ON SITE
TECHNOLOGIES, LTD.

OFF: (505) 325-5667
LAB: (505) 325-1556

Denny E. Foust
DEPUTY OIL & GAS INSPECTOR

FEB 06 1998

Approved

October 7, 1997

Mr. Bill Olson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Project # 4-1306

T-4-23N-7W

RE: Resubmittal of Pit Closure report for D. J. Simmons' Dunn Federal # 1

On behalf of D. J. Simmons, On Site Technologies Limited Partnership, is submitting the enclosed "Pit Remediation and Closure" (PRC) forms for Dunn Federal #1 dehydrator pit. The PRC has been revised following re-sampling and analytical testing of the former pits areas. The re-sampling and testing was done in response to your letter denying closure approval dated 5/19/97, and per discussions with you. Included with this report are laboratory results, Chains of Custody and QA/QC documentation.

Thank you for your time and consideration.

Respectfully submitted:

Larry Trujillo
Environmental Technician
***On Site Technologies Limited Partnership***

Enclosure: Pit Closure and Remediation Report
- Summary
- Lab results
- COC
- QA/QC

CC: Denny Foust
John Byrom
Bill Leise

District I

P.O. Box 1980, Hobbs, NM

District II

P.O. Drawer DD, Artesia, NM 88211

District III

1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico

Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY TO APPROPRIATE DISTRICT OFFICE AND 1 COPY TO SANTA FE OFFICE

(Revised 3/9/94)

# PIT REMEDIATION AND CLOSURE REPORT

**Operator:** D. J. Simmons **Telephone:** 505-326-3753

**Address:** 3005 Northridge Drive, Suite L, Farmington, NM 87401

**Facility Or Well Name:** Dunn Federal # 1

**Location:** Unit or Qtr/Qtr J Sec 4 T ~~29~~ 23W R7 County Rio Arriba

**Pit Type:** Separator ____ Dehydrator X Other ____

**Land Type:** BLM X, State ____, Fee ____, Other ____

**Pit Location:** (Attach diagram)

Pit dimensions: length 18' width 15, depth 1.5'

Reference: wellhead X, other ____,

Footage from reference: 156',

Direction from reference: 48 Degrees X East North X of West South ____,

| | | |
|---|---|---|
| **Depth To Ground Water:** (Vertical distance from contaminants to seasonal high water elevation of ground water) | Less than 50 feet | (20 points) |
| | 50 feet to 99 feet | (10 points) |
| | Greater than 100 feet | (0 points) |
| | 0 , | |
| **Wellhead Protection Area:** (Less than 200 feet from a private domestic water source, or; less than 1000 feet from all other water sources) | Yes | (20 points) |
| | No | (0 points) |
| | 0 , | |
| **Distance To Surface Water:** (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches) | Less than 200 feet | (20 points) |
| | 200 feet to 1000 feet | (10 points) |
| | Greater than 1000 feet | (0 points) |
| | 0 , | |
| | **RANKING SCORE (TOTAL POINTS):** 0 . | |

**Date Remediation Started:** 9- 6 - 1996 **Date Completed:** 9-26-96

**Remediation Method:** (Check all appropriate sections) Excavation X Approx. cubic yards 6 ,

Landfarmed _____ Insitu Bioremediation _____

Other: Contaminated soils were blended with uncontaminated soils and placed back in pit

**Remediation Location:** (ie. landfarmed onsite, name and location of offsite facility) Onsite X Offsite _____

**General Description Of Remedial Action:** To determine vertical extent of contamination two trenches were dug across the pit. Vertical extent was determined to extend no more then 18 to 20 inches. Initial PID reading of contaminated soils was 1140.0 ppm. A total of 6 cubic yards of contaminated soil was excavated and blended with uncontaminated soil and placed in pit excavation. PID reading of clean soil immediately below contaminated soil was 22"ppm for location ""A" and 15 ppm for location B".

Pit re-sampled on June 6, 1997 see attached summary.

