

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-144  
June 1, 2004

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For drilling and production facilities, submit to  
appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe  
office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: BP AMERICA PROD. CO. Telephone: (505)-326-9200 e-mail address: \_\_\_\_\_  
Address: 200 ENERGY COURT, FARMINGTON, NM 87410  
Facility or well name: LUDWICK LS #11 API #: 30-045- 09389 U/L or Qtr/Qtr B Sec 19 T 30N R 10W  
County: SAN JUAN Latitude 36.80180 Longitude 107.92105 NAD: 1927 ☐ 1983 ☒ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

RCVD APR5'07  
OIL CONS. DIV.  
DIST. 3

| Pit   | Below-grade tank  |
|---|---|
| Type: Drilling <input type="checkbox"/> Production <input checked="" type="checkbox"/> Disposal <input type="checkbox"/> SEPARATOR<br>Workover <input type="checkbox"/> Emergency <input type="checkbox"/><br>Lined <input checked="" type="checkbox"/> Unlined <input type="checkbox"/> STEEL TANK<br>Liner type: Synthetic <input type="checkbox"/> Thickness _____ mil Clay <input type="checkbox"/><br>Pit Volume _____ bbl | Volume: _____ bbl Type of fluid: <u>N/A</u><br>Construction material: <u>N/A</u><br>Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____ |
| Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)  | Less than 50 feet (20 points)<br>50 feet or more, but less than 100 feet (10 points) <b>0</b><br>100 feet or more (0 points)  |
| Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)   | Yes (20 points)<br>No (0 points) <b>0</b>   |
| Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)   | Less than 200 feet (20 points)<br>200 feet or more, but less than 1000 feet (10 points) <b>0</b><br>1000 feet or more (0 points)  |
| Ranking Score (Total Points) <b>0</b>   |   |

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☒ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☒ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5)

Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments PIT LOCATED APPROXIMATELY 120 FT. S12E FROM WELL HEAD.

PIT EXCAVATION: WIDTH N/A ft., LENGTH N/A ft., DEPTH N/A ft.

PIT REMEDIATION: CLOSE AS IS: ☒, LANDFARM: ☐, COMPOST: ☐, STOCKPILE: ☐, OTHER ☐ (explain)

Cubic yards: N/A

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an alternative OCD-approved plan ☒.

Date: 10/24/06

Printed Name/Title Jeff Blagg - P.E. # 11607

Signature [Signature]

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: Deputy Oil & Gas Inspector,  
District #3

Printed Name/Title \_\_\_\_\_

Signature [Signature]

Date: AUG 03 2007

|                   |   |                           |
|-------------------|---|---------------------------|
| CLIENT: <u>BP</u> | <b>BLAGG ENGINEERING, INC.</b><br><b>P.O. BOX 87, BLOOMFIELD, NM 87413</b><br><b>(505) 632-1199</b> | LOCATION NO: <u>81800</u> |
|                   |   | COCR NO: <u>1606</u>      |

**FIELD REPORT: PIT CLOSURE VERIFICATION**PAGE No: 1 of 1

LOCATION: NAME: LUDWICK LS WELL #: 11 TYPE: SEP  
 QUAD/UNIT B SEC: 19 TWP: 30N RNG: 10W PM: NM CNTY: SJ ST: NM  
 QTR/FOOTAGE: 990 FNL x 1580 FEL <sup>NW 1/4</sup> CONTRACTOR: HDI - EDGAR

DATE STARTED 10-18-06  
 DATE FINISHED: 10-18-06

ENVIRONMENTAL SPECIALIST: JCBEXCAVATION APPROX. NA FT. x NA FT. x NA FT. DEEP. CUBIC YARDAGE: 0DISPOSAL FACILITY: NA REMEDIATION METHOD: CLOSE AS ISLAND USE: RANGE-BLM LEASE: SF-078194 FORMATION: PCFIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 120' FT. S 1/2 E FROM WELLHEAD.DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: >1000 NEAREST SURFACE WATER: >1000NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM**SOIL AND EXCAVATION DESCRIPTION:**

