961	49.04092	10.00	39.12049	88.3 11.6	75-125 20	
Chromium (Cr), SPLP	1.12229	1.14386	1.00	0.17040	95.2 2.2	75-125 20	
Lead (Pb), SPLP	1.11688	1.13575	1.00	0.17218	94.5 2.0	75-125 20	
Magnesium (Mg), SPLP	51.80736	52.86661	10.00	41.80142	100.1 10.1	75-125 20	
Selenium (Se), SPLP	0.98040	0.98844	1.00	0.01146	96.9 0.8	75-125 20	
Silver (Ag), SPLP	0.49826	0.50109	0.500	-0.00032	99.7 0.6	75-125 20	

Job Number.: 294556			QUALITY CONTROL RESULTS			Report Date.: 05/02/2005	
CUSTOMER: Marathon Oil Company			PROJECT: MARATHON INDIAN BASIN			ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	

MSD	Matrix Spike Duplicate	MSPIKE3	294463-1		04/27/2005	1432	
-----	------------------------	---------	----------	--	------------	------	--

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), TCLP	0.95877	0.96370	1.00	0.00618	95.3 0.5		75-125 20	
Barium (Ba), TCLP	1.48571	1.48927	1.00	0.40309	108.3 0.3		75-125 20	
Cadmium (Cd), TCLP	0.46873	0.47925	0.500	0.00027	93.7 2.2		75-125 20	
Calcium (Ca), TCLP	37.44675	38.52567	10.00	27.74774	97.0 10.5		75-125 20	
Chromium (Cr), TCLP	1.35940	1.39773	1.00	0.35949	100.0 3.7		75-125 20	
Lead (Pb), TCLP	1.03756	1.05374	1.00	0.03211	100.5 1.7		75-125 20	
Magnesium (Mg), TCLP	23.53486	23.93666	10.00	12.31621	112.2 3.5		75-125 20	
Selenium (Se), TCLP	0.99662	0.99940	1.00	0.00309	99.4 0.2		75-125 20	
Silver (Ag), TCLP	0.57313	0.58084	0.500	-0.00167	115.0 1.3		75-125 20	

PB	Prep. Blank		127944		04/27/2005	1152	
----	-------------	--	--------	--	------------	------	--

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As)	0.00083							
Barium (Ba)	-0.00021							
Cadmium (Cd)	-0.00033							
Calcium (Ca)	0.00248							
Chromium (Cr)	-0.00240							
Lead (Pb)	-0.00004							
Magnesium (Mg)	-0.03531							
Selenium (Se)	0.00040							
Silver (Ag)	-0.00111							
Sodium (Na)	0.00087							

PDS	Post Digestion Spike	MSPIKE3	294556-1		04/27/2005	1444	
-----	----------------------	---------	----------	--	------------	------	--

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Arsenic (As), Water	0.97422		1.00	0.00049	97.4		75-125	
Barium (Ba), Water	1.02360		1.00	0.02662	99.7		75-125	
Cadmium (Cd), Water	0.47247		0.500	-0.00035	94.6		75-125	
Calcium (Ca), Water	113.70074		10.00	101.29122	124.1		75-125	
Chromium (Cr), Water	0.96656		1.00	0.00005	96.7		75-125	
Lead (Pb), Water	0.95899		1.00	0.00018	95.9		75-125	
Magnesium (Mg), Water	50.82105		10.00	38.93759	118.8		75-125	
Selenium (Se), Water	1.00128		1.00	0.00093	100.0		75-125	
Silver (Ag), Water	0.47458		0.500	-0.00099	95.1		75-125	

QUALITY CONTROL RESULTS							
Job Number.: 294556				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
S0	Calibration Blank				04/27/2005	1054	
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	-0.00185						
Barium (Ba)	-0.00000						
Cadmium (Cd)	-0.01192						
Calcium (Ca)	0.01041						
Chromium (Cr)	0.00004						
Lead (Pb)	0.00044						
Magnesium (Mg)	0.05612						
Selenium (Se)	0.00032						
Silver (Ag)	-0.00753						
Sodium (Na)	0.04067						
SD	Serial Dilution		294556-1	5		04/27/2005	1448
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As), Water	0.00089			0.00049			
Barium (Ba), Water	0.00542			0.02662	1.8		
Cadmium (Cd), Water	-0.00024			-0.00035			
Calcium (Ca), Water	20.54977			101.29122	1.4	10.0	
Chromium (Cr), Water	0.00149			0.00005			
Lead (Pb), Water	0.00130			0.00018			
Magnesium (Mg), Water	7.78101			38.93759	0.1	10.0	
Selenium (Se), Water	-0.00068			0.00093			
Silver (Ag), Water	-0.00014			-0.00099			
STD	Spiked Blank Duplicate					04/27/2005	1058
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Arsenic (As)	5.59359						
Barium (Ba)	0.63692						
Cadmium (Cd)	25.06670						
Calcium (Ca)	0.50735						
Chromium (Cr)	0.80424						
Magnesium (Mg)	0.78423						
Silver (Ag)	0.63098						
Sodium (Na)	3.60960						
CCB	Continuing Calibration Blank					04/27/2005	0853
Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Potassium (K)	0.11401						