**Ground Water Encountered:** No X Yes ____ Depth _____

**Final Pit:**
**Closure Sampling:**
(if multiple samples, attach sample results and diagram of sample locations and depths)

**Sample location:**, 5 Point composite sample of treated soil shown below

**Re-sample:** center of pit at 4' and NE corner at 5'

**Sample depth** 18"

**Re-sample depth** 4' and 5' below bottom of pit

**Sample date:** 9-26-96 **time:** 1330 hours

**Re-sample date:** 6-6-97 **time:** 1330 hours

**Sample Results**

(9-26-96)

Benzene (ppm) 0.0018

Total BTEX (ppm) 0.67

Field headspace (ppm) 93

TPH 439.5

*** re-sample data on summary sheet attached**

**Ground Water Sample:** Yes ____ No X (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE 10/7/97

SIGNATURE John A Byrom

PRINTED NAME AND TITLE JOHN A. BYROM OPERATIONS MGR.

PIT TESTING PROCEDURES, ANALYSES AND CLOSURE OF

DUNN FEDERAL # 1

1830' FSL & 1760'FEL, Sec 4, T-23-N, R-7-W, Rio Arriba County, NM

The D.J. Simmons Company, Ltd. recently acquired several gas properties. Only one location, the Dunn Federal # 1, had an old dehy pit located just off the north edge of the well pad. Since this is an old location, has just been recently purchased in a package deal and no other locations have pits due remediation, no pit closure plan was submitted. The following report details remediation on the Dunn Federal # 1.

On August 14 and 15, 1996, Mr. Robert Crabb of On Site Technologies, Ltd., obtained soil samples at the Dunn Federal # 1. A total of four samples were taken. All samples were taken with a hand auger. The first sample was taken at "Hole # 1" (see Exhibit A) at a depth of 12 feet. The soil was a sandy loam and exhibited very little moisture. The laboratory BTEX analysis for this sample was 10.3 PPM with a Benzene reading of < 0.2 PPM. Two samples were taken at Hole # 2, one at a depth of 6 feet and another at 12 feet. The decision to take two samples at this location was because the general terrain flows in the direction of hole # 2. The BTEX for the six foot level was 11.8 PPM and the 12 foot level was 4. 8 PPM. The third test hole sample was taken at a depth of 6 feet. This particular hole was augured down and through the existing stained soil. The BTEX analysis of this location was 48.8 PPM.

During testing, it was noted that a very fine sand existed to a depth of 6 feet, followed by approximately one foot of clay with 12 to 15 inches of sandy loam below that and remainder (to TD of 12 feet) was sand with very light moisture. The contamination seemed to be limited to the stained area (approximately 18'X15') and should be restricted in depth due to the heavy clay layer at 7 feet. Staining was very heavy with a small amount of free product showing.

On September 6, 1996, Mr. Crabb of On Site Technologies, Ltd. had a backhoe on the location and remediation was accomplished by mixing and fluffing the soil. Two trenches were dug across the contaminated soil to determine the vertical depth of the contamination. It was discovered that the contamination extended only 18 to 20 inches and did not extend horizontally any more than noted on the surface. Calculations showed that the total contaminated soil consisted of 6 cubic yards. A total of 120 cubic yards was extracted and used to mix with the contaminated soil yielding a contaminated to clean soil ratio of 1 to 20. A PID reading was taken of the clean soil immediately below the contaminated soil in both trenches (see Exhibit B). These PID readings showed to be 22 PPM for location "A" and 15 PPM at location "B". Soil treatment was then begun. The soil was mixed and fluffed three times. A three point composite of the treated soil was then run for a PID reading. This composite showed to be 327 PPM. Work was completed at 12:30 PM.

On September 26, Mr. Crabb was on site and took a PID reading from a sample taken from the center of the remediated pit. This sample was taken at depth of 12 inches. The PID reading for this sample was 93 ppm. A 5 point composite was taken from the center, the south, north, east and west edges of the treated soil. This sample was delivered to On Site Laboratory for BTEX 8020 and TPH 8015 methods. Each of the samples were taken at a depth of 18 inches. The TPH total for the 5 point composite was 439.5 ppm. The Benzene analysis was 0.0018 ppm and total BTEX was 0.67 ppm

## RE-ASSESSMENT SUMMARY

On June 6, 1997 Larry Trujillo of On Site ,as per conversation with Bill Olson of NMOCD, Dunn Federal #1 was re-sampled to a depth of at least 3' below the bottom center of the former pit. Using a hand auger, two sample holes were dug. The first was at the approximate center of the former pit to a depth of 4 feet below bottom of pit. A second sample hole was dug at the northeast wall and downgradent from center of the pit. The second sample was taken from a depth of 5 feet. The depth of each hole was measured using a steel tape.