OVM CALIB. READ. = 53.4 ppm  
 OVM CALIB. GAS = 100 ppm RF = 0.52  
 TIME: 1000 am/pm DATE: 10-18-06

SOIL TYPE (SAND / SILTY SAND) SILT / SILTY CLAY / CLAY / GRAVEL / OTHERSOIL COLOR: TANCOHESION (ALL OTHERS): (NON COHESIVE) SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVECONSISTENCY (NON COHESIVE SOILS): (LOOSE) FIRM / DENSE / VERY DENSE

PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC

DENSITY (COHESIVE CLAYS &amp; SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD

MOISTURE DRY (SLIGHTLY MOIST) MOIST / WET / SATURATED / SUPER SATURATEDDISCOLORATION/STAINING OBSERVED: YES (NO) EXPLANATION -HC ODOR DETECTED: YES (NO) EXPLANATION -SAMPLE TYPE (GRAB) COMPOSITE - # OF PTS -

ADDITIONAL COMMENTS: 4' DIAMETER x 6' TALL STEEL TANK SET IN G'  
USE BACKHOE TO PULL TANK & SAMPLE. NO EVIDENCE  
OF CONTAMINATION

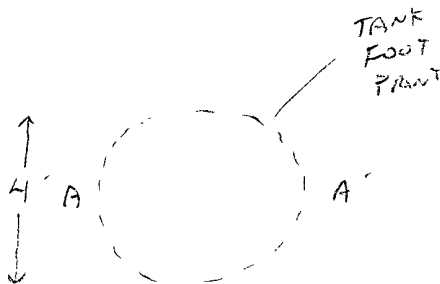
**CLOSED****FIELD 418.1 CALCULATIONS**

SCALE



0 FT

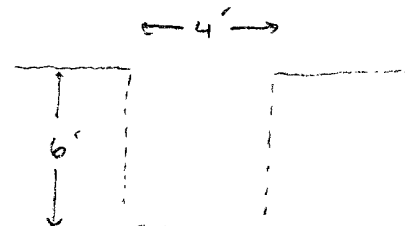
| SAMP. TIME | SAMP. ID | LAB NO. | WEIGHT (g) | mL FREON | DILUTION | READING | CALC. (ppm) |
|------------|----------|---------|------------|----------|----------|---------|-------------|
|            |          |         |            |          |          |         |             |

**PIT PERIMETER****PIT PROFILE****OVM READING**

| SAMPLE ID | FIELD HEADSPACE (ppm) |
|-----------|-----------------------|
| 1 @       |                       |
| 2 @       |                       |
| 3 @       |                       |
| 4 @       |                       |
| 5 @       |                       |
| C @ 9     | 0.0                   |

**LAB SAMPLES**

| SAMPLE ID | ANALYSIS      | TIME |
|-----------|---------------|------|
| C @ 9     | TPH           | 0950 |
|           | BFE           |      |
|           | CL-           |      |
|           | <b>PASSED</b> |      |



P.D. = PIT DEPRESSION, B.G. = BELOW GRADE; B = BELOW  
 T.H. = TEST HOLE, ~ = APPROX.; T.B. = TANK BOTTOM

TRAVEL NOTES:

CALLOUT: \_\_\_\_\_ ONSITE: 10-18-06

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons


|                      |                 |                     |           |
|----------------------|-----------------|---------------------|-----------|
| Client:              | Blagg / BP      | Project #:          | 94034-010 |
| Sample ID:           | C @ 9'          | Date Reported:      | 10-20-06  |
| Laboratory Number:   | 38895           | Date Sampled:       | 10-18-06  |
| Chain of Custody No: | 1606            | Date Received:      | 10-19-06  |
| Sample Matrix:       | Soil            | Date Extracted:     | 10-19-06  |
| Preservative:        | Cool            | Date Analyzed:      | 10-20-06  |
| Condition:           | Cool and Intact | Analysis Requested: | 8015 TPH  |

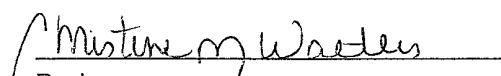
| Parameter                    | Concentration<br>(mg/Kg) | Det.<br>Limit<br>(mg/Kg) |
|------------------------------|--------------------------|--------------------------|
| Gasoline Range (C5 - C10)    | ND                       | 0.2                      |
| Diesel Range (C10 - C28)     | ND                       | 0.1                      |
| Total Petroleum Hydrocarbons | ND                       | 0.2                      |

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Ludwick LS 11 Sep Pit**

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

|                    |               |                     |           |
|--------------------|---------------|---------------------|-----------|
| Client:            | Blagg / BP    | Project #:          | 94034-010 |
| Sample ID:         | C @ 9'        | Date Reported:      | 10-20-06  |
| Laboratory Number: | 38895         | Date Sampled:       | 10-18-06  |
| Chain of Custody:  | 1606          | Date Received:      | 10-19-06  |
| Sample Matrix:     | Soil          | Date Analyzed:      | 10-20-06  |
| Preservative:      | Cool          | Date Extracted:     | 10-19-06  |
| Condition:         | Cool & Intact | Analysis Requested: | BTEX      |

| Parameter    | Concentration<br>(ug/Kg) | Det.<br>Limit<br>(ug/Kg) |
|--------------|--------------------------|--------------------------|
| Benzene      | ND                       | 1.8                      |
| Toluene      | 5.0                      | 1.7                      |
| Ethylbenzene | 6.0                      | 1.5                      |
| p,m-Xylene   | 5.7                      | 2.2                      |
| o-Xylene     | 8.2                      | 1.0                      |
| Total BTEX   | 24.9                     |                          |

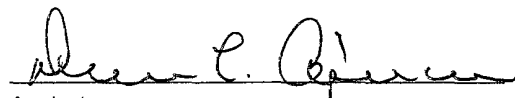
ND - Parameter not detected at the stated detection limit.

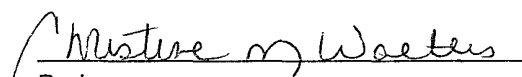
| Surrogate Recoveries: | Parameter           | Percent Recovery |
|-----------------------|---------------------|------------------|
|                       | Fluorobenzene       | 99.0 %           |
|                       | 1,4-difluorobenzene | 99.0 %           |
|                       | Bromochlorobenzene  | 99.0 %           |

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Ludwick LS 11 Sep Pit

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## Chloride

|                |                 |                   |           |
|----------------|-----------------|-------------------|-----------|
| Client:        | Blagg / BP      | Project #         | 94034-010 |
| Sample ID:     | C @ 9'          | Date Reported:    | 10-19-06  |
| Lab ID#:       | 38895           | Date Sampled:     | 10-18-06  |
| Sample Matrix: | Soil            | Date Received:    | 10-19-06  |
| Preservative:  | Cool            | Date Analyzed:    | 10-19-06  |
| Condition      | Cool and Intact | Chain of Custody: | 1606      |

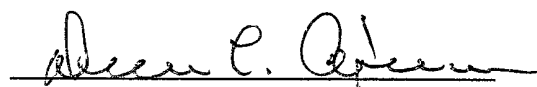
| Parameter | Concentration (mg/Kg) |
|-----------|-----------------------|
|-----------|-----------------------|

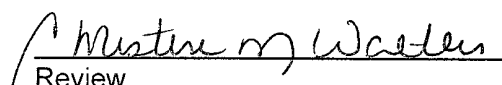
Total Chloride

22.0

Reference: Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992

Comments: Ludwick LS 11 Sep Pit.

  
Analyst

  
Review

# CHAIN OF CUSTODY RECORD

1606

|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|--|-----------------|-------------|--|---------------------|--|------------|------------|-------------------------|---------------------|---------------------|-------------------------------------|---|-----------------|
| Client / Project Name<br><i>SAGE/GP</i>  |                 |             | Project Location<br><i>LUDWICK LS II</i> |                     | ANALYSIS / PARAMETERS                          |            |            |                         |                     |                     |                                     |   |                 |
| Sampler:<br><i>Jeff Bence</i>  |                 |             | Client No.<br><i>94034-010</i>           |                     | No. of Containers                              | <i>TPH</i> | <i>205</i> | <i>1208</i>             | <i>CL</i>           |                     |                                     |   | Remarks         |
| Sample No./ Identification   | Sample Date     | Sample Time | Lab Number                               | Sample Matrix       |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
| <i>1-Part 19</i>   | <i>10/19/06</i> | <i>0940</i> | <i>38894</i>                             | <i>SOIL</i>         | <i>1</i>                                       | <i>X</i>   | <i>X</i>   | <i>X</i>                |                     |                     |                                     |   | <i>DECK PIT</i> |
| <i>2-Part 19</i>   | <i>"</i>        | <i>0950</i> | <i>38895</i>                             | <i>"</i>            | <i>1</i>                                       | <i>X</i>   | <i>X</i>   | <i>X</i>                |                     |                     |                                     |   | <i>SEP PIT</i>  |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     |                                     |   |                 |
| Relinquished by: (Signature)<br><i>[Signature]</i>   |                 |             | Date<br><i>10/19/06</i>                  | Time<br><i>0923</i> | Received by: (Signature)<br><i>[Signature]</i> |            |            | Date<br><i>10/19/06</i> | Time<br><i>0923</i> |                     |                                     |   |                 |
| Relinquished by: (Signature)   |                 |             |  |                     | Received by: (Signature)                       |            |            |                         |                     |                     |                                     |   |                 |
| Relinquished by: (Signature)   |                 |             |  |                     | Received by: (Signature)                       |            |            |                         |                     |                     |                                     |   |                 |
| <b>ENVIROTECH INC.</b><br>5796 U.S. Highway 64<br>Farmington, New Mexico 87401<br>(505) 632-0615 |                 |             |  |                     |  |            |            |                         |                     | Sample Receipt      |                                     |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     |                     | Y                                   | N | N/A             |
|  |                 |             |  |                     |  |            |            |                         |                     | Received Intact     | <input checked="" type="checkbox"/> |   |                 |
|  |                 |             |  |                     |  |            |            |                         |                     | Cool - Ice/Blue Ice | <input checked="" type="checkbox"/> |   |                 |

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

### Quality Assurance Report

|                    |                    |                     |          |
|--------------------|--------------------|---------------------|----------|
| Client:            | QA/QC              | Project #:          | N/A      |
| Sample ID:         | 10-20-06 QA/QC     | Date Reported:      | 10-20-06 |
| Laboratory Number: | 38894              | Date Sampled:       | N/A      |
| Sample Matrix:     | Methylene Chloride | Date Received:      | N/A      |
| Preservative:      | N/A                | Date Analyzed:      | 10-20-06 |
| Condition:         | N/A                | Analysis Requested: | TPH      |

|                         | I-Cal Date | I-Cal RF    | C-Cal RF    | % Difference | Accept. Range |
|-------------------------|------------|-------------|-------------|--------------|---------------|
| Gasoline Range C5 - C10 | 07-11-05   | 1.0030E+003 | 1.0040E+003 | 0.10%        | 0 - 15%       |
| Diesel Range C10 - C28  | 07-11-05   | 1.0009E+003 | 1.0029E+003 | 0.20%        | 0 - 15%       |

| Blank Conc. (mg/L - mg/Kg)   | Concentration | Detection Limit |
|------------------------------|---------------|-----------------|
| Gasoline Range C5 - C10      | ND            | 0.2             |
| Diesel Range C10 - C28       | ND            | 0.1             |
| Total Petroleum Hydrocarbons | ND            | 0.2             |

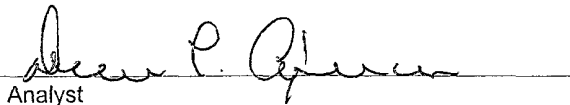
| Duplicate Conc. (mg/Kg) | Sample | Duplicate | % Difference | Accept. Range |
|-------------------------|--------|-----------|--------------|---------------|
| Gasoline Range C5 - C10 | ND     | ND        | 0.0%         | 0 - 30%       |
| Diesel Range C10 - C28  | 0.7    | 0.7       | 0.0%         | 0 - 30%       |

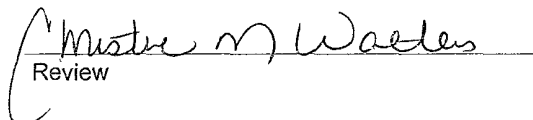
| Spike Conc. (mg/Kg)     | Sample | Spike Added | Spike Result | % Recovery | Accept. Range |
|-------------------------|--------|-------------|--------------|------------|---------------|
| Gasoline Range C5 - C10 | ND     | 250         | 250          | 100.0%     | 75 - 125%     |
| Diesel Range C10 - C28  | 0.7    | 250         | 250          | 99.9%      | 75 - 125%     |

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 38894 - 38896

  
Analyst

  
Review

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

|                    |                  |                |          |
|--------------------|------------------|----------------|----------|
| Client:            | N/A              | Project #:     | N/A      |
| Sample ID:         | 10-20-BTEX QA/QC | Date Reported: | 10-20-06 |
| Laboratory Number: | 38894            | Date Sampled:  | N/A      |
| Sample Matrix:     | Soil             | Date Received: | N/A      |
| Preservative:      | N/A              | Date Analyzed: | 10-20-06 |
| Condition:         | N/A              | Analysis:      | BTEX     |

| Calibration and<br>Detection Limits (ug/L) | I-Cal RF    | C-Cal RF             | %Diff | Blank<br>Conc | Detect<br>Limit |
|--|-------------|----------------------|-------|---------------|-----------------|
|  |             | Accept Range 0 - 15% |       |               |                 |
| Benzene                                    | 3.9381E+007 | 3.9460E+007          | 0.2%  | ND            | 0.2             |
| Toluene                                    | 4.7260E+007 | 4.7354E+007          | 0.2%  | ND            | 0.2             |
| Ethylbenzene                               | 2.2973E+007 | 2.3019E+007          | 0.2%  | ND            | 0.2             |
| p,m-Xylene                                 | 8.7258E+007 | 8.7433E+007          | 0.2%  | ND            | 0.2             |
| o-Xylene                                   | 3.5655E+007 | 3.5726E+007          | 0.2%  | ND            | 0.1             |


| Duplicate Conc. (ug/Kg) | Sample | Duplicate | %Diff | Accept Range | Detect Limit |
|-------------------------|--------|-----------|-------|--------------|--------------|
| Benzene                 | 6.7    | 6.7       | 0.0%  | 0 - 30%      | 1.8          |
| Toluene                 | 15.3   | 15.2      | 0.7%  | 0 - 30%      | 1.7          |
| Ethylbenzene            | 10.4   | 10.2      | 1.9%  | 0 - 30%      | 1.5          |
| p,m-Xylene              | 22.9   | 22.7      | 0.9%  | 0 - 30%      | 2.2          |
| o-Xylene                | 14.0   | 14.0      | 0.0%  | 0 - 30%      | 1.0          |

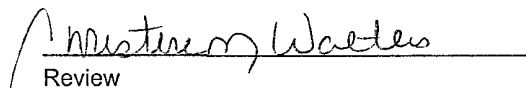
| Spike Conc. (ug/Kg) | Sample | Amount Spiked | Spiked Sample | % Recovery | Accept Range |
|---------------------|--------|---------------|---------------|------------|--------------|
| Benzene             | 6.7    | 50.0          | 56.6          | 99.8%      | 39 - 150     |
| Toluene             | 15.3   | 50.0          | 65.2          | 99.8%      | 46 - 148     |
| Ethylbenzene        | 10.4   | 50.0          | 60.3          | 99.8%      | 32 - 160     |
| p,m-Xylene          | 22.9   | 100           | 122           | 99.6%      | 46 - 148     |
| o-Xylene            | 14.0   | 50.0          | 63.9          | 99.8%      | 46 - 148     |

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 38894 - 38898

  
Analyst

  
Review