TA-21

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Risk Reduction & Environmental Stewardship (RRES)
Environmental Restoration (ER) Project, MS M992
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*U.S. Department of Energy*
Office of Los Alamos Site Operations, MS A316
Environmental Restoration Program
Los Alamos, New Mexico 87544
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*Date:* November 5, 2002
*Refer to:* ER2002-0749

Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303

NOV 20[redacted]

**SUBJECT: REQUEST FOR "NO LONGER CONTAINED IN" DETERMINATION FOR SOIL, TUFF, AND SEDIMENT AT SOLID WASTE MANAGEMENT UNIT 21-011(k), AT TECHNICAL AREA (TA) 21**

Dear Mr. Young:

The purpose of this letter is to request that the New Mexico Environment Department Hazardous Waste Bureau (NMED-HWB) use their discretionary authority to determine that environmental media to be generated during excavation of soil, sediment, and tuff as part of the Laboratory's Voluntary Corrective Measure[1] (VCM) for Solid Waste Management Unit (SWMU) 21-011(k), do not warrant management as F-listed hazardous waste.

The excavation activities at SWMU 21-011(k) will involve excavating environmental media in an effort to reduce potential dose from radionuclides present in soil, sediment, and tuff. Some of this excavated material may contain low levels of acetone, toluene, methylene chloride, and trichloroethylene that may have originated from processes for which listed wastes are identified.

The Los Alamos National Laboratory (LANL) proposes to use the Environmental Protection Agency (EPA) Region 6 Human Health Medium-Specific Screening Levels (MSSLs) and NMED Soil Screening Levels (SSLs) for comparison to maximum detected concentrations to determine whether any of the organic constituents detected in excavated environmental media from SWMU 21-011(k) warrant management as F-listed hazardous waste. The proposed MSSLs and SSLs are based on the industrial receptor using direct exposure routes (inhalation, ingestion, and dermal contact) and are derived using conservative exposure parameters for reasonable maximum exposure. These MSSLs and SSLs, based on an industrial receptor, are appropriate because the environmental media excavated during these removal activities will be properly disposed in an onsite engineered low-level radioactive waste disposal facility. All of the maximum

[1] This letter does not address or concede Hazardous Waste Act authority over this unit. LANL remediates this unit pursuant to a comprehensive program that addresses contaminants at all Potential Release Sites on site

detected concentrations of the acetone, toluene, methylene chloride, and trichloroethylene in the environmental media to date are below MSSLs and SSLs.

According to EPA documents and associated guidance, the authorized state may also make a determination on a case-specific basis as to how the Land Disposal Restrictions (LDRs) apply to the waste when a "no longer contained in" determination has been made. Because all of the maximum detected concentrations of acetone, toluene, methylene chloride, and trichloroethylene in the environmental media at SWMU 21-011(k) are below their respective LDRs, it is LANL's expectation that LDR treatment standards will not apply to this environmental media.

The organic constituents, maximum concentration detected to date, the proposed MSSLs and SSLs, and LDR treatment standards are shown in the table below:

| Organic Constituent | Maximum Concentration (mg/kg) | MSSL (mg/kg) | SSL (mg/kg) | LDR Treatment Standards (mg/kg) |
|---|---|---|---|---|
| Acetone | 0.013(J) | 7600 | NA | 160 |
| Methylene chloride | 0.072 | 25 | 2700 | 30 |
| Toluene | 1.0 (J) | 520 | 180 | 10 |
| Trichloroethylene | 1.8(J) | 7.6 | 18 | 6 |

(J) = estimated value between method detection limit (MDL) and practical quantification limit (PQL).
(NA) = no SSL available for this constituent

The organic constituent concentrations listed above were detected in discrete waste characterization samples collected from soil, tuff, and sediment planned for excavation and removal from SWMU 21-011(k). Since the maximum detected concentrations in the environmental media to be excavated are below the MSSLs or SSLs, the material will be managed as low-level radioactive waste unless and until it meets another listing criteria or exhibits a hazardous characteristic.

Enclosed are the validated analytical results for volatile organic compounds (VOCs) from the pre-VCM waste characterization samples collected at SWMU 21-011(k). Please note that based on the organic chemical concentrations observed for Sample Location 21-11205, Sample IDs MD21-01-0033, and -0034, three additional samples were collected from the same sample location (21-11205), Sample IDs MD21-01-0519, -0520, and –0521 in October 2001 and reanalyzed for VOCs to determine the presence or absence of acetone, methylene chloride, and 4-isopropyltoluene detected at this location in two of the samples collected in March 2001. (See Table 2.2-2 in the VCM Plan for SWMU 21-011(k), Rev. 2). None of the organic chemicals detected in the two samples collected in March 2001 from Sample Location 21-11205 were detected in the three samples collected from the same location and depths in October 2001. In addition, target analytes acetone and methylene chloride were detected in the method blank but not in the samples for Sample IDs MD21-01-0520 and -0521. Reported results for acetone, toluene and trichloroethylene are estimated because the values are less than the Practical Quantification Limit (PQL) but above the Method Detection Limit (MDL).

LANL believes that a "no longer contained in" determination for the organic constituents listed above is appropriate. It would be protective of human health and the environment, and would allow for cost-effective removal of the environmental media at SWMU 21-011(k). If you have any questions, please contact Mark Thacker at (505) 665-5342 or Woody Woodworth at (505) 665-5820.

Sincerely,

David McInroy, Acting Program Manager
Environmental Restoration Project
Los Alamos National Laboratory

Sincerely,

Everett Trollinger, Project Manager
Department of Energy
Office of Los Alamos Site Operations

DM/ET/PB/MT/eim

Enclosure: Analytical Results for Volatile Organic Compounds from Pre-VCM Waste Characterization Samples at SWMU 21-011(k)

Cy:
P. Bertino, RRES-R, MS M992
N. Quintana, RRES-R, MS 992
M. Thacker, RRES-R, MS M992
M. Wetovsky, RRES-R, MS M992
W. Woodworth, OLASO, MS A906
V. Maranville, NMED-HWB
S. Yanicak, NMED-OB
L. King, EPA Region 6
IM-5, MS A150
RPF MS M707
RRES-CT#839 File MS M992

Cy:(w/o enclosure)
D. McInroy, RRES-R, MS M992
B. Ramsey, RRES-DO, MS J591
J. Bearzi, NMED-HWB
J. Davis, NMED-SWB
J. Parker, NMED-OB
RRES-R File, MS M992