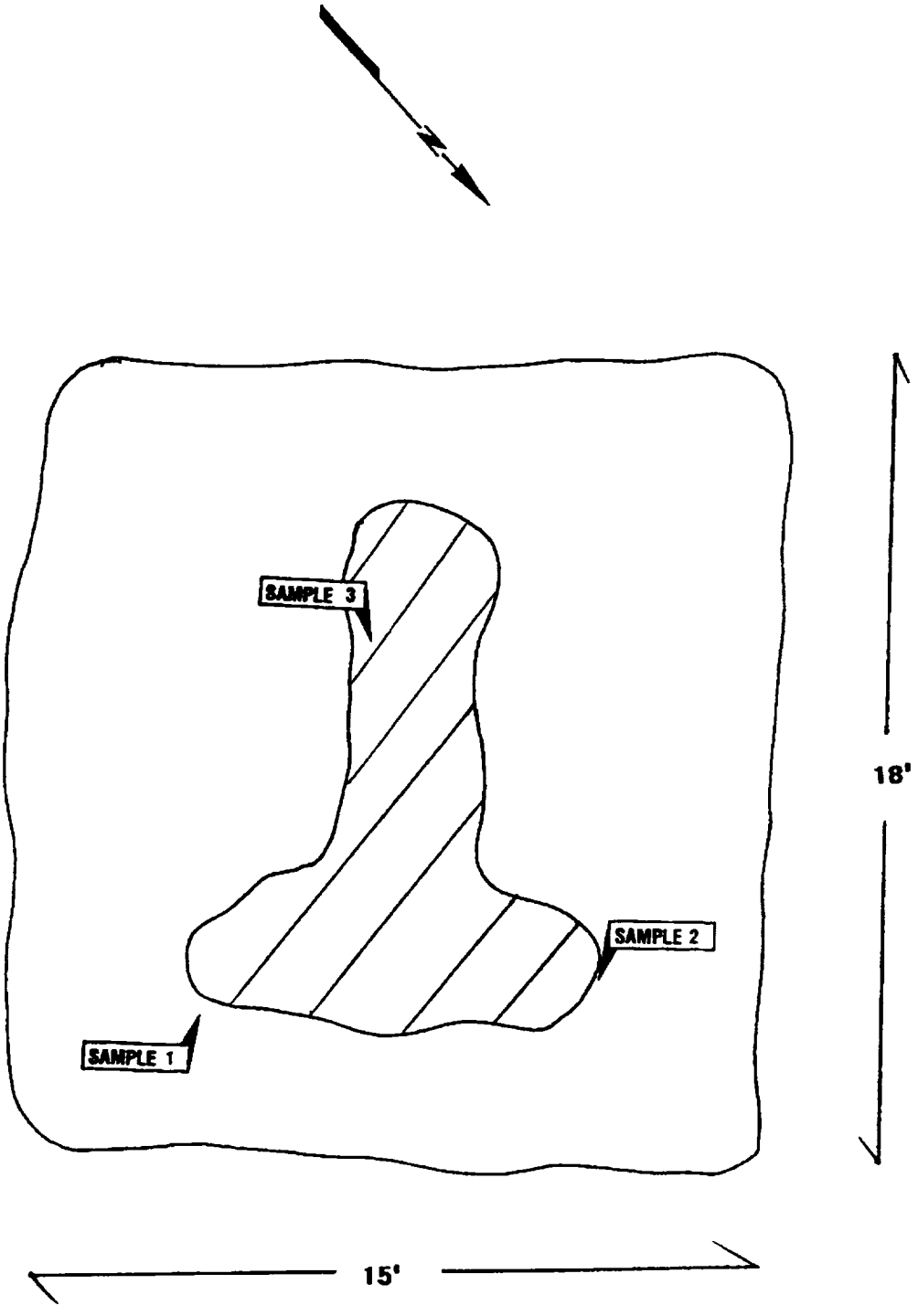
Each sample was field tested by the Heated Headspace Method using a MICROTIP®MP-100 organic vapor analyzer with photo ionizing detector (PID). Following PID measurement, samples were sealed in 4-ounce jars labeled and delivered on ice in an ice chest to On Site's Laboratory for analysis. Proper Chain-of-Custody was followed.