Job Number.: 294556		QUALITY CONTROL RESULTS				Report Date.: 05/02/2005	
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time	
CCB	Continuing Calibration Blank				04/27/2005	1020	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.21676					
CCB	Continuing Calibration Blank				04/27/2005	1104	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.19229					
CCB	Continuing Calibration Blank				04/27/2005	1130	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.22178					
CCB	Continuing Calibration Blank				04/27/2005	1422	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.04229					
CCB	Continuing Calibration Blank				04/27/2005	1436	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.07700					
CCB	Continuing Calibration Blank				04/27/2005	1715	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.05764					
CCB	Continuing Calibration Blank				04/27/2005	1729	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		0.16041					
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	0850	
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits F
Potassium (K)		11.47125		12.50		91.8	90.0-110.0

Job Number.: 294556		QUALITY CONTROL RESULTS				Report Date.: 05/02/2005			
CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN				ATTN:			
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time			
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1017			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		11.78387		12.50		94.3	90.0-110.0		
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1101			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		11.77538		12.50		94.2	90.0-110.0		
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1126			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		11.62293		12.50		93.0	90.0-110.0		
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1418			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		11.86043		12.50		94.9	90.0-110.0		
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1433			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		11.87229		12.50		95.0	90.0-110.0		
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1711			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		12.05736		12.50		96.5	90.0-110.0		
CCV	Continuing Calibration Verification	MS042005CC			04/27/2005	1726			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		12.03705		12.50		96.3	90.0-110.0		
CH1	Calibration check standard 1	MS041305T1			04/27/2005	0835			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F	
Potassium (K)		9.71239		0.60000		118.7	50.0-150.0		

QUALITY CONTROL RESULTS									
Job Number.: 294556					Report Date.: 05/02/2005				
CUSTOMER: Marathon Oil Company			PROJECT: MARATHON INDIAN BASIN			ATTN:			
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time			
CH3	Standard check for ICAP	MS042005T3			04/27/2005	0824			
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K)		19.98532		20.00		99.9		95.0-105.0	
ICB	Initial Calibration Blank					04/27/2005	0831		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K)		0.15504							
ICV	Initial Calibration Verification	MS042005CC				04/27/2005	0828		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K)		11.85329		12.50		94.8		95.0-105.0	G
LCS	Laboratory Control Sample	MSPIKE3	127944			04/27/2005	1638		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K)		9.89684		10.00		99.0		85.0-115.0	
MD	Method Duplicate		294556-1			04/27/2005	1645		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Water		1.66969	1.74428		1.74428	0.07459		2.00000	
MS	Matrix Spike	MSPIKE3	294556-1			04/27/2005	1649		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Water		12.68423		10.00	1.74428	109.4		75-125	
MSD	Matrix Spike Duplicate	MSPIKE3	294556-1			04/27/2005	1653		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K), Water		13.32284	12.68423	10.00	1.74428	115.8 5.7		75-125 20	
PB	Prep. Blank		127944			04/27/2005	1634		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	*	Limits	F
Potassium (K)		0.01294							

Job Number.: 294556			QUALITY CONTROL RESULTS			Report Date.: 05/02/2005		
CUSTOMER: Marathon Oil Company			PROJECT: MARATHON INDIAN BASIN			ATTN:		
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date	Time		
PDS	Post Digestion Spike	MSPIKE3	294556-1		04/27/2005	1700		
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Potassium (K), Water		13.01039		10.00	1.74428	112.7	75-125	
S0	Calibration Blank						04/27/2005	0752
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Potassium (K)		0.52842						
SD	Serial Dilution			294556-1	5		04/27/2005	1704
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Potassium (K), Water		0.30080			1.74428	13.8		
STD	Spiked Blank Duplicate						04/27/2005	0800
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Potassium (K)		3.62765						
Test Method.....: SW-846 8260B				Units.....: ug/L		Analyst....: ydy		
Method Description.: Volatile Organics				Batch(s) ...: 128239				
LCS	Laboratory Control Sample	VS040405E					04/29/2005	1045
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water		45.5706		50.00	ND	91.1	68-127	
Ethylbenzene, Water		41.9177		50.00	ND	83.8	64-132	
Toluene, Water		41.2348		50.00	ND	82.5	63-127	
Xylenes (total), Water		126.948		150.0	ND	84.6	37-161	
MB	Method Blank	VS041805C					04/29/2005	1217
Parameter/Test Description		QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water		ND						
Ethylbenzene, Water		ND						
Toluene, Water		ND						
Xylenes (total), Water		ND						

Job Number.: 294556	QUALITY CONTROL RESULTS	Report Date.: 05/02/2005
---------------------	-------------------------	--------------------------

CUSTOMER: Marathon Oil Company		PROJECT: MARATHON INDIAN BASIN		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

MS	Matrix Spike	VS041805E	294655-4		04/29/2005	1432
----	--------------	-----------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water	51.3357		50.00	ND	103	65-125	
Ethylbenzene, Water	46.4118		50.00	ND	93	60-140	
Toluene, Water	45.6476		50.00	ND	91	76-125	
Xylenes (total), Water	139.518		150.0	ND	93	60-140	

MSD	Matrix Spike Duplicate	VS041805E	294655-4		04/29/2005	1459
-----	------------------------	-----------	----------	--	------------	------

Parameter/Test Description	QC Result	QC Result	True Value	Orig. Value	Calc. Result	* Limits	F
Benzene, Water	50.3013	51.3357	50.00	ND	101	65-125	
					2.0	30.0	
Ethylbenzene, Water	45.3941	46.4118	50.00	ND	91	60-140	
					2.2	30.0	
Toluene, Water	45.2952	45.6476	50.00	ND	91	76-125	
					0.8	30.0	
Xylenes (total), Water	141.261	139.518	150.0	ND	94	60-140	
					1.2	30.0	

SURROGATE RECOVERIES REPORT

Job Number.: 294556

Report Date.: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: MARATHON INDIAN BASIN

ATTN: Vijay Kurki

Method.....: Volatile Organics
Batch(s).....: 128239

Method Code...: 8260
Test Matrix...: Water

Prep Batch.....
Equipment Code: GCMSVOA04

Lab ID	DT	Sample ID	Date	12DCED	BRFLBE	DBRFLM	TOLD8
128239--21	LCS		04/29/2005	75.1	78.7	78.5	80.5
128239--21	MB		04/29/2005	90.4	107.9	92.5	100.7
294556- 1		SW-1	04/29/2005	91.9	102.2	94.7	103.0
294556- 2		SW-3	04/29/2005	84.1	94.0	90.8	89.0
294655- 4	MS	FGOR-Outlet	04/29/2005	86.4	103.3	96.6	103.3
294655- 4	MSD	FGOR-Outlet	04/29/2005	86.1	102.8	95.2	104.0

Test	Test Description	Limits
12DCED	1,2-Dichloroethane-d4	70 - 130
BRFLBE	4-Bromofluorobenzene	70 - 130
DBRFLM	Dibromofluoromethane	70 - 130
TOLD8	Toluene-d8	70 - 130

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/02/2005

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 3) According to 40CFR Part 136.3, pH, Chlorine Residual, and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.
- 4) For all USACE projects, the QC limits are based on "mean +/- 2 sigma", which are the warning limits.

General Information:

- Cresylic Acid is the combination of o,m and p-Cresol. The combination is reported as the final result.
- m-Cresol and p-Cresol co-elute. The result of the two is reported as either m&p-cresol or as p-cresol.
- m-Xylene and p-Xylene co-elute. The result of the two is reported as m,p-Xylene.
- N-Nitrosodiphenylamine decomposes in the gas chromatograph inlet forming dipheylamine and, consequently, may be detected as diphenylamine.
- Methylene Chloride and Acetone are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- Trimethylsilyl (Diazomethane) is used to esterify acid herbicides in Method SW-846 8151A.
- For Inorganic analyses, duplicate QC limits are determined as follows: If the sample result is less than or equal to 5 times the reporting limit, the RPD limit is equal to the reporting limit. If the sample result is greater than 5 times the reporting limit, the RPD limit is the method defined RPD.

Explanation of Qualifiers:

- U - This qualifier indicates that the analyte was analyzed but not detected.
- J - (Organics only) This qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- B - (Inorganics only) This Qualifier indicates that the analyte is an estimated value between the RL and the MDL.
- N - (Organics only) This flag indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as "chlorinated hydrocarbon", the "N" flag is not used.

Explanation of General QC Outliers:

- A - Matrix interference present in sample.
- a - MS/MSD analyses yielded comparable poor recoveries, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
- b - Target analyte was found in the method blank.
- M - QC sample analysis yielded recoveries outside QC acceptance criteria. This sample was reanalyzed.
- L - LCS analysis yielded high recoveries, indicating a potential high bias. No target analytes were observed above the RL in the associated samples.
- G - Marginal outlier within 1% of acceptance criteria.
- r - RPD value is outside method acceptance criteria.
- C - Poor RPD values observed due to the non-homogenous nature of the sample.
- O - Sample required dilution due to matrix interference.
- D - Sample reported from a dilution.
- d - Spike and/or surrogate diluted.
- P - The recovery of this analyte is outside default QC limits. The data is accepted and will be used to calculate in-house statistical limits.
- E - The reported concentration exceeds the instrument calibration.
- F - The analyte is outside QC limits. The sample data is accepted since this analyte is not reported in associated samples.
- H - Continuing Calibration Verification (CCV) standard is not associated with the samples reported.
- q - See the subcontract final report for qualifier explanation.

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/02/2005

- W - The MS/MSD recoveries are outside QC acceptance criteria because the amount spiked is much less than the amount found in the sample.
- K - High recovery will not affect the quality of reported results.
- Z - See case narrative.

Explanation of Organic QC Outliers:

- e - Method blank analysis yielded phthalate concentrations above the RL. Phthalates are recognized potential laboratory contaminants. Its presence in the sample up to five times the amount reported in the blank may be attributed to laboratory contamination.
- S - Sample reanalyzed/reextracted due to poor surrogate recovery. Reanalysis confirmed original analysis indicating a possible matrix interference.
- T - Sample analysis yielded poor surrogate recovery.
- R - The RPD between the two GC columns is greater than 40% and no anomalies are present. The higher result is reported as per EPA Method 8000B.
- I - The RPD between the two GC columns is greater than 40% and anomalies are present. The lower of the two results has been reported.
- X - Gaseous compound. In-house QC limits are advisory.
- Y - Ketone compounds have poor purge efficiency. In-house QC limits are advisory.
- f - Surrogate not associated with reported analytes.

Explanation of Inorganic QC Outliers:

- Q - Method blank analysis yielded target analytes above the RL. Associated sample results are greater than 10 times the concentrations observed in the method blank.
- V - The RPD control limit for sample results less than 5 times the RL is +/- the RL value. Sample and duplicate results are within method acceptance criteria.
- e - Serial dilution failed due to matrix interference.
- g - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is greater than or equal to 0.995.
- s - BOD/cBOD seed value is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
- l - BOD/cBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
- N - Spiked sample recovery is not within control limits.
- n - Sample result quantitated by Method of Standard Additions (MSA) due to the analytical spike recovery being below 85 percent. The correlation coefficient for the MSA is less than 0.995.
- * - Duplicate analysis is not within control limits.

Abbreviations:

- Batch - Designation given to identify a specific extraction, digestion, preparation, or analysis set.
- CCV - Continuing Calibration Verification
- CRA - Low level standard check - GFAA, Mercury
- CRI - Low level standard check - ICP
- Dil Fac - Dilution Factor - Secondary dilution analysis
- DLFac - Detection Limit Factor
- DU - Duplicate
- EB - Extraction Blank (TCLP, SPLP, etc.)
- ICAL - Initial Calibration
- ICB - Initial Calibration Blank
- ICV - Initial Calibration Verification
- ISA - Interference Check Sample A - ICP
- ISB - Interference Check Sample B - ICP
- LCD - Laboratory Control Duplicate
- LCS - Laboratory Control Sample
- MB - Method Blank

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 05/02/2005

MD - Method Duplicate
MDL - Method Detection Limit
MQL - Method Quantitation Limit (TRRP)
MS - Matrix Spike
MSD - Matrix Spike Duplicate
ND - Not Detected
PB - Preparation Blank
PREPF - Preparation Factor
RL - Reporting Limit
RPD - Relative Percent Difference
RRF - Relative Response Factor
RT - Retention Time
SQL - Sample Quantitation Limit (TRRP)
TIC - Tentatively Identified Compound

Method References:

- (1) EPA 600/4-79-020 Methods for the Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-94-111 Methods for the Determination of Metals in Environmental Samples, Supplement I, May 1994.
- (3) EPA SW846 Test Methods for Evaluating Solid Waste, Third Edition, September 1986; Update I July 1992; Update II, September 1994, Update IIA August 1993; Update IIB, January 1995; Update III, December 1996, Update IVA January 1998, Update IVB November 2000.
- (4) Standard Methods for the Examination of Water and Wastewater, 16th Edition (1985), 17th Edition (1989), 18th Edition (1992), 19th Edition (1995), 20th Edition (1998).
- (5) HACH Water Analysis Handbook 3rd Edition (1997).
- (6) Federal Register, July 1, 1990 (40 CFR Part 136 Appendix A).
- (7) Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, 2nd Edition, January 1997.
- (8) ASTM Annual Book of Methods (Various Years)
- (9) Diagnosis and Improvement of Saline and Alkali Soils, Agriculture Handbook No. 60, United States Department of Agriculture, 1954.

LABORATORY CHRONICLE

Job Number: 294556

Date: 05/02/2005

CUSTOMER: Marathon Oil Company

PROJECT: MARATHON INDIAN BASI

ATTN: Vijay Kurki

Lab ID: 294556-1	Client ID: SW-1	Date Recvd: 04/26/2005	Sample Date: 04/25/2005		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
SW-846 3010A	Acid Digestion Aqueous/Extracts FLAA/ICP	1	127944		04/26/2005 1630
EPA 310.1	Alkalinity	1	128117		04/28/2005 1400
EPA 130.2	Hardness, as CaCO3 (Titration)	1	127943		04/26/2005 1730
EPA 300.0	Ion Chromatography Analysis	1	128025		04/26/2005 1724
EPA 300.0	Ion Chromatography Analysis	1	128025		04/27/2005 1450
EPA 300.0	Ion Chromatography Analysis - Short Hold	1	128025		04/26/2005 1724
SW-846 7470A	Mercury (CVAA)	1	127937	127890	04/26/2005 1617
SW-846 7470A	Mercury Preparation (CVAA)	1	127890		04/26/2005 1236
SW-846 6010B	Metals Analysis (ICAP Trace)	1	128026	127944	04/27/2005 1203
SW-846 6010B	Metals Analysis (ICAP Trace)	1	128049	127944	04/27/2005 1642
EPA 160.1	Solids, Total Dissolved (TDS)	1	127960		04/26/2005 1600
EPA 120.1	Specific Conductance @ 25 degrees C	1	128106		04/28/2005 1400
SW-846 8260B	Volatile Organics	1	128239		04/29/2005 1553
EPA 150.1	pH	1	128138		04/28/2005 0000

Lab ID: 294556-2	Client ID: SW-3	Date Recvd: 04/26/2005	Sample Date: 04/25/2005		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
SW-846 3010A	Acid Digestion Aqueous/Extracts FLAA/ICP	1	127944		04/26/2005 1630
EPA 310.1	Alkalinity	1	128117		04/28/2005 1400
EPA 130.2	Hardness, as CaCO3 (Titration)	1	127943		04/26/2005 1730
EPA 300.0	Ion Chromatography Analysis	1	128025		04/26/2005 1816
EPA 300.0	Ion Chromatography Analysis	1	128025		04/27/2005 1507
EPA 300.0	Ion Chromatography Analysis - Short Hold	1	128025		04/26/2005 1816
SW-846 7470A	Mercury (CVAA)	1	127937	127890	04/26/2005 1623
SW-846 7470A	Mercury Preparation (CVAA)	1	127890		04/26/2005 1236
SW-846 6010B	Metals Analysis (ICAP Trace)	1	128026	127944	04/27/2005 1219
SW-846 6010B	Metals Analysis (ICAP Trace)	1	128049	127944	04/27/2005 1656
EPA 160.1	Solids, Total Dissolved (TDS)	1	127960		04/26/2005 1600
EPA 120.1	Specific Conductance @ 25 degrees C	1	128106		04/28/2005 1400
SW-846 8260B	Volatile Organics	1	128239		04/29/2005 1620
EPA 150.1	pH	1	128138		04/28/2005 0000