# Volatile Organic Data Validation Checklist

## Part IIa. Method Blanks Validation Criteria

| Criterion | Criterion true? (yes or no) | Action if "criterion true?" = no<br>Assign qualifier ... | List affected matrices or batches. |
|---|---|---|---|
| Was a method blank analyzed for each sample matrix and/or 12-hour batch beginning with the BFB injection? | 1a.<br>YES | 1b. **"A, V5a"** for any missing documentation.<br>In block 1c, record all sample matrices and/or analytical batches that did not include a method blank. | 1c.<br>na |

## Part IIb. Method Blanks Validation Criteria (continued)

| Criteria | Criterion true? (yes or no) | Action if "criterion true?" = yes<br>Assign qualifier & reason code... | List detected blank analyte(s) and affected samples. | Analyte concentration (mg/kg) |
|---|---|---|---|---|
| Is a target analyte detected in both the method blank and sample<br>**AND**<br>is the sample result ≤ 5 times the method-blank concentration*? | 2a.<br>no | 2b. **"U, V4"** to the sample analyte(s) in question (in blocks 2c and 2d). | 2c.<br>na | 2d.<br>na |

* Replace "5 times" with "10 times" for laboratory contaminants acetone, 2-butanone, or methylene chloride.

# Volatile Organic Data Validation Checklist

## Part IIIa. Internal Standard (IS) Validation Criteria

| Criteria | Criterion true? (yes/no) | Action if "criterion true?" = yes<br>Assign qualifier & reason code... | List all noncompliant ISs, samples, retention times, & area counts. |
|---|---|---|---|
| Are any required IS retention times *not* reported? | 1a.<br>no | 1b. **"A, V2a"** for any missing documentation.<br>In block 1c, record<br>• any ISs not reported and<br>• all affected samples. | 1c.<br>na |
| Are any required IS area counts *not* reported? | 2a.<br>no | 2b. **"A, V2a"** for any missing documentation.<br>In block 2c, record<br>• any ISs not reported and<br>• all affected samples. | 2c.<br>na |
| Is any sample IS retention time >30 seconds different from previous continuing calibration? | 3a.<br>no | 3b. **"PM, V0"** to all sample analytes quantitated against the IS in question. | 3c.<br>na |
| Are any sample IS area counts <10% of previous continuing calibration IS area counts? | 4a.<br>no | 4b. **"RPM, V2"** to all detected sample analytes quantitated against the IS in question. | 4c.<br>na |
| Are any sample IS area counts >10%<br>**AND**<br><50% of previous continuing calibration area counts? | 5a.<br>no | 5b. **"JPM, V1"** to *detected* sample analytes quantitated against the IS in question.<br>**"UJ, V1a"** to *nondetected* sample analytes quantitated against the IS in question. | 5c.<br>na |
| Is a target analyte detected in sample<br>**AND**<br>any sample IS area counts >200% of previous continuing calibration's IS area counts? | 6a.<br>no | 6b. **"JPM, V1"** to detected sample analytes quantitated against the IS in question. | 6c.<br>na |

# Volatile Organic Data Validation Checklist

## Part IIIb. Internal Standard Assignments

| 1. Pentafluorobenzene | 2. 1,4-Difluorobenzene | 3. Chlorobenzene-d4 | 4. 1,4-Dichlorobenzene-d4 |
|---|---|---|---|
| Acetone | Benzene | Bromoform | Bromobenzene |
| Bromochloromethane | Bromodichloromethane | Chlorobenzene | n-Butylbenzene |
| Bromomethane | 4-Bromofluorobenzene (*surrogate*) | Chlorodibromomethane | sec-Butylbenzene |
| 2-Butanone | Carbon tetrachloride | 1,3-Dichloropropane | tert-Butylbenzene |
| Carbon disulfide | 1,2-Dibromoethane | Ethylbenzene | 2-Chlorotoluene |
| Chloroethane | Dibromomethane | 2-Hexanone | 4-Chlorotoluene |
| Chloroform | 1,2-Dichloroethane | Styrene | 1,2-Dibromo-3-chloropropane |
| Chloromethane | 1,2-Dichloropropane | 1,1,1,2-Tetrachloroethane | 1,2-Dichlorobenzene |
| Dichlorodifluoromethane | 1,1-Dichloropropene | Tetrachloroethene | 1,3-Dichlorobenzene |
| 1,1-Dichloroethane | c-1,3-Dichloropropene | o,m,p-Xylene (mixed isomers) | 1,4-Dichlorobenzene |
| 1,1-Dichloroethene | t-1,3-Dichloropropene | | Isopropylbenzene |
| c-1,2-Dichloroethene | 1,1,2-Trichloroethane | | p-Isopropyltoluene |
| t-1,2-Dichloroethene | Toluene | | n-Propylbenzene |
| 2,2-Dichloropropane | Toluene-d8 (*surrogate*) | | 1,1,2,2,-Tetrachloroethane |
| Iodomethane | Trichloroethene | | 1,2,3-Trichloropropane |
| Methylene chloride | 4-Methyl-2-pentanone | | 1,2,4-Trimethylbenzene |
| 1,1,1-Trichloroethane | | | 1,3,5-Trimethylbenzene |
| Trichlorofluoromethane | | | |
| Vinyl chloride | | | |

The following internal standard assignments will vary: Dibromofluoromethane (surrogate) and Trichlorotrifluoroethane

# Volatile Organic Data Validation Checklist

## Required VOC Surrogate Compounds and Recovery Acceptance Ranges

| Surrogate name | Soil matrix recovery acceptance range | Water matrix recovery acceptance range |
|---|---|---|
| Toluene-d8 | 81%–117% | 88%–110% |
| 4-Bromofluorobenzene | 74%–121% | 86%–115% |
| Dibromofluoromethane | 80%–120% | 86%–118% |

# Volatile Organic Data Validation Checklist

## Part IV. Surrogate Validation Criteria

| Criteria | Criterion true? (yes/no) | Action if "criterion true?" = yes<br>Identify noncompliant surrogates *and* assign qualifier & reason code... | List all noncompliant surrogates and samples. | Percent recovery |
|---|---|---|---|---|
| Are any required surrogate percent recoveries *not* reported? | 1a.<br>NO | 1b. **"A, V3f"** for any missing documentation.<br>In block 1c, record<br>• noncompliant surrogates and<br>• all affected samples. | 1c.<br>na | 1d.<br>n/a |
| Is at least one surrogate recovery <10%? | 2a.<br>NO | 2b. **"J-, V3b"** to all *detected* sample analytes and<br>**"RPM, V3d"** to all *nondetected* sample analytes. | 2c.<br>na | 2d.<br>na |
| Is at least one surrogate percent recovery > UAL<br>**AND**<br>no surrogate percent recoveries < LAL? | 3a.<br>yes | 3b. **"J+, V3"** to all detected sample analytes. | 3c.<br>see comments | 3d.<br>na |
| Is at least one surrogate percent recovery > UAL<br>**AND**<br>at least one surrogate percent recovery <LAL? | 4a.<br>NO | 4b. **"J, V3e"** to all *detected* sample analytes and<br>**"UJ, V3e"** to all *nondetected* sample analytes. | 4c.<br>na | 4d.<br>na |
| Is at least one surrogate percent recovery < LAL<br>**AND**<br>*the same* surrogate percent recovery ≥ 10%? | 5a.<br>no | 5b. **"J-, V3a"** to all *detected* sample analytes and<br>**"UJ, V3c"** to all *nondetected* sample analytes. | 5c.<br>na | 5d.<br>na |

# Volatile Organic Data Validation Checklist

## Part V. Holding Time Validation Criteria

| Criteria | Criterion true? (yes/no) | Action if "criterion true?" = no<br>Assign qualifier & reason code... | List samples for which holding times were exceeded. | List the number of days by which holding times were exceeded. |
|---|---|---|---|---|
| Was each sample analyzed within its required holding time? | 1a.<br>yes | 1b. "**PM, V9**" to all analytes in affected samples. | 1c.<br>na | 1d.<br>na |

# Volatile Organic Data Validation Checklist

## Part VI. Tentatively Identified Compounds (TICs) Validation Criteria

| Criteria | Criterion true? (yes/no) | Action if "criterion true?" = no<br>Assign qualifier & reason code... | Samples that are missing TICs forms | Samples that contain TICs |
|---|---|---|---|---|
| Were TICs requested (i.e., an "**N**" is *not* appended to the analysis order code on the chain of custody form)<br>**AND**<br>TICs were *not* reported in at least one sample? | 1a.<br>yes | 1b. "**A, V11**" to samples that are missing documentation.<br>In block 1d, record the sample numbers of each sample for which TICs have been reported. | 1c.<br>na | 1d.<br>na |

ER-SOP-15.01

Los Alamos
Environmental Restoration Project

# GC/MS Volatiles

## Method SW8260

## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010320-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/20/2001
**Date Analyzed:** 03/20/2001

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12237

| CASNO | Target Analyte | DF | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 10 | 10 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 10 | 10 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 10 | 10 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 10 | 10 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 10 | 10 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5 | 5 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5 | 5 | U | |
| 67-64-1 | ACETONE | 1 | 30 | 30 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5 | 5 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5 | 5 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5 | 5 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 20 | 20 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5 | 5 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5 | 5 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 71-43-2 | BENZENE | 1 | 5 | 5 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5 | 5 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5 | 5 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 20 | 20 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010320-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/20/2001
**Date Analyzed:** 03/20/2001

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12237

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-88-3 | TOLUENE | 1 | 5 | 5 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 20 | 20 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5 | 5 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5 | 5 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5 | 5 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5 | 5 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5 | 5 | U | |
| 95-47-6 | O-XYLENE | 1 | 5 | 5 | U | |
| 100-42-5 | STYRENE | 1 | 5 | 5 | U | |
| 75-25-2 | BROMOFORM | 1 | 5 | 5 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5 | 5 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5 | 5 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5 | 5 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5 | 5 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5 | 5 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 10 | 10 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010320-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/20/2001
**Date Analyzed:** 03/20/2001

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12237

| | | | | | | |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5 | 5 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5 | 5 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5 | 5 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5 | 5 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 55.6 | | 50 | 111 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 48.3 | | 50 | 97 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 51.7 | | 50 | 103 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:**
**Lab ID:** VL010320-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12237

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010317-3MB

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/17/2001
**Date Analyzed:** 03/17/2001

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-2
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** UG/L
**File Name:** C8048

| CASNO | Target Analyte | DF | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 10 | 10 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 10 | 10 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 10 | 10 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 10 | 10 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 10 | 10 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5 | 5 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5 | 5 | U | |
| 67-64-1 | ACETONE | 1 | 30 | 30 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5 | 5 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5 | 5 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5 | 5 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 20 | 20 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5 | 5 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5 | 5 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 71-43-2 | BENZENE | 1 | 5 | 5 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5 | 5 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5 | 5 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 20 | 20 | U | |

**Data Package ID:** *VL0103093-1*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010317-3MB

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/17/2001
**Date Analyzed:** 03/17/2001

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-2
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** UG/L
**File Name:** C8048

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-88-3 | TOLUENE | 1 | 5 | 5 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 20 | 20 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5 | 5 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5 | 5 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5 | 5 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5 | 5 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5 | 5 | U | |
| 95-47-6 | O-XYLENE | 1 | 5 | 5 | U | |
| 100-42-5 | STYRENE | 1 | 5 | 5 | U | |
| 75-25-2 | BROMOFORM | 1 | 5 | 5 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5 | 5 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5 | 5 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5 | 5 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5 | 5 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5 | 5 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 10 | 10 | U | |

**Data Package ID:** *VL0103093-1*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010317-3MB

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/17/2001
**Date Analyzed:** 03/17/2001

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-2
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** UG/L
**File Name:** C8048

| | | | | | | |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5 | 5 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5 | 5 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5 | 5 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5 | 5 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 46 | | 50 | 92 | 86 - 115 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 45.9 | | 50 | 92 | 86 - 118 |
| 2037-26-5 | TOLUENE-D8 | 46.6 | | 50 | 93 | 88 - 110 |

**Data Package ID:** *VL0103093-1*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:**
**Lab ID:** VL010317-3MB

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 17-Mar-01
**Date Analyzed:** 17-Mar-01

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-2
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**File Name:** C8048

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-1*

# GC/MS Volatiles

## Method SW8260

## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010318-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/18/2001
**Date Analyzed:** 03/18/2001

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12221

| CASNO | Target Analyte | DF | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 10 | 10 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 10 | 10 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 10 | 10 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 10 | 10 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 10 | 10 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5 | 5 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5 | 5 | U | |
| 67-64-1 | ACETONE | 1 | 30 | 30 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5 | 5 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5 | 5 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5 | 5 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 20 | 20 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5 | 5 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5 | 5 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 71-43-2 | BENZENE | 1 | 5 | 5 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5 | 5 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5 | 5 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 20 | 20 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010318-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/18/2001
**Date Analyzed:** 03/18/2001

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12221

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-88-3 | TOLUENE | 1 | 5 | 5 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 20 | 20 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5 | 5 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5 | 5 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5 | 5 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5 | 5 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5 | 5 | U | |
| 95-47-6 | O-XYLENE | 1 | 5 | 5 | U | |
| 100-42-5 | STYRENE | 1 | 5 | 5 | U | |
| 75-25-2 | BROMOFORM | 1 | 5 | 5 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5 | 5 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5 | 5 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5 | 5 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5 | 5 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5 | 5 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 10 | 10 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010318-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/18/2001
**Date Analyzed:** 03/18/2001

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12221

| | | | | | | |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5 | 5 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5 | 5 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5 | 5 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5 | 5 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 55 | | 50 | 110 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 46.2 | | 50 | 92 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 51 | | 50 | 102 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:**
**Lab ID:** VL010318-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 18-Mar-01
**Date Analyzed:** 18-Mar-01

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12221

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010316-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/16/2001
**Date Analyzed:** 03/16/2001

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12179

| CASNO | Target Analyte | DF | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 10 | 10 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 10 | 10 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 10 | 10 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 10 | 10 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 10 | 10 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5 | 5 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5 | 5 | U | |
| 67-64-1 | ACETONE | 1 | 30 | 30 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5 | 5 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5 | 5 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5 | 5 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 20 | 20 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5 | 5 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5 | 5 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5 | 5 | U | |
| 71-43-2 | BENZENE | 1 | 5 | 5 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5 | 5 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5 | 5 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5 | 5 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 20 | 20 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010316-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/16/2001
**Date Analyzed:** 03/16/2001

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12179

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-88-3 | TOLUENE | 1 | 5 | 5 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5 | 5 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5 | 5 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 20 | 20 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5 | 5 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5 | 5 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5 | 5 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5 | 5 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5 | 5 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5 | 5 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5 | 5 | U | |
| 95-47-6 | O-XYLENE | 1 | 5 | 5 | U | |
| 100-42-5 | STYRENE | 1 | 5 | 5 | U | |
| 75-25-2 | BROMOFORM | 1 | 5 | 5 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5 | 5 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5 | 5 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5 | 5 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5 | 5 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5 | 5 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5 | 5 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5 | 5 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5 | 5 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5 | 5 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5 | 5 | U | |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 10 | 10 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Method Blank

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Lab ID:** VL010316-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 03/16/2001
**Date Analyzed:** 03/16/2001

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** N/A

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12179

| | | | | | | |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5 | 5 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5 | 5 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5 | 5 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5 | 5 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 53.8 | | 50 | 108 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 54.1 | | 50 | 108 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 50.8 | | 50 | 102 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:**
**Lab ID:** VL010316-2MB

**Sample Matrix:** SOIL
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12179

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0022
**Lab ID:** 0103093-2

**Sample Matrix:** SOIL
**% Moisture:** 13.8
**Date Collected:** 06-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12238

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 12 | 12 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 12 | 12 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 12 | 12 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 12 | 12 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 12 | 12 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5.8 | 5.8 | U | |
| 67-64-1 | ACETONE | 1 | 13 | 35 | J | |
| 74-88-4 | IODOMETHANE | 1 | 5.8 | 5.8 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5.8 | 5.8 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5.8 | 5.8 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 23 | 23 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5.8 | 5.8 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5.8 | 5.8 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5.8 | 5.8 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 71-43-2 | BENZENE | 1 | 5.8 | 5.8 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5.8 | 5.8 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5.8 | 5.8 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0022
**Lab ID:** 0103093-2

**Sample Matrix:** SOIL
**% Moisture:** 13.8
**Date Collected:** 06-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12238

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 23 | 23 | U | |
| 108-88-3 | TOLUENE | 1 | 5.8 | 5.8 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5.8 | 5.8 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 23 | 23 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5.8 | 5.8 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5.8 | 5.8 | U | |
| 95-47-6 | O-XYLENE | 1 | 5.8 | 5.8 | U | |
| 100-42-5 | STYRENE | 1 | 5.8 | 5.8 | U | |
| 75-25-2 | BROMOFORM | 1 | 5.8 | 5.8 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5.8 | 5.8 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5.8 | 5.8 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5.8 | 5.8 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 7.3 | 5.8 | | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0022
**Lab ID:** 0103093-2

**Sample Matrix:** SOIL
**% Moisture:** 13.8
**Date Collected:** 06-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12238

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 12 | 12 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5.8 | 5.8 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5.8 | 5.8 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 64 | | 58 | 110 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 57 | | 58 | 98 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 59.6 | | 58 | 103 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0022
**Lab ID:** 0103093-2

**Sample Matrix:** SOIL
**% Moisture:** 13.8
**Date Collected:** 3/6/2001
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12238

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| 80-56-8 | 10.67 | .ALPHA.-PINENE1 | 1 | 690 | UG/KG | J |
| | 10.92 | CAMPHENE | 1 | 8.3 | UG/KG | J |
| 123-35-3 | 11.09 | .BETA.-MYRCENE1 | 1 | 90 | UG/KG | J |
| | 11.24 | .BETA.-PINENE | 1 | 26 | UG/KG | J |
| | 11.48 | 3-CARENE | 1 | 1300 | UG/KG | J |
| 138-86-3 | 11.67 | LIMONENE1 | 1 | 18 | UG/KG | J |
| | 11.79 | CYCLIC COMPOUND1 | 1 | 14 | UG/KG | J |
| | 12.28 | CYCLIC COMPOUND2 | 1 | 50 | UG/KG | J |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0022
**Lab ID:** 0103093-30
**LEACH DATE:** 3/15/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 06-Mar-01
**Date Extracted:** 17-Mar-01
**Date Analyzed:** 17-Mar-01

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-1
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8051

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.007 | 0.025 | J | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0447 | | 0.05 | 89 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0451 | | 0.05 | 90 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0456 | | 0.05 | 91 | 89 - 116 |

**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0025
**Lab ID:** 0103093-5

**Sample Matrix:** SOIL
**% Moisture:** 20.1
**Date Collected:** 06-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12240

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 13 | 13 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 13 | 13 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 13 | 13 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 13 | 13 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 13 | 13 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 6.3 | 6.3 | U | |
| 67-64-1 | ACETONE | 1 | 38 | 38 | U | |
| 74-88-4 | IODOMETHANE | 1 | 6.3 | 6.3 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 6.3 | 6.3 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 6.3 | 6.3 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 25 | 25 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 67-66-3 | CHLOROFORM | 1 | 6.3 | 6.3 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 6.3 | 6.3 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 6.3 | 6.3 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 71-43-2 | BENZENE | 1 | 6.3 | 6.3 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 6.3 | 6.3 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 6.3 | 6.3 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0025
**Lab ID:** 0103093-5

**Sample Matrix:** SOIL
**% Moisture:** 20.1
**Date Collected:** 06-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12240

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 25 | 25 | U | |
| 108-88-3 | TOLUENE | 1 | 6.3 | 6.3 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 6.3 | 6.3 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 25 | 25 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 6.3 | 6.3 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 136777-61- | M+P-XYLENE | 1 | 6.3 | 6.3 | U | |
| 95-47-6 | O-XYLENE | 1 | 6.3 | 6.3 | U | |
| 100-42-5 | STYRENE | 1 | 6.3 | 6.3 | U | |
| 75-25-2 | BROMOFORM | 1 | 6.3 | 6.3 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 6.3 | 6.3 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 6.3 | 6.3 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 6.3 | 6.3 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 6.3 | 6.3 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0025
**Lab ID:** 0103093-5

**Sample Matrix:** SOIL
**% Moisture:** 20.1
**Date Collected:** 06-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12240

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 13 | 13 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 6.3 | 6.3 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 6.3 | 6.3 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 75.1 | | 62.6 | 120 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 61.4 | | 62.6 | 98 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 64.1 | | 62.6 | 102 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0025
**Lab ID:** 0103093-5

**Sample Matrix:** SOIL
**% Moisture:** 20.1
**Date Collected:** 3/6/2001
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12240

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0025
**Lab ID:** 0103093-33
**LEACH DATE:** 3/15/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 06-Mar-01
**Date Extracted:** 17-Mar-01
**Date Analyzed:** 17-Mar-01

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-1
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8054

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0476 | | 0.05 | 95 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0481 | | 0.05 | 96 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0492 | | 0.05 | 98 | 89 - 116 |

**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0033
**Lab ID:** 0103093-13

**Sample Matrix:** SOIL
**% Moisture:** 12.3
**Date Collected:** 07-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12245

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 11 | 11 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 11 | 11 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 11 | 11 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 11 | 11 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 11 | 11 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5.7 | 5.7 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5.7 | 5.7 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5.7 | 5.7 | U | |
| 67-64-1 | ACETONE | 1 | 34 | 34 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5.7 | 5.7 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5.7 | 5.7 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5.7 | 5.7 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5.7 | 5.7 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5.7 | 5.7 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5.7 | 5.7 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 23 | 23 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5.7 | 5.7 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5.7 | 5.7 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5.7 | 5.7 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5.7 | 5.7 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5.7 | 5.7 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5.7 | 5.7 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5.7 | 5.7 | U | |
| 71-43-2 | BENZENE | 1 | 5.7 | 5.7 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5.7 | 5.7 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5.7 | 5.7 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5.7 | 5.7 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5.7 | 5.7 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5.7 | 5.7 | U | |

**Data Package ID:** *VL0103093-2*

BSM

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0033
**Lab ID:** 0103093-13

**Sample Matrix:** SOIL
**% Moisture:** 12.3
**Date Collected:** 07-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12245

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 23 | 23 | U | |
| 108-88-3 | TOLUENE | 1 | 5.7 | 5.7 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5.7 | 5.7 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5.7 | 5.7 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 23 | 23 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5.7 | 5.7 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5.7 | 5.7 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5.7 | 5.7 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5.7 | 5.7 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5.7 | 5.7 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5.7 | 5.7 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5.7 | 5.7 | U | |
| 95-47-6 | O-XYLENE | 1 | 5.7 | 5.7 | U | |
| 100-42-5 | STYRENE | 1 | 5.7 | 5.7 | U | |
| 75-25-2 | BROMOFORM | 1 | 5.7 | 5.7 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5.7 | 5.7 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5.7 | 5.7 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5.7 | 5.7 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5.7 | 5.7 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5.7 | 5.7 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5.7 | 5.7 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5.7 | 5.7 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5.7 | 5.7 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5.7 | 5.7 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5.7 | 5.7 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0033
**Lab ID:** 0103093-13

**Sample Matrix:** SOIL
**% Moisture:** 12.3
**Date Collected:** 07-Mar-01
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12245

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 11 | 11 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5.7 | 5.7 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5.7 | 5.7 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5.7 | 5.7 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5.7 | 5.7 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 63.5 | | 57 | 111 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 57.5 | | 57 | 101 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 60.1 | | 57 | 105 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0033
**Lab ID:** 0103093-13

**Sample Matrix:** SOIL
**% Moisture:** 12.3
**Date Collected:** 3/7/2001
**Date Extracted:** 20-Mar-01
**Date Analyzed:** 20-Mar-01

**Prep Batch:** VL010320-2
**QCBatchID:** VL010320-2-1
**Run ID:** VL010320-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12245

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | 4.60 | ETHANOL | 1 | 7.3 | UG/KG | J |
| 80-56-8 | 10.66 | .ALPHA.-PINENE1 | 1 | 82 | UG/KG | J |
| | 11.24 | .BETA.-PINENE | 1 | 47 | UG/KG | J |
| | 11.47 | 3-CARENE | 1 | 45 | UG/KG | J |

Psm

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0033
**Lab ID:** 0103093-41
**LEACH DATE:** 3/16/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 07-Mar-01
**Date Extracted:** 17-Mar-01
**Date Analyzed:** 17-Mar-01

**Prep Batch:** VL010317-3
**QCBatchID:** VL010317-3-1
**Run ID:** VL010317-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8063

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0463 | | 0.05 | 93 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0477 | | 0.05 | 95 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0474 | | 0.05 | 95 | 89 - 116 |

**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0034
**Lab ID:** 0103093-14

**Sample Matrix:** SOIL
**% Moisture:** 17.2
**Date Collected:** 07-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12199

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 12 | 12 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 12 | 12 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 12 | 12 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 12 | 12 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 12 | 12 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 6 | 6 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 6 | 6 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 6 | 6 | U | |
| 67-64-1 | ACETONE | 1 | 50 | 36 | | |
| 74-88-4 | IODOMETHANE | 1 | 6 | 6 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 6 | 6 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 72 | 6 | | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 6 | 6 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 6 | 6 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 6 | 6 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 24 | 24 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 6 | 6 | U | |
| 67-66-3 | CHLOROFORM | 1 | 6 | 6 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 6 | 6 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 6 | 6 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 6 | 6 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 6 | 6 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 6 | 6 | U | |
| 71-43-2 | BENZENE | 1 | 6 | 6 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 6 | 6 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 6 | 6 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 6 | 6 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 6 | 6 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 6 | 6 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0034
**Lab ID:** 0103093-14

**Sample Matrix:** SOIL
**% Moisture:** 17.2
**Date Collected:** 07-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12199

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 24 | 24 | U | |
| 108-88-3 | TOLUENE | 1 | 6 | 6 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 6 | 6 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 6 | 6 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 24 | 24 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 6 | 6 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 6 | 6 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 6 | 6 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 6 | 6 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 6 | 6 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 6 | 6 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 6 | 6 | U | |
| 136777-61- | M+P-XYLENE | 1 | 6 | 6 | U | |
| 95-47-6 | O-XYLENE | 1 | 6 | 6 | U | |
| 100-42-5 | STYRENE | 1 | 6 | 6 | U | |
| 75-25-2 | BROMOFORM | 1 | 6 | 6 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 6 | 6 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 6 | 6 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 6 | 6 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 6 | 6 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 6 | 6 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 6 | 6 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 6 | 6 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 6 | 6 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 6 | 6 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 6 | 6 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 6 | 6 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 6 | 6 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 26 | 6 | | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 6 | 6 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 6 | 6 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 6 | 6 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0034
**Lab ID:** 0103093-14

**Sample Matrix:** SOIL
**% Moisture:** 17.2
**Date Collected:** 07-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12199

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 12 | 12 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 6 | 6 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 6 | 6 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 6 | 6 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 6 | 6 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 55.7 | | 60.4 | 92 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 72 | | 60.4 | 119 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 58.2 | | 60.4 | 96 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0034
**Lab ID:** 0103093-14

**Sample Matrix:** SOIL
**% Moisture:** 17.2
**Date Collected:** 3/7/2001
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12199

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| 80-56-8 | 10.68 | .ALPHA.-PINENE1 | 1 | 4800 | UG/KG | J |
| | 10.93 | CAMPHENE | 1 | 250 | UG/KG | J |
| 123-35-3 | 11.09 | .BETA.-MYRCENE1 | 1 | 430 | UG/KG | J |
| | 11.25 | .BETA.-PINENE | 1 | 4000 | UG/KG | J |
| | 11.49 | 3-CARENE | 1 | 970 | UG/KG | J |
| 99-86-5 | 11.56 | 1-METHYL-4-(1-METHYLETHYL)-1,3-CYC | 1 | 130 | UG/KG | J |
| 138-86-3 | 11.68 | LIMONENE1 | 1 | 450 | UG/KG | J |
| | 11.79 | CYCLIC COMPOUND1 | 1 | 160 | UG/KG | J |
| | 11.94 | CYCLIC COMPOUND2 | 1 | 79 | UG/KG | J |
| | 12.28 | CYCLIC COMPOUND3 | 1 | 210 | UG/KG | J |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0034
**Lab ID:** 0103093-42
**LEACH DATE:** 3/17/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 07-Mar-01
**Date Extracted:** 19-Mar-01
**Date Analyzed:** 19-Mar-01

**Prep Batch:** VL010319-3
**QCBatchID:** VL010319-3-1
**Run ID:** VL010319-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8079

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0506 | | 0.05 | 101 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0503 | | 0.05 | 101 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0511 | | 0.05 | 102 | 89 - 116 |

pd

**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0036
**Lab ID:** 0103093-16

**Sample Matrix:** SOIL
**% Moisture:** 13.9
**Date Collected:** 08-Mar-01
**Date Extracted:** 18-Mar-01
**Date Analyzed:** 18-Mar-01

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12225

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 12 | 12 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5.8 | 5.8 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5.8 | 5.8 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 68.9 | | 58.1 | 119 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 56.4 | | 58.1 | 97 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 60.4 | | 58.1 | 104 | 81 - 117 |

pm

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0036
**Lab ID:** 0103093-16

**Sample Matrix:** SOIL
**% Moisture:** 13.9
**Date Collected:** 08-Mar-01
**Date Extracted:** 18-Mar-01
**Date Analyzed:** 18-Mar-01

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG

**File Name:** B12225

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 12 | 12 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 12 | 12 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 12 | 12 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 12 | 12 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 12 | 12 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5.8 | 5.8 | U | |
| 67-64-1 | ACETONE | 1 | 35 | 35 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5.8 | 5.8 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5.8 | 5.8 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 5.8 | 5.8 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 23 | 23 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5.8 | 5.8 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5.8 | 5.8 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5.8 | 5.8 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 71-43-2 | BENZENE | 1 | 5.8 | 5.8 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5.8 | 5.8 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5.8 | 5.8 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0036
**Lab ID:** 0103093-16

**Sample Matrix:** SOIL
**% Moisture:** 13.9
**Date Collected:** 08-Mar-01
**Date Extracted:** 18-Mar-01
**Date Analyzed:** 18-Mar-01

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12225

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 23 | 23 | U | |
| 108-88-3 | TOLUENE | 1 | 5.8 | 5.8 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5.8 | 5.8 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 23 | 23 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5.8 | 5.8 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5.8 | 5.8 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5.8 | 5.8 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5.8 | 5.8 | U | |
| 95-47-6 | O-XYLENE | 1 | 5.8 | 5.8 | U | |
| 100-42-5 | STYRENE | 1 | 5.8 | 5.8 | U | |
| 75-25-2 | BROMOFORM | 1 | 5.8 | 5.8 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5.8 | 5.8 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5.8 | 5.8 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5.8 | 5.8 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5.8 | 5.8 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5.8 | 5.8 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5.8 | 5.8 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5.8 | 5.8 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260
## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0036
**Lab ID:** 0103093-16

**Sample Matrix:** SOIL
**% Moisture:** 13.9
**Date Collected:** 08-Mar-01
**Date Extracted:** 18-Mar-01
**Date Analyzed:** 18-Mar-01

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12225

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 12 | 12 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5.8 | 5.8 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5.8 | 5.8 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5.8 | 5.8 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 68.9 | | 58.1 | 119 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 56.4 | | 58.1 | 97 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 60.4 | | 58.1 | 104 | 81 - 117 |

pm

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0036
**Lab ID:** 0103093-16

**Sample Matrix:** SOIL
**% Moisture:** 13.9
**Date Collected:** 3/8/2001
**Date Extracted:** 18-Mar-01
**Date Analyzed:** 18-Mar-01

**Prep Batch:** VL010318-2
**QCBatchID:** VL010318-2-1
**Run ID:** VL010318-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12225

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0036
**Lab ID:** 0103093-44
**LEACH DATE:** 3/17/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 08-Mar-01
**Date Extracted:** 19-Mar-01
**Date Analyzed:** 19-Mar-01

**Prep Batch:** VL010319-3
**QCBatchID:** VL010319-3-1
**Run ID:** VL010319-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8081

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0491 | | 0.05 | 98 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0492 | | 0.05 | 98 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.05 | | 0.05 | 100 | 89 - 116 |

**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0039
**Lab ID:** 0103093-19

**Sample Matrix:** SOIL
**% Moisture:** 15.6
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12202

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 12 | 12 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 12 | 12 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 12 | 12 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 12 | 12 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 12 | 12 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 5.9 | 5.9 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 5.9 | 5.9 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 5.9 | 5.9 | U | |
| 67-64-1 | ACETONE | 1 | 36 | 36 | U | |
| 74-88-4 | IODOMETHANE | 1 | 5.9 | 5.9 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 5.9 | 5.9 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 7.6 | 5.9 | | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 5.9 | 5.9 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 5.9 | 5.9 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 5.9 | 5.9 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 24 | 24 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 5.9 | 5.9 | U | |
| 67-66-3 | CHLOROFORM | 1 | 5.9 | 5.9 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 5.9 | 5.9 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 5.9 | 5.9 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 5.9 | 5.9 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 5.9 | 5.9 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 5.9 | 5.9 | U | |
| 71-43-2 | BENZENE | 1 | 5.9 | 5.9 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 5.9 | 5.9 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 5.9 | 5.9 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 5.9 | 5.9 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 5.9 | 5.9 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 5.9 | 5.9 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0039
**Lab ID:** 0103093-19

**Sample Matrix:** SOIL
**% Moisture:** 15.6
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12202

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 24 | 24 | U | |
| 108-88-3 | TOLUENE | 1 | 5.9 | 5.9 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 5.9 | 5.9 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 5.9 | 5.9 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 24 | 24 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 5.9 | 5.9 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 5.9 | 5.9 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 5.9 | 5.9 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 5.9 | 5.9 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 5.9 | 5.9 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 5.9 | 5.9 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 136777-61- | M+P-XYLENE | 1 | 5.9 | 5.9 | U | |
| 95-47-6 | O-XYLENE | 1 | 5.9 | 5.9 | U | |
| 100-42-5 | STYRENE | 1 | 5.9 | 5.9 | U | |
| 75-25-2 | BROMOFORM | 1 | 5.9 | 5.9 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 5.9 | 5.9 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 5.9 | 5.9 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 5.9 | 5.9 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 5.9 | 5.9 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 5.9 | 5.9 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 5.9 | 5.9 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 5.9 | 5.9 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 5.9 | 5.9 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 5.9 | 5.9 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 5.9 | 5.9 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0039
**Lab ID:** 0103093-19

**Sample Matrix:** SOIL
**% Moisture:** 15.6
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12202

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 12 | 12 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 5.9 | 5.9 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 5.9 | 5.9 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 5.9 | 5.9 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 5.9 | 5.9 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 67.9 | | 59.2 | 115 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 68.4 | | 59.2 | 116 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 62 | | 59.2 | 105 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0039
**Lab ID:** 0103093-19

**Sample Matrix:** SOIL
**% Moisture:** 15.6
**Date Collected:** 3/8/2001
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12202

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0039
**Lab ID:** 0103093-47
**LEACH DATE:** 3/17/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 08-Mar-01
**Date Extracted:** 19-Mar-01
**Date Analyzed:** 19-Mar-01

**Prep Batch:** VL010319-3
**QCBatchID:** VL010319-3-1
**Run ID:** VL010319-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8084

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0495 | | 0.05 | 99 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0537 | | 0.05 | 107 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0513 | | 0.05 | 103 | 89 - 116 |

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**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0041
**Lab ID:** 0103093-21

**Sample Matrix:** SOIL
**% Moisture:** 21
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12203

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 13 | 13 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 13 | 13 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 13 | 13 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 13 | 13 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 13 | 13 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 6.3 | 6.3 | U | |
| 67-64-1 | ACETONE | 1 | 38 | 38 | U | |
| 74-88-4 | IODOMETHANE | 1 | 6.3 | 6.3 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 6.3 | 6.3 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 8.2 | 6.3 | | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 25 | 25 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 67-66-3 | CHLOROFORM | 1 | 6.3 | 6.3 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 6.3 | 6.3 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 6.3 | 6.3 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 71-43-2 | BENZENE | 1 | 6.3 | 6.3 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 6.3 | 6.3 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 6.3 | 6.3 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0041
**Lab ID:** 0103093-21

**Sample Matrix:** SOIL
**% Moisture:** 21
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12203

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 25 | 25 | U | |
| 108-88-3 | TOLUENE | 1 | 6.3 | 6.3 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 6.3 | 6.3 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 25 | 25 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 6.3 | 6.3 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 6.3 | 6.3 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 6.3 | 6.3 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 136777-61- | M+P-XYLENE | 1 | 6.3 | 6.3 | U | |
| 95-47-6 | O-XYLENE | 1 | 6.3 | 6.3 | U | |
| 100-42-5 | STYRENE | 1 | 6.3 | 6.3 | U | |
| 75-25-2 | BROMOFORM | 1 | 6.3 | 6.3 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 6.3 | 6.3 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 6.3 | 6.3 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 6.3 | 6.3 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 6.3 | 6.3 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 6.3 | 6.3 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 6.3 | 6.3 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 6.3 | 6.3 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0041
**Lab ID:** 0103093-21

**Sample Matrix:** SOIL
**% Moisture:** 21
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12203

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 13 | 13 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 6.3 | 6.3 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 6.3 | 6.3 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 6.3 | 6.3 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 73.8 | | 63.3 | 117 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 72.5 | | 63.3 | 115 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 63.3 | | 63.3 | 100 | 81 - 117 |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0041
**Lab ID:** 0103093-21

**Sample Matrix:** SOIL
**% Moisture:** 21
**Date Collected:** 3/8/2001
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12203

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0041
**Lab ID:** 0103093-49
**LEACH DATE:** 3/18/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 08-Mar-01
**Date Extracted:** 19-Mar-01
**Date Analyzed:** 19-Mar-01

**Prep Batch:** VL010319-3
**QCBatchID:** VL010319-3-1
**Run ID:** VL010319-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8087

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0504 | | 0.05 | 101 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0502 | | 0.05 | 100 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0507 | | 0.05 | 101 | 89 - 116 |

**Data Package ID:** *VL0103093-3*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0042
**Lab ID:** 0103093-22

**Sample Matrix:** SOIL
**% Moisture:** 30
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12204

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 14 | 14 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 14 | 14 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 14 | 14 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 14 | 14 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 14 | 14 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 7.1 | 7.1 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 7.1 | 7.1 | U | |
| 76-13-1 | TRICHLOROTRIFLUOROETHANE | 1 | 7.1 | 7.1 | U | |
| 67-64-1 | ACETONE | 1 | 43 | 43 | U | |
| 74-88-4 | IODOMETHANE | 1 | 7.1 | 7.1 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 7.1 | 7.1 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 9.2 | 7.1 | | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 7.1 | 7.1 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 7.1 | 7.1 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 7.1 | 7.1 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 29 | 29 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 7.1 | 7.1 | U | |
| 67-66-3 | CHLOROFORM | 1 | 7.1 | 7.1 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 7.1 | 7.1 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 7.1 | 7.1 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 7.1 | 7.1 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 7.1 | 7.1 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 7.1 | 7.1 | U | |
| 71-43-2 | BENZENE | 1 | 7.1 | 7.1 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 7.1 | 7.1 | U | |
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 7.1 | 7.1 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 7.1 | 7.1 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 7.1 | 7.1 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 7.1 | 7.1 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0042
**Lab ID:** 0103093-22

**Sample Matrix:** SOIL
**% Moisture:** 30
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12204

| | | | | | | |
|---|---|---|---|---|---|---|
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 29 | 29 | U | |
| 108-88-3 | TOLUENE | 1 | 7.1 | 7.1 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 7.1 | 7.1 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 7.1 | 7.1 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 29 | 29 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 7.1 | 7.1 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 7.1 | 7.1 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 7.1 | 7.1 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 7.1 | 7.1 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 7.1 | 7.1 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 7.1 | 7.1 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 136777-61- | M+P-XYLENE | 1 | 7.1 | 7.1 | U | |
| 95-47-6 | O-XYLENE | 1 | 7.1 | 7.1 | U | |
| 100-42-5 | STYRENE | 1 | 7.1 | 7.1 | U | |
| 75-25-2 | BROMOFORM | 1 | 7.1 | 7.1 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 7.1 | 7.1 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 7.1 | 7.1 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 7.1 | 7.1 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 7.1 | 7.1 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 7.1 | 7.1 | U | |
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 7.1 | 7.1 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 7.1 | 7.1 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 7.1 | 7.1 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 7.1 | 7.1 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 7.1 | 7.1 | U | |

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0042
**Lab ID:** 0103093-22

**Sample Matrix:** SOIL
**% Moisture:** 30
**Date Collected:** 08-Mar-01
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**Result Units:** UG/KG
**File Name:** B12204

| | | | | | | |
|---|---|---|---|---|---|---|
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 14 | 14 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 7.1 | 7.1 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 7.1 | 7.1 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 7.1 | 7.1 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 7.1 | 7.1 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 78.9 | | 71.4 | 110 | 74 - 121 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 84.3 | | 71.4 | 118 | 80 - 120 |
| 2037-26-5 | TOLUENE-D8 | 74.1 | | 71.4 | 104 | 81 - 117 |

P.Sm

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260

## Tentatively Identified Compounds

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0042
**Lab ID:** 0103093-22

**Sample Matrix:** SOIL
**% Moisture:** 30
**Date Collected:** 3/8/2001
**Date Extracted:** 16-Mar-01
**Date Analyzed:** 16-Mar-01

**Prep Batch:** VL010316-2
**QCBatchID:** VL010316-2-1
**Run ID:** VL010316-2A
**Cleanup:** NONE
**Basis:** Dry Weight

**Sample Aliquot:** 5 G
**Final Volume:** 5 ML
**File Name:** B12204

| CASNO | Retention Time | Target Analyte | Dilution Factor | Result | Units | Qualifier |
|---|---|---|---|---|---|---|
| | | NONE DETECTED | 1 | | | |

Pa

**Data Package ID:** *VL0103093-2*

# GC/MS Volatiles

## Method SW8260--TCLP Leachate

## Sample Results

**Lab Name:** Paragon Analytics, Inc.
**Work Order Number:** 0103093
**Client Name:** Los Alamos National Laboratory SMO
**ClientProject ID:** 8445R

**Field ID:** MD21-01-0042
**Lab ID:** 0103093-50
**LEACH DATE:** 3/18/2001

**Sample Matrix:** LEACHATE
**% Moisture:** N/A
**Date Collected:** 08-Mar-01
**Date Extracted:** 19-Mar-01
**Date Analyzed:** 19-Mar-01

**Prep Batch:** VL010319-3
**QCBatchID:** VL010319-3-1
**Run ID:** VL010319-3A
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 5 ML
**Final Volume:** 5 ML
**Result Units:** MG/L
**File Name:** C8088

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|
| 75-01-4 | VINYL CHLORIDE | 5 | 0.05 | 0.05 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 78-93-3 | 2-BUTANONE | 5 | 0.1 | 0.1 | U | |
| 67-66-3 | CHLOROFORM | 5 | 0.025 | 0.025 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 5 | 0.025 | 0.025 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 5 | 0.025 | 0.025 | U | |
| 71-43-2 | BENZENE | 5 | 0.025 | 0.025 | U | |
| 79-01-6 | TRICHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 127-18-4 | TETRACHLOROETHENE | 5 | 0.025 | 0.025 | U | |
| 108-90-7 | CHLOROBENZENE | 5 | 0.025 | 0.025 | U | |

## Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|---|---|---|---|---|---|---|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 0.0483 | | 0.05 | 97 | 82 - 123 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 0.0494 | | 0.05 | 99 | 75 - 127 |
| 2037-26-5 | TOLUENE-D8 | 0.0503 | | 0.05 | 101 | 89 - 116 |

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**Data Package ID:** *VL0103093-3*