Samples were tested for TPH per EPA Method 8015. The following table summarizes the field and lab results

| Sample | Time | PID Units | Total TPH (ppm) |
|---|---|---|---|
| S-1 @ 4 ft. | 0908 | 66.1 | 1051.6 |
| S-2 @ 5 ft. | 0913 | 18.1 | 11.0 |

ND = Not Detected At Limit of Quantitation

ATTACHMENTS
Lab Results
QA/QC
Chain of Custody
Site Map




Stained Area

EXHIBIT A

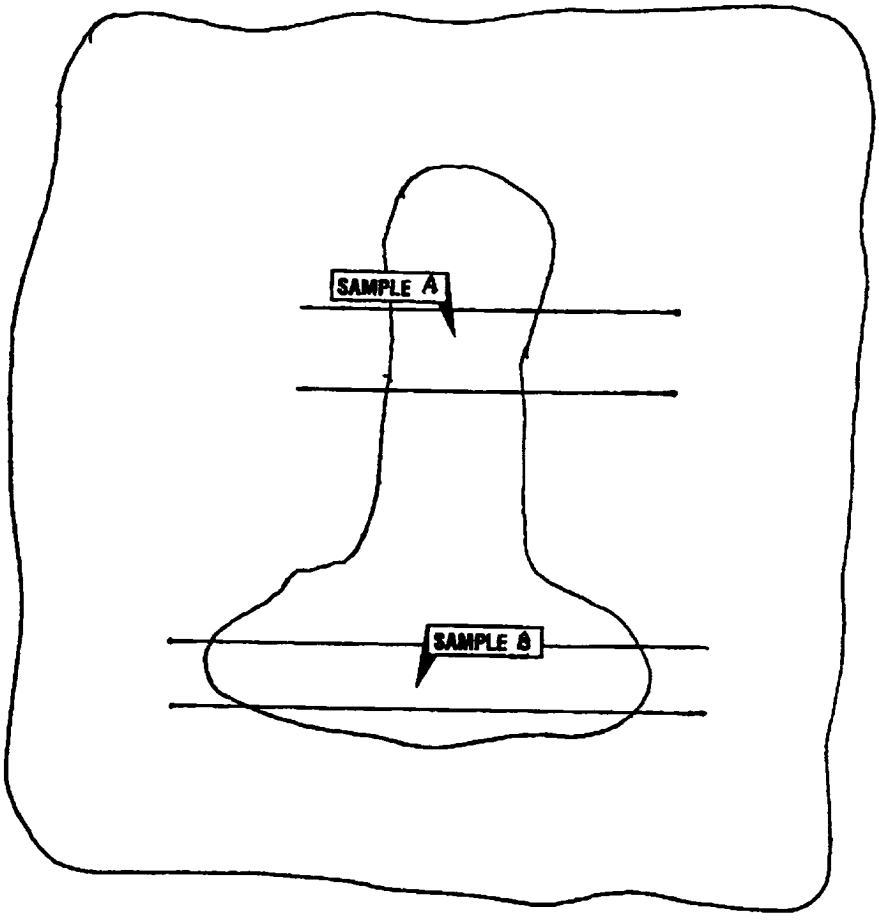



EXHIBIT B

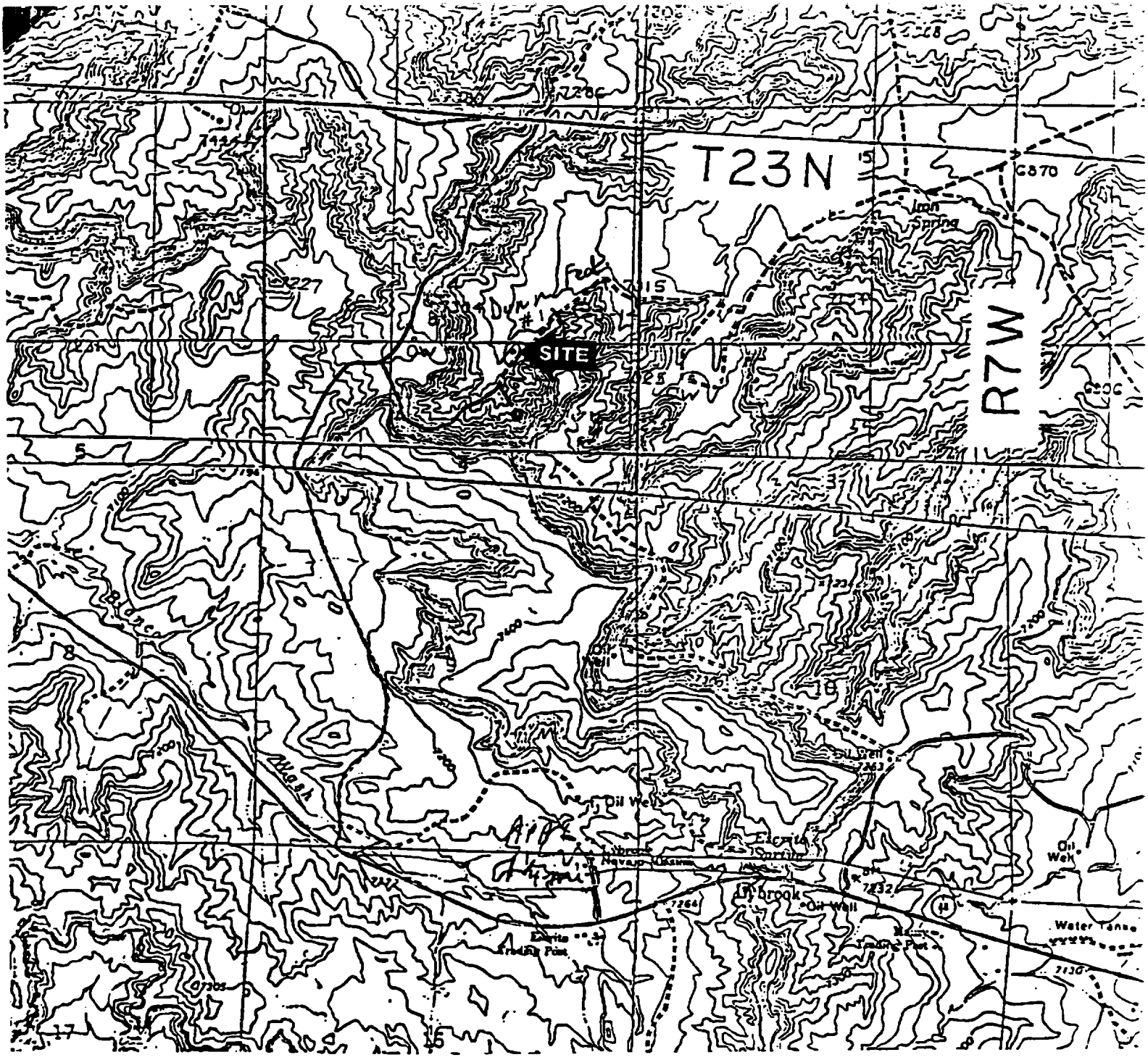



EXHIBIT C

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *ANALYTICAL REPORT*

| | | | |
|---|---|---|---|
| Attn: | *Larry Trujillo* | Date: | 11-Jun-97 |
| Company: | *On Site Technologies, Ltd. c/o D.J. Simmons* | COC No.: | *6407* |
| Address: | *612 E. Murray Drive* | Sample No.: | *14864* |
| City, State: | *Farmington, NM 87401* | Job No.: | *1-1306* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***S-1 @ 4ft.*** | | | | |
| Sampled by: | LT | Date: | 5-Jun-97 | Time: | 9:08 |
| Analyzed by: | DC/HR | GRO Date: | 6-Jun-97 | | |
| Sample Matrix: | *Soil* | DRO Date: | 6-Jun-97 | | |

## *Laboratory Analysis*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---|---|---|---|---|
| *Gasoline Range Organics (C5 - C9)* | 1.6 | mg/kg | 0.5 | mg/kg |
| *Diesel Range Organics (C10 - C28)* | 1050 | mg/kg | 5 | mg/kg |

ND - Not Detected at Limit of Quantitation

## *Quality Assurance Report*

GRO QC No.: 0537-STD

DRO QC No.: 0548-STD

***Continuing Calibration Verification***

| Parameter | Method Blank | Unit of Measure | True Value | Analyzed Value | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| | | | | | | |
| *Gasoline Range (C5 - C9)* | ND | ppb | 1,351 | 1,227 | 9.6 | 15% |
| *Diesel Range (C10 - C28)* | ND | ppm | 100 | 106 | 5.6 | 15% |

***Matrix Spike***

| Parameter | 1- Percent Recovered | 2 - Percent Recovered | Limit | RPD | RPD Limit |
|---|---|---|---|---|---|
| | | | | | |
| *Gasoline Range (C5-C9)* | 77 | 83 | (80-120) | 8 | 20% |
| *Diesel Range (C10-C28)* | 76 | 89 | (84-118) | 15 | 20% |

**Method:** *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

*Approved by:*

*Date:* 6/11/97

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *ANALYTICAL REPORT*

| | | | |
|---|---|---|---|
| Attn: | *Larry Trujillo* | Date: | 11-Jun-97 |
| Company: | *On Site Technologies, Ltd. c/o D.J. Simmons* | COC No.: | *6407* |
| Address: | *612 E. Murray Drive* | Sample No.: | *14865* |
| City, State: | *Farmington, NM 87401* | Job No.: | *1-1306* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***S-2 @ 5ft.*** | | | | |
| Sampled by: | LT | Date: | 5-Jun-97 | Time: | 9:13 |
| Analyzed by: | DC/HR | GRO Date: | 6-Jun-97 | | |
| Sample Matrix: | *Soil* | DRO Date: | 6-Jun-97 | | |

## *Laboratory Analysis*

| Parameter | Results as Received | Unit of Measure | Limit of Quantitation | Unit of Measure |
|---|---|---|---|---|
| *Gasoline Range Organics (C5 - C9)* | ND | mg/kg | 0.5 | mg/kg |
| *Diesel Range Organics (C10 - C28)* | 11 | mg/kg | 5 | mg/kg |

ND - Not Detected at Limit of Quantitation

## *Quality Assurance Report*

GRO QC No.: 0537-STD
DRO QC No.: 0548-STD

### *Continuing Calibration Verification*

| Parameter | Method Blank | Unit of Measure | True Value | Analyzed Value | RPD | RPD Limit |
|---|---|---|---|---|---|---|
| *Gasoline Range (C5 - C9)* | ND | ppb | 1,351 | 1,227 | 9.6 | 15% |
| *Diesel Range (C10 - C28)* | ND | ppm | 100 | 106 | 5.6 | 15% |

### *Matrix Spike*

| Parameter | 1- Percent Recovered | 2 - Percent Recovered | Limit | RPD | RPD Limit |
|---|---|---|---|---|---|
| *Gasoline Range (C5-C9)* | 77 | 83 | (80-120) | 8 | 20% |
| *Diesel Range (C10-C28)* | 76 | 89 | (84-118) | 15 | 20% |

**Method:** *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

*Approved by:*
*Date:* 6/11/97

# CHAIN OF CUSTODY RECORD

6407

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 6/10/1997

Page 1 of 1

| | | | |
|---|---|---|---|
| Purchase Order No.: | | Job No. 1-1206 | |
| SEND INVOICE TO | Name Larry Trujillo | | |
| | Company D.J. Simmons | Dept. | |
| | Address | | |
| | City, State, Zip | | |
| REPORT RESULTS TO | Name Larry Trujillo | Title | |
| | Company D.J. Simmons | | |
| | Mailing Address | | |
| | City, State, Zip | | |
| | Telephone No. | Telefax No. | |

Sampling Location: Dunn Fed #1

Sampler: Larry Trujillo

ANALYSIS REQUESTED

| SAMPLE IDENTIFICATION | SAMPLE DATE | SAMPLE TIME | MATRIX | PRES. | Number of Containers | TPH 418.1 | LAB ID |
|---|---|---|---|---|---|---|---|
| Dunn Federal S-1 @ 4 ft. | 6/10/97 | 0758 | soil | | 1 | ✓ | 14Cd-6407 |
| Dunn Federal S-2 @ 4 ft | 6/10/97 | 0815 | soil | | 1 | ✓ | 14Cd-6408 |

| | | | |
|---|---|---|---|
| Relinquished by: | Date/Time 6/10/97 1255 | Received by: | Date/Time 6/10/97 1255 |
| Relinquished by: | Date/Time | Received by: | Date/Time |
| Relinquished by: | Date/Time | Received by: | Date/Time |

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

| Rush | 24-48 Hours | 10 Working Days | Special Instructions: |
|---|---|---|---|
| | | | cool, intact |

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *TPH - Gasoline / Diesel Range Organics*

| | | | |
|---|---|---|---|
| Attn: | *Bob Crabb* | Date: | 10-Oct-96 |
| Company: | *On Site Technologies, Ltd.* | *COC No.:* | *4479* |
| Address: | *612 E. Murray Drive* | *Sample No.* | *12329* |
| City, State: | *Farmington, NM 87401* | *Job No.* | *4-1095* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Fed #1*** | | | | |
| Project Location: | ***Dunn Fed #1; Pit Composite*** | | | | |
| Sampled by: | RLC | Date: | 26-Sep-96 | Time: | 13:30 |
| Analyzed by: | DC/HR | Date: | 9-Oct-96 | | |
| Sample Matrix: | *Soil* | | | | |

## *Laboratory Analysis*

| *Parameter* | *Result* | *Unit of Measure* | *Detection Limit* | *Unit of Measure* |
|---|---|---|---|---|
| *Gasoline Range Organics (C5 - C9)* | <5.0 | mg/kg | 5.0 | mg/kg |
| *Diesel Range Organics (C10 - C28)* | 439.5 | mg/kg | 5.0 | mg/kg |
| TOTAL | 439.5 | mg/kg | | |

## *Quality Assurance Report*

*GRO QC No.:* *0493-STD*
*DRO QC No.:* *0489-STD*

***Calibration Check***

| *Parameter* | *Method Blank* | *Unit of Measure* | *True Value* | *Analyzed Value* | *% Diff* | *Limit* |
|---|---|---|---|---|---|---|
| *Gasoline Range (C5 - C9)* | <50 | ppb | 1,350 | 1,447 | 7.2 | 15% |
| *Diesel Range (C10 - C28)* | <5.0 | ppm | 100 | 91 | 9.1 | 15% |

***Matrix Spike***

| *Parameter* | *1- Percent Recovered* | *2 - Percent Recovered* | *Limit* | *%RSD* | *Limit* |
|---|---|---|---|---|---|
| *Gasoline Range (C5-C9)* | 98 | 85 | (70-130) | 10 | 20% |
| *Diesel Range (C10-C28)* | 99 | 100 | (70-130) | 1 | 20% |

***Method*** - *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*

*Approved by:*
*Date:* 10/10/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *AROMATIC VOLATILE ORGANICS*

| | | | |
|---|---|---|---|
| Attn: | *Bob Crabb* | Date: | 1-Oct-96 |
| Company: | *On Site Technologies, Ltd.* | *COC No.:* | *4479* |
| Address: | *612 E. Murray Drive* | *Sample No.* | *12329* |
| City, State: | *Farmington, NM 87401* | *Job No.* | *4-1095* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***Dunn Federal #1 Pit Composite*** | | | | |
| Sampled by: | RLC | Date: | 26-Sep-96 | Time: | 13:30 |
| Analyzed by: | DC | Date: | 30-Sep-96 | | |
| Sample Matrix: | *Soil* | | | | |

## *Laboratory Analysis*

| *Parameter* | *Result* | *Units of Measure* | *Detection Limit* | *Units of Measure* |
|---|---|---|---|---|
| *Benzene* | 1.8 | ug/kg | 0.2 | ug/kg |
| *Toluene* | 50.3 | ug/kg | 0.2 | ug/kg |
| *Ethylbenzene* | 144.0 | ug/kg | 0.2 | ug/kg |
| *m,p-Xylene* | 152.7 | ug/kg | 0.2 | ug/kg |
| *o-Xylene* | 330.8 | ug/kg | 0.2 | ug/kg |
| *TOTAL* | 679.6 | ug/kg | | |

***Method*** - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

*Approved by:*

*Date:* 10/1/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *QUALITY ASSURANCE REPORT*

*for EPA Method 8020*

*Date Analyzed:* 30-Sep-96

*Internal QC No.:* 0486-QC
*Surrogate QC No.:* 0488-QC
*Reference Standard QC No.:* 0417-QC

---

### *Method Blank*

| *Analyte* | *Result* | *Units of Measure* |
|---|---|---|
| *Average Amount of All Analytes In Blank* | <0.2 | ppb |

### *Calibration Check*

| *Analyte* | *Units of Measure* | *True Value* | *Analyzed Value* | *% Diff* | *Limit* |
|---|---|---|---|---|---|
| | | | | | |
| *Benzene* | ppb | 20.0 | 19.9 | 1 | 15% |
| *Toluene* | ppb | 20.0 | 19.6 | 2 | 15% |
| *Ethylbenzene* | ppb | 20.0 | 19.7 | 1 | 15% |
| *m,p-Xylene* | ppb | 40.0 | 37.9 | 5 | 15% |
| *o-Xylene* | ppb | 20.0 | 18.7 | 7 | 15% |

### *Matrix Spike*

| *Analyte* | *1- Percent Recovered* