WESTERN ATLAS

Core Laboratories

CORE LABORATORIES
A N A L Y T I C A L  R E P O R T

Job Number: 940436
Prepared For:

AMOCO PRODUCTION COMPANY
MIKE GREENWOOD
P.O. BOX 189
SWEENY, TX 77480

Date: 03/08/94

soil & water
from well
installation

Chip Meador
Signature

3/8/94
Date:

Name: Chip Meador

Title: Regional Manager

CORE LABORATORIES
1733 NORTH PADRE ISLAND DRIVE
CORPUS CHRISTI, TX 78408

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WESTERN ATLAS

Core Laboratories

LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-1 (2')
DATE SAMPLED.....: 02/22/94
TIME SAMPLED.....: 15:58
WORK DESCRIPTION...: OW-1 (2')

LABORATORY I.D...: 940436-0001
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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WESTERN ATLAS

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-1 (4')
DATE SAMPLED.....: 02/22/94
TIME SAMPLED.....: 16:03
WORK DESCRIPTION...: OW-1 (4')

LABORATORY I.D...: 940436-0002
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-2 (2')
DATE SAMPLED.....: 02/22/94
TIME SAMPLED.....: 18:05
WORK DESCRIPTION...: OW-2 (2')

LABORATORY I.D...: 940436-0003
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | 2710 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 8020 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 62900 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 95200 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-2 (4')
DATE SAMPLED.....: 02/22/94
TIME SAMPLED.....: 18:06
WORK DESCRIPTION...: OW-2 (4')

LABORATORY I.D...: 940436-0004
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | 4570 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 6740 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 3960 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 68900 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-3 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 08:18
WORK DESCRIPTION...: OW-3 (2')

LABORATORY I.D...: 940436-0005
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 6370 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 7750 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 22800 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-3 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 08:24
WORK DESCRIPTION...: OW-3 (4')

LABORATORY I.D...: 940436-0006
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | 3980 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 2920 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 10700 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 28200 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |
| Total Petroleum Hydrocarbons | 22000 | 400 | mg/kg | EPA 418.1 | 03/03/94 | DC |
| Sonication Extraction | Completed | | | EPA SW-846 3550 | 03/03/94 | DC |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-4 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 08:40
WORK DESCRIPTION...: OW-4 (2')

LABORATORY I.D...: 940436-0007
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 1330 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 2920 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 20300 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-4 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 08:50
WORK DESCRIPTION...: OW-4 (4')

LABORATORY I.D...: 940436-0008
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | 5330 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 6990 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 40400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 68000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-5 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 09:10
WORK DESCRIPTION...: OW-5 (2')

LABORATORY I.D...: 940436-0009
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-5 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 09:15
WORK DESCRIPTION...: OW-5 (4')

LABORATORY I.D...: 940436-0010
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 02/28/94 | HJK |
| Benzene-Soil | 13000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 12900 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 53600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 113000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-6 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 11:25
WORK DESCRIPTION...: OW-6 (2')

LABORATORY I.D...: 940436-0011
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 6950 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 15700 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 67300 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 73400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-6 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 11:35
WORK DESCRIPTION...: OW-6 (4')

LABORATORY I.D...: 940436-0012
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 29900 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 20100 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 83400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 159000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-7 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 11:54
WORK DESCRIPTION...: OW-7 (2')

LABORATORY I.D...: 940436-0013
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 6100 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 13300 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 42100 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 75600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-7 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 11:58
WORK DESCRIPTION...: OW-7 (4')

LABORATORY I.D...: 940436-0014
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 3380 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 3740 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 36000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 62300 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-8 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 12:45
WORK DESCRIPTION...: OW-8 (2')

LABORATORY I.D...: 940436-0015
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | <2500 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <2500 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 53600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 58500 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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WESTERN ATLAS

Core Laboratories

LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-8 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 12:50
WORK DESCRIPTION...: OW-8 (4')

LABORATORY I.D...: 940436-0016
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | 17300W-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 17300 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 15000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 42000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 82400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-9 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 13:15
WORK DESCRIPTION...: OW-9 (2')

LABORATORY I.D...: 940436-0017
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 1450 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 12400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 53500 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 61600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-9 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 13:20
WORK DESCRIPTION...: OW-9 (4')

LABORATORY I.D...: 940436-0018
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 44100 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 32300 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 137000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 277000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-10 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 13:30
WORK DESCRIPTION...: OW-10 (2')

LABORATORY I.D...: 940436-0019
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 670 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 1250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-10 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 13:36
WORK DESCRIPTION...: OW-10 (4')

LABORATORY I.D...: 940436-0020
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 22800 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 22800 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 92800 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 167000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |
| Total Petroleum Hydrocarbons | 37600 | 400 | mg/kg | EPA 418.1 | 03/03/94 | DC |
| Sonication Extraction | Completed | | | EPA SW-846 3550 | 03/03/94 | DC |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-11 (2')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 13:44
WORK DESCRIPTION...: OW-11 (2')

LABORATORY I.D...: 940436-0021
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-11 (4')
DATE SAMPLED.....: 02/23/94
TIME SAMPLED.....: 13:50
WORK DESCRIPTION...: OW-11 (4')

LABORATORY I.D...: 940436-0022
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-12 (2')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 11:13
WORK DESCRIPTION...: OW-12 (2')

LABORATORY I.D...: 940436-0023
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 300 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-12 (4')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 11:17
WORK DESCRIPTION...: OW-12 (4')

LABORATORY I.D...: 940436-0024
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-13 (2')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 12:05
WORK DESCRIPTION...: OW-13 (2')

LABORATORY I.D...: 940436-0025
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | 6020 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 20400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 79700 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 115000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-13 (4')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 12:10
WORK DESCRIPTION...: OW-13 (4')

LABORATORY I.D...: 940436-0026
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/02/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 520 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 870 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-14 (2')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 12:45
WORK DESCRIPTION...: OW-14 (2')

LABORATORY I.D...: 940436-0027
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 420 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-14 (4')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 12:55
WORK DESCRIPTION...: OW-14 (4')

LABORATORY I.D...: 940436-0028
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *1 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | <250 | 250 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-15 (2')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 13:25
WORK DESCRIPTION...: OW-15 (2')

LABORATORY I.D...: 940436-0029
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 15600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 13500 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 49900 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 84700 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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WESTERN ATLAS

Core Laboratories

LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-15 (4')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 13:35
WORK DESCRIPTION...: OW-15 (4')

LABORATORY I.D...: 940436-0030
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 87100 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 55600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 109000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 115000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |
| Total Petroleum Hydrocarbons | 60800 | 400 | mg/kg | EPA 418.1 | 03/03/94 | DC |
| Sonication Extraction | Completed | | | EPA SW-846 3550 | 03/03/94 | DC |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-16 (2')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 13:55
WORK DESCRIPTION...: OW-16 (2')

LABORATORY I.D...: 940436-0031
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 18500 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 25600 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 84100 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 205000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-16 (4')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:05
WORK DESCRIPTION...: OW-16 (4')

LABORATORY I.D...: 940436-0032
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 43000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 19000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 126000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 236000 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-17 (2')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:20
WORK DESCRIPTION...: OW-17 (2')

LABORATORY I.D...: 940436-0033
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *20 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 21100 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 19400 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 80600 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 139000 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-17 (4')
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:20
WORK DESCRIPTION...: OW-17 (4')

LABORATORY I.D...: 940436-0034
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *20 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 82400 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 58600 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 119000 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 227000 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: SVE-1 (2')
DATE SAMPLED.....: 02/22/94
TIME SAMPLED.....: 11:07
WORK DESCRIPTION...: SVE-1 (2')

LABORATORY I.D...: 940436-0035
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *20 | | EPA SW-846 8020 | 03/03/94 | HJK |
| Benzene-Soil | 31100 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 36200 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 107000 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 161000 | 5000 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: SVE-1 (4')
DATE SAMPLED.....: 02/22/94
TIME SAMPLED.....: 11:13
WORK DESCRIPTION...: SVE-1 (4')

LABORATORY I.D...: 940436-0036
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Volatile Organics, High Level | | *10 | | EPA SW-846 8020 | 03/07/94 | HJK |
| Benzene-Soil | 4540 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Toluene-Soil | 6950 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Ethylbenzene-Soil | 30400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Xylenes-Soil | 43400 | 2500 | ug/kg | EPA SW-846 8020 | | |
| Extraction - BTEX (Soil/Solids) | Completed | | | EPA SW-846 5030 | 02/25/94 | DEH |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-1
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:30
WORK DESCRIPTION...: OW-1

LABORATORY I.D...: 940436-0037
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Aromatic Volatile Organics | | *1 | | EPA SW-846 8020 | 02/26/94 | CRS |
| Benzene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Toluene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Ethylbenzene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Xylenes | <2 | 2 | ug/L | EPA SW-846 8020 | | |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-6
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 15:20
WORK DESCRIPTION...: OW-6

LABORATORY I.D...: 940436-0038
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Aromatic Volatile Organics | | *1 | | EPA SW-846 8020 | 02/27/94 | CRS |
| Benzene | 330 | 20 | ug/L | EPA SW-846 8020 | | |
| Toluene | <20 | 20 | ug/L | EPA SW-846 8020 | | |
| Ethylbenzene | 170 | 20 | ug/L | EPA SW-846 8020 | | |
| Xylenes | 220 | 20 | ug/L | EPA SW-846 8020 | | |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-7
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:50
WORK DESCRIPTION...: OW-7

LABORATORY I.D...: 940436-0039
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Aromatic Volatile Organics | | *1 | | EPA SW-846 8020 | 02/26/94 | CRS |
| Benzene | 40 | 20 | ug/L | EPA SW-846 8020 | | |
| Toluene | <20 | 20 | ug/L | EPA SW-846 8020 | | |
| Ethylbenzene | 50 | 20 | ug/L | EPA SW-846 8020 | | |
| Xylenes | 40 | 20 | ug/L | EPA SW-846 8020 | | |

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LABORATORY TESTS RESULTS
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-8
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 15:30
WORK DESCRIPTION...: OW-8

LABORATORY I.D...: 940436-0040
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Aromatic Volatile Organics | | *1 | | EPA SW-846 8020 | 02/27/94 | CRS |
| Benzene | 7100 | 200 | ug/L | EPA SW-846 8020 | | |
| Toluene | <200 | 200 | ug/L | EPA SW-846 8020 | | |
| Ethylbenzene | 3400 | 200 | ug/L | EPA SW-846 8020 | | |
| Xylenes | 5800 | 200 | ug/L | EPA SW-846 8020 | | |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-11
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:45
WORK DESCRIPTION...: OW-11

LABORATORY I.D...: 940436-0041
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Aromatic Volatile Organics | | *1 | | EPA SW-846 8020 | 02/26/94 | CRS |
| Benzene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Toluene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Ethylbenzene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Xylenes | <2 | 2 | ug/L | EPA SW-846 8020 | | |

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LABORATORY TESTS RESULTS
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

CLIENT I.D.....: OW-11 (DUP)
DATE SAMPLED.....: 02/24/94
TIME SAMPLED.....: 14:46
WORK DESCRIPTION...: OW-11 (DUP)

LABORATORY I.D...: 940436-0042
DATE RECEIVED....: 02/24/94
TIME RECEIVED....: 17:13
REMARKS.....:

| TEST DESCRIPTION | FINAL RESULT | LIMITS/*DILUTION | UNITS OF MEASURE | TEST METHOD | DATE | TECHN |
|---|---|---|---|---|---|---|
| Aromatic Volatile Organics | | *1 | | EPA SW-846 8020 | 02/26/94 | CRS |
| Benzene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Toluene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Ethylbenzene | <2 | 2 | ug/L | EPA SW-846 8020 | | |
| Xylenes | <2 | 2 | ug/L | EPA SW-846 8020 | | |

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# QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

| ANALYSIS | | | | DUPLICATES | | REFERENCE STANDARDS | | MATRIX SPIKES | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ANALYSIS TYPE | ANALYSIS SUB-TYPE | ANALYSIS I.D. | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | TRUE VALUE | PERCENT RECOVERY | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY |
| PARAMETER:Total Petroleum Hydrocarbons | | | DATE/TIME ANALYZED:03/03/94 17:00 | | | | | | | QC BATCH NUMBER:954352 |
| REPORTING LIMIT/DF: 10 | UNITS:mg/kg | | METHOD REFERENCE :EPA 418.1 | | | | | | | TECHNICIAN:DC |
| BLANK | MB | Sand | <10 | | | | | | | |
| STANDARD | LCS | 356.53.24 | 102 | | | 100 | 102 | | | |
| STANDARD | LCS | 356.55.15 | 110 | | | 100 | 110 | | | |
| STANDARD | LCS | 356.55.15 | 108 | | | 100 | 108 | | | |
| STANDARD | LCS | 356.55.15 | 106 | | | 100 | 106 | | | |
| SPIKE | MS | 940429-00 | 204 | | | | | <1 | 200 | 102 |
| SPIKE | MS | 940494-00 | 229 | | | | | <1 | 200 | 114 |
| SPIKE | MS | 940430-00 | 220 | | | | | <1 | 200 | 110 |
| SPIKE | MS | 940431-00 | 220 | | | | | <10 | 200 | 110 |
| DUPLICATE | MD | 940436-30 | 60800 | 61600 | 1 | | | | | |
| DUPLICATE | MD | 940444-2 | 1620 | 1500 | 8 | | | | | |
| DUPLICATE | MD | 940454-00 | <10 | <10 | NC | | | | | |
| DUPLICATE | MD | 940940-00 | <10 | <10 | NC | | | | | |

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QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 02/28/94 TIME ANALYZED: 09:23 METHOD: EPA SW-846 8020 QC NUMBER:954071

BLANKS

| TEST DESCRIPTION | ANALY SUB-TYPE | ANALYSIS I.D. | DILUTION FACTOR | ANALYZED VALUE | DETECTION LIMIT | UNITS OF MEASURE |
|---|---|---|---|---|---|---|
| Benzene-Soil | RB | 022494 | 1 | <250 | 250 | ug/kg |
| | RB | 022594 | 1 | <250 | 250 | ug/kg |
| Toluene-Soil | RB | 022494 | 1 | <250 | 250 | ug/kg |
| | RB | 022594 | 1 | <250 | 250 | ug/kg |
| Ethylbenzene-Soil | RB | 022494 | 1 | <250 | 250 | ug/kg |
| | RB | 022594 | 1 | <250 | 250 | ug/kg |
| Xylenes-Soil | RB | 022494 | 1 | <250 | 250 | ug/kg |
| | RB | 022594 | 1 | <250 | 250 | ug/kg |

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WESTERN ATLAS

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QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 02/28/94 TIME ANALYZED: 09:23 METHOD: EPA SW-846 8020 QC NUMBER:954071

REFERENCE STANDARDS

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | TRUE VALUE | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | RS | B.338.42.1 | 1 | 2660 | 2500 | 106 | 250 | ug/kg |
| Toluene-Soil | RS | B.338.42.1 | 1 | 2450 | 2500 | 98 | 250 | ug/kg |
| Ethylbenzene-Soil | RS | B.338.42.1 | 1 | 2560 | 2500 | 102 | 250 | ug/kg |
| Xylenes-Soil | RS | B.338.42.1 | 1 | 7410 | 7500 | 99 | 250 | ug/kg |

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QUALITY ASSURANCE REPORT
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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 02/28/94 TIME ANALYZED: 09:23 METHOD: EPA SW-846 8020 QC NUMBER:954071

MATRIX SPIKES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MS | 940436-1 | 1 | 1410 | 0 | 1250 | 113 | 250 | ug/kg |
| Toluene-Soil | MS | 940436-1 | 1 | 1370 | 0 | 1250 | 110 | 250 | ug/kg |
| Ethylbenzene-Soil | MS | 940436-1 | 1 | 1360 | 0 | 1250 | 109 | 250 | ug/kg |
| Xylenes-Soil | MS | 940436-1 | 1 | 4060 | 0 | 3750 | 108 | 250 | ug/kg |
| 4-Bromofluorobenzene | SS | 940418-36 | 1 | 60000 | 35000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940418-37 | 1 | 58000 | 33000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940418-43 | 1 | 65000 | 40000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940418-39 | 1 | 5470 | 2970 | 2500 | 100 | 100 | ug/kg |
| | SS | 940418-44 | 1 | 2470 | 0 | 2500 | 99 | 100 | ug/kg |
| | SS | 940436-1 | 1 | 2530 | 0 | 2500 | 101 | 100 | ug/kg |
| | SS | 940436-2 | 1 | 2350 | 0 | 2500 | 94 | 100 | ug/kg |
| | SS | 940436-3 | 1 | 66800 | 41800 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-4 | 1 | 57800 | 32800 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-5 | 1 | 12100 | 9600 | 2500 | 100 | 100 | ug/kg |
| | SS | 940436-6 | 1 | 11900 | 9400 | 2500 | 100 | 100 | ug/kg |
| | SS | 940436-7 | 1 | 15400 | 12900 | 2500 | 100 | 100 | ug/kg |
| | SS | 940436-8 | 1 | 71100 | 46100 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-9 | 1 | 2120 | 0 | 2500 | 85 | 100 | ug/kg |
| | SS | 940436-10 | 1 | 60800 | 35800 | 25000 | 100 | 100 | ug/kg |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 02/28/94 TIME ANALYZED: 09:23 METHOD: EPA SW-846 8020 QC NUMBER:954071

## DUPLICATES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MSD | 940436-1 | 1 | 1410 | 1580 | 11 | 250 | ug/kg |
| Toluene-Soil | MSD | 940436-1 | 1 | 1370 | 1220 | 12 | 250 | ug/kg |
| Ethylbenzene-Soil | MSD | 940436-1 | 1 | 1360 | 1191 | 13 | 250 | ug/kg |
| Xylenes-Soil | MSD | 940436-1 | 1 | 4060 | 3510 | 15 | 250 | ug/kg |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Water) DATE ANALYZED: 02/26/94 TIME ANALYZED: 10:13 METHOD: EPA SW-846 8020 QC NUMBER:954188

## BLANKS

| TEST DESCRIPTION | ANALY SUB-TYPE | ANALYSIS I.D. | DILUTION FACTOR | ANALYZED VALUE | DETECTION LIMIT | UNITS OF MEASURE |
|---|---|---|---|---|---|---|
| Benzene | RB | 02-26-94 | 1 | <2 | 2 | ug/l |
| Toluene | RB | 02-26-94 | 1 | <2 | 2 | ug/l |
| Ethylbenzene | RB | 02-26-94 | 1 | <2 | 2 | ug/l |
| Xylenes | RB | 02-26-94 | 1 | <2 | 2 | ug/l |

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BTEX (Water) DATE ANALYZED: 02/26/94 TIME ANALYZED: 10:13 METHOD: EPA SW-846 8020 QC NUMBER:954188

REFERENCE STANDARDS

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | TRUE VALUE | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene | CCV | B338.43.1 | 1 | 19 | 20 | 95 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 20 | 20 | 100 | 2 | ug/l |
| Toluene | CCV | B338.43.1 | 1 | 19.6 | 20 | 98 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 20 | 20 | 100 | 2 | ug/l |
| Ethylbenzene | CCV | B338.43.1 | 1 | 20 | 20 | 100 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 22 | 20 | 110 | 2 | ug/l |
| Xylenes | CCV | B338.43.1 | 1 | 58 | 60 | 97 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 61 | 60 | 102 | 2 | ug/l |

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BTEX (Water) DATE ANALYZED: 02/26/94 TIME ANALYZED: 10:13 METHOD: EPA SW-846 8020 QC NUMBER:954188

## MATRIX SPIKES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | MS | 940439-1 | 1 | 11.9 | 0 | 10 | 119 | 2 | ug/l |
| Toluene | MS | 940439-1 | 1 | 12 | 0 | 10 | 120 | 2 | ug/l |
| Ethylbenzene | MS | 940439-1 | 1 | 9.9 | 0 | 10 | 99 | 2 | ug/l |
| Xylenes | MS | 940439-1 | 1 | 35 | 0 | 30 | 117 | 2 | ug/l |
| 4-Bromofluorobenzene | SS | 940439-1 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940439-3 | 1 | 22 | 0 | 20 | 110 | 1 | ug/L |
| | SS | 940439-4 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940439-5 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940439-6 | 1 | 21 | 0 | 20 | 105 | 1 | ug/L |
| | SS | 940436-37 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940436-38 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940436-39 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940436-41 | 1 | 19 | 0 | 20 | 95 | 1 | ug/L |
| | SS | 940436-42 | 1 | 20 | 0 | 20 | 100 | 1 | ug/L |
| | SS | 940444-23 | 1 | 19 | 0 | 20 | 95 | 1 | ug/L |
| | SS | 940445-1 | 1 | 19 | 0 | 20 | 95 | 1 | ug/L |

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## DUPLICATES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene | MSD | 940439-1 | 1 | 11.9 | 11.9 | 0 | 2 | ug/l |
| Toluene | MSD | 940439-1 | 1 | 12 | 12.3 | 2 | 2 | ug/l |
| Ethylbenzene | MSD | 940439-1 | 1 | 9.9 | 9.8 | 0 | 2 | ug/l |
| Xylenes | MSD | 940439-1 | 1 | 35 | 34 | 3 | 2 | ug/l |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Water) DATE ANALYZED: 02/27/94 TIME ANALYZED: 11:17 METHOD: EPA SW-846 8020 QC NUMBER:954194

BLANKS

| TEST DESCRIPTION | ANALY SUB-TYPE | ANALYSIS I.D. | DILUTION FACTOR | ANALYZED VALUE | DETECTION LIMIT | UNITS OF MEASURE |
|---|---|---|---|---|---|---|
| Benzene | RB | 02-27-94 | 1 | <2 | 2 | ug/l |
| Toluene | RB | 02-27-94 | 1 | <2 | 2 | ug/l |
| Ethylbenzene | RB | 02-27-94 | 1 | <2 | 2 | ug/l |
| Xylenes | RB | 02-27-94 | 1 | <2 | 2 | ug/l |

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BTEX (Water) DATE ANALYZED: 02/27/94 TIME ANALYZED: 11:17 METHOD: EPA SW-846 8020 QC NUMBER:954194

REFERENCE STANDARDS

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | TRUE VALUE | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene | CCV | B338.43.1 | 1 | 19.9 | 20 | 99 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 20 | 20 | 100 | 2 | ug/l |
| Toluene | CCV | B338.43.1 | 1 | 20 | 20 | 100 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 18.5 | 20 | 92 | 2 | ug/l |
| Ethylbenzene | CCV | B338.43.1 | 1 | 20 | 20 | 100 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 18.4 | 20 | 92 | 2 | ug/l |
| Xylenes | CCV | B338.43.1 | 1 | 59 | 60 | 98 | 2 | ug/l |
| | CCV | B338.42.16 | 1 | 55 | 60 | 92 | 2 | ug/l |

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BTEX (Water) DATE ANALYZED: 02/27/94 TIME ANALYZED: 11:17 METHOD: EPA SW-846 8020 QC NUMBER:954194

MATRIX SPIKES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | MS | 940437-25 | 1 | 11.3 | 0 | 10 | 113 | 2 | ug/l |
| Toluene | MS | 940437-25 | 1 | 12.4 | 0 | 10 | 124 | 2 | ug/l |
| Ethylbenzene | MS | 940437-25 | 1 | 11 | 0 | 10 | 110 | 2 | ug/l |
| Xylenes | MS | 940437-25 | 1 | 33 | 0 | 30 | 110 | 2 | ug/l |
| 4-Bromofluorobenzene | SS | 940437-25 | 1 | 19 | 0 | 20 | 95 | 1 | ug/L |
| | SS | 940442-1 | 1 | 19.7 | 0 | 20 | 98 | 1 | ug/L |
| | SS | 940442-2 | 1 | 19.2 | 0 | 20 | 96 | 1 | ug/L |
| | SS | 940439-2 | 1 | 18.6 | 0 | 20 | 93 | 1 | ug/L |
| | SS | 940436-38 | 1 | 16 | 0 | 20 | 80 | 1 | ug/L |
| | SS | 940436-39 | 1 | 15 | 0 | 20 | 75 | 1 | ug/L |
| | SS | 940436-40 | 1 | 26 | 5 | 20 | 105 | 1 | ug/L |
| | SS | 940442-3 | 1 | 19 | 0 | 20 | 95 | 1 | ug/L |
| | SS | 940442-4 | 1 | 19.8 | 0 | 20 | 99 | 1 | ug/L |
| | SS | 940437-28 | 1 | 19.8 | 0 | 20 | 99 | 1 | ug/L |
| | SS | 940437-29 | 1 | 19.2 | 0 | 20 | 96 | 1 | ug/L |
| | SS | 940437-30 | 1 | 19.2 | 0 | 20 | 96 | 1 | ug/L |
| | SS | 940437-31 | 1 | 19.4 | 0 | 20 | 97 | 1 | ug/L |

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BTEX (Water) DATE ANALYZED: 02/27/94 TIME ANALYZED: 11:17 METHOD: EPA SW-846 8020 QC NUMBER:954194

## DUPLICATES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene | MSD | 940437-25 | 1 | 11.3 | 11.1 | 2 | 2 | ug/l |
| Toluene | MSD | 940437-25 | 1 | 12.4 | 12.3 | 1 | 2 | ug/l |
| Ethylbenzene | MSD | 940437-25 | 1 | 11 | 11.1 | 1 | 2 | ug/l |
| Xylenes | MSD | 940437-25 | 1 | 33 | 33 | 0 | 2 | ug/l |

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JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/02/94 TIME ANALYZED: 16:49 METHOD: EPA SW-846 8020 QC NUMBER:954344

BLANKS

| TEST DESCRIPTION | ANALY SUB-TYPE | ANALYSIS I.D. | DILUTION FACTOR | ANALYZED VALUE | DETECTION LIMIT | UNITS OF MEASURE |
|---|---|---|---|---|---|---|
| Benzene-Soil | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Toluene-Soil | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Ethylbenzene-Soil | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Xylenes-Soil | RB | 030294 | 1 | <250 | 250 | ug/kg |

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BTEX (Soil) DATE ANALYZED: 03/02/94 TIME ANALYZED: 16:49 METHOD: EPA SW-846 8020 QC NUMBER:954344

REFERENCE STANDARDS

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | TRUE VALUE | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | RS | B.338.42.1 | 1 | 2550 | 2500 | 102 | 250 | ug/kg |
| Toluene-Soil | RS | B.338.42.1 | 1 | 2340 | 2500 | 94 | 250 | ug/kg |
| Ethylbenzene-Soil | RS | B.338.42.1 | 1 | 2380 | 2500 | 95 | 250 | ug/kg |
| Xylenes-Soil | RS | B.338.42.1 | 1 | 6990 | 7500 | 93 | 250 | ug/kg |

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BTEX (Soil) DATE ANALYZED: 03/02/94 TIME ANALYZED: 16:49 METHOD: EPA SW-846 8020 QC NUMBER:954344

## MATRIX SPIKES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MS | 940454-1 | 1 | 1270 | 0 | 1250 | 102 | 250 | ug/kg |
| Toluene-Soil | MS | 940454-1 | 1 | 1300 | 0 | 1250 | 104 | 250 | ug/kg |
| Ethylbenzene-Soil | MS | 940454-1 | 1 | 1220 | 0 | 1250 | 98 | 250 | ug/kg |
| Xylenes-Soil | MS | 940454-1 | 1 | 3670 | 0 | 3750 | 98 | 250 | ug/kg |
| 4-Bromofluorobenzene | SS | 940452-1 | 1 | 2010 | 0 | 2500 | 80 | 100 | ug/kg |
| | SS | 940454-1 | 1 | 1970 | 0 | 2500 | 79 | 100 | ug/kg |
| | SS | 940436-11 | 1 | 33200 | 8200 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-12 | 1 | 59100 | 34100 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-13 | 1 | 23900 | 0 | 25000 | 96 | 100 | ug/kg |
| | SS | 940436-14 | 1 | 50900 | 25900 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-15 | 1 | 25000 | 0 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-16 | 1 | 29200 | 4200 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-17 | 1 | 28100 | 3100 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-18 | 1 | 109000 | 84000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-19 | 1 | 2630 | 130 | 2500 | 100 | 100 | ug/kg |
| | SS | 940436-20 | 1 | 82000 | 57000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-25 | 1 | 65000 | 40000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-26 | 1 | 2520 | 0 | 2500 | 101 | 100 | ug/kg |

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WESTERN ATLAS

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QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/02/94 TIME ANALYZED: 16:49 METHOD: EPA SW-846 8020 QC NUMBER:954344

DUPLICATES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MSD | 940454-1 | 1 | 1270 | 1470 | 15 | 250 | ug/kg |
| Toluene-Soil | MSD | 940454-1 | 1 | 1300 | 1290 | 1 | 250 | ug/kg |
| Ethylbenzene-Soil | MSD | 940454-1 | 1 | 1220 | 1270 | 50 | 250 | ug/kg |
| Xylenes-Soil | MSD | 940454-1 | 1 | 3670 | 3780 | 3 | 250 | ug/kg |

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QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/03/94 TIME ANALYZED: 22:01 METHOD: EPA SW-846 8020 QC NUMBER:954365

BLANKS

| TEST DESCRIPTION | ANALY SUB-TYPE | ANALYSIS I.D. | DILUTION FACTOR | ANALYZED VALUE | DETECTION LIMIT | UNITS OF MEASURE |
|---|---|---|---|---|---|---|
| Benzene-Soil | RB | 022594 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Toluene-Soil | RB | 022594 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Ethylbenzene-Soil | RB | 022594 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Xylenes-Soil | RB | 022594 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |

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# QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/03/94 TIME ANALYZED: 22:01 METHOD: EPA SW-846 8020 QC NUMBER:954365

## REFERENCE STANDARDS

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | TRUE VALUE | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | RS | B.338.42.1 | 1 | 2600 | 2500 | 104 | 250 | ug/kg |
| Toluene-Soil | RS | B.338.42.1 | 1 | 2390 | 2500 | 96 | 250 | ug/kg |
| Ethylbenzene-Soil | RS | B.338.42.1 | 1 | 2450 | 2500 | 98 | 250 | ug/kg |
| Xylenes-Soil | RS | B.338.42.1 | 1 | 7300 | 7500 | 97 | 250 | ug/kg |

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QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/03/94 TIME ANALYZED: 22:01 METHOD: EPA SW-846 8020 QC NUMBER:954365

MATRIX SPIKES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MS | 940454-3 | 1 | 1570 | 0 | 1250 | 126 | 250 | ug/kg |
| Toluene-Soil | MS | 940454-3 | 1 | 1560 | 0 | 1250 | 125 | 250 | ug/kg |
| Ethylbenzene-Soil | MS | 940454-3 | 1 | 1590 | 0 | 1250 | 127 | 250 | ug/kg |
| Xylenes-Soil | MS | 940454-3 | 1 | 4850 | 0 | 3750 | 129 | 250 | ug/kg |
| 4-Bromofluorobenzene | SS | 940436-21 | 1 | 2350 | 0 | 2500 | 94 | 100 | ug/kg |
| | SS | 940436-22 | 1 | 2480 | 0 | 2500 | 99 | 100 | ug/kg |
| | SS | 940436-23 | 1 | 2440 | 0 | 2500 | 98 | 100 | ug/kg |
| | SS | 940436-24 | 1 | 2520 | 0 | 2500 | 101 | 100 | ug/kg |
| | SS | 940436-27 | 1 | 2350 | 0 | 2500 | 94 | 100 | ug/kg |
| | SS | 940436-28 | 1 | 2550 | 0 | 2500 | 102 | 100 | ug/kg |
| | SS | 940436-29 | 1 | 30400 | 5400 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-30 | 1 | 43000 | 18000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-31 | 1 | 112000 | 87000 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-32 | 1 | 88500 | 63500 | 25000 | 100 | 100 | ug/kg |
| | SS | 940436-33 | 1 | 71600 | 21600 | 50000 | 100 | 100 | ug/kg |
| | SS | 940436-34 | 1 | 49100 | 0 | 50000 | 98 | 100 | ug/kg |
| | SS | 940436-35 | 1 | 76200 | 26000 | 50000 | 100 | 100 | ug/kg |
| | SS | 940454-3 | 1 | 2580 | 0 | 2500 | 103 | 100 | ug/kg |
| | SS | 940454-4 | 1 | 2560 | 0 | 2500 | 102 | 100 | ug/kg |
| | SS | 940455-1 | 1 | 2420 | 0 | 2500 | 97 | 100 | ug/kg |
| | SS | 940455-2 | 1 | 2720 | 0 | 2500 | 109 | 100 | ug/kg |
| | SS | 940455-3 | 1 | 10800 | 8300 | 2500 | 100 | 100 | ug/kg |
| | SS | 940455-4 | 1 | 2330 | 0 | 2500 | 93 | 100 | ug/kg |

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# QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/03/94 TIME ANALYZED: 22:01 METHOD: EPA SW-846 8020 QC NUMBER:954365

## DUPLICATES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MSD | 940454-3 | 1 | 1570 | 1610 | 3 | 250 | ug/kg |
| Toluene-Soil | MSD | 940454-3 | 1 | 1560 | 1560 | 0 | 250 | ug/kg |
| Ethylbenzene-Soil | MSD | 940454-3 | 1 | 1590 | 1720 | 8 | 250 | ug/kg |
| Xylenes-Soil | MSD | 940454-3 | 1 | 4850 | 5260 | 8 | 250 | ug/kg |

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QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/07/94 TIME ANALYZED: 08:57 METHOD: EPA SW-846 8020 QC NUMBER:954552

BLANKS

| TEST DESCRIPTION | ANALY SUB-TYPE | ANALYSIS I.D. | DILUTION FACTOR | ANALYZED VALUE | DETECTION LIMIT | UNITS OF MEASURE |
|---|---|---|---|---|---|---|
| Benzene-Soil | RB | 030794 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Toluene-Soil | RB | 030794 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Ethylbenzene-Soil | RB | 030794 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |
| Xylenes-Soil | RB | 030794 | 1 | <250 | 250 | ug/kg |
| | RB | 030294 | 1 | <250 | 250 | ug/kg |

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# QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/07/94 TIME ANALYZED: 08:57 METHOD: EPA SW-846 8020 QC NUMBER:954552

## REFERENCE STANDARDS

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | TRUE VALUE | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | RS | B.338.46.3 | 1 | 2480 | 2500 | 99 | 250 | ug/kg |
| Toluene-Soil | RS | B.338.46.3 | 1 | 2320 | 2500 | 93 | 250 | ug/kg |
| Ethylbenzene-Soil | RS | B.338.46.3 | 1 | 2350 | 2500 | 94 | 250 | ug/kg |
| Xylenes-Soil | RS | B.338.46.3 | 1 | 6980 | 7500 | 93 | 250 | ug/kg |

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# QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/07/94 TIME ANALYZED: 08:57 METHOD: EPA SW-846 8020 QC NUMBER:954552

## MATRIX SPIKES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE | ORIGINAL VALUE | SPIKE ADDED | PERCENT RECOVERY | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MS | 940495-4 | 1 | 1380 | 0 | 1250 | 110 | 250 | ug/kg |
| Toluene-Soil | MS | 940495-4 | 1 | 1510 | 0 | 1250 | 121 | 250 | ug/kg |
| Ethylbenzene-Soil | MS | 940495-4 | 1 | 1510 | 0 | 1250 | 121 | 250 | ug/kg |
| Xylenes-Soil | MS | 940495-4 | 1 | 4450 | 0 | 3750 | 119 | 250 | ug/kg |
| 4-Bromofluorobenzene | SS | 940436-36 | 1 | 39200 | 14200 | 25000 | 100 | 100 | ug/kg |
| | SS | 940495-4 | 1 | 2020 | 0 | 2500 | 81 | 100 | ug/kg |
| | SS | 940495-5 | 1 | 2270 | 0 | 2500 | 91 | 100 | ug/kg |
| | SS | 940495-6 | 1 | 2270 | 0 | 2500 | 91 | 100 | ug/kg |
| | SS | 940495-7 | 1 | 101000 | 0 | 125000 | 81 | 100 | ug/kg |
| | SS | 940495-8 | 1 | 67100 | 42100 | 25000 | 100 | 100 | ug/kg |
| | SS | 940495-9 | 1 | 105000 | 0 | 125000 | 84 | 100 | ug/kg |
| | SS | 940495-10 | 1 | 6310 | 3810 | 2500 | 100 | 100 | ug/kg |
| | SS | 940516-1 | 1 | 26200 | 1200 | 25000 | 100 | 100 | ug/kg |
| | SS | 940516-2 | 1 | 22800 | 0 | 25000 | 91 | 100 | ug/kg |
| | SS | 940526-1 | 1 | 2010 | 0 | 2500 | 80 | 100 | ug/kg |

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# QUALITY ASSURANCE REPORT
03/08/94

JOB NUMBER: 940436 CUSTOMER: AMOCO PRODUCTION COMPANY ATTN: MIKE GREENWOOD

BTEX (Soil) DATE ANALYZED: 03/07/94 TIME ANALYZED: 08:57 METHOD: EPA SW-846 8020 QC NUMBER:954552

## DUPLICATES

| TEST DESCRIPTION | ANALYSIS SUB-TYPE | ANALYSIS I. D. | DILUTION FACTOR | ANALYZED VALUE (A) | DUPLICATE VALUE (B) | RPD or (\|A-B\|) | DETECTION LIMITS | UNITS OF MEASURE |
|---|---|---|---|---|---|---|---|---|
| Benzene-Soil | MSD | 940495-4 | 1 | 1380 | 1490 | 8 | 250 | ug/kg |
| Toluene-Soil | MSD | 940495-4 | 1 | 1510 | 1600 | 6 | 250 | ug/kg |
| Ethylbenzene-Soil | MSD | 940495-4 | 1 | 1510 | 1590 | 5 | 250 | ug/kg |
| Xylenes-Soil | MSD | 940495-4 | 1 | 4450 | 4750 | 7 | 250 | ug/kg |

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QUALITY ASSURANCE FOOTER
03/08/94

Standard Methods for the Examination of Water and Wastewater, 17th Ed. APHA,AWWA,WPCF.
USEPA SW-846 3rd. Edition, Test Methods for the Evaluation of Solid Waste
EPA-600/4-79-020, Methods for the Analysis of Water and Wastes, March 1983
Federal Register, July 1, 1992 (40 CFR Part 136).
EPA-600/2-78-054, Field and Laboratory Methods Applicable to Overburdens and Minesoils.

Quality control acceptance criteria are method dependent.
GCMS tuning criteria meet EPA CLP Statement of Work OLM01.0.
All data reported on sample "as received" unless noted.
Sample IDs with a "-00" at the end indicate a blank spike or blank spike duplicate associated with the numbered sample.
NC = Not Calculated due to value at or below detection limit.
The data in this report are within the limits of uncertainty specified in the referenced method unless otherwise indicated.
NOTE: Data in QA report may differ from final results due to digestion and/or dilution of sample into analytical range.

The "TIME ANALYZED" in the QA Report refers to the start time of the analytical batch which may not reflect the actual time of each analysis. The "DATE ANALYZED" is the actual date of analysis.

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## QC SAMPLE IDENTIFICATION

| | | |
|---|---|---|
| 1. BLANKS | Method or Method / Type | MB or MB / type^ |
| | Reagent | RB |
| | Initial Calibration | ICB |
| | Continuing Calibration | CCB |
| | Storage | SB |
| 2. STANDARDS | Laboratory Control | LCS |
| | Reference | RS |
| | Initial Calibration | ICV |
| | Continuing Calibration | CCV |
| 3. SPIKES | Matrix | MS |
| | Blank | BS |
| | Surrogate | SS |
| | Post Digestion Spike | PDS |
| | Matrix Spike Duplicate | MSD |
| 4. DUPLICATES | Matrix | MD |
| | Post Digestion Duplicate | PDD |

^ In the event that several different method blanks are analyzed, the blank type will be designated by the preparation method, i.e., ZHE, TCLP, 3010, 3050, etc.

**Subcontracted Analysis Codes**

| | |
|---|---|
| Anaheim | *AN |
| Aurora | *AU |
| Casper | *CA |
| Houston | *HP |
| Lake Charles | *LC |
| Long Beach | *LB |
| Other Laboratories | *XX |

* The asterisk in the "TECHN" column signifies that the analysis was performed by a subcontract laboratory.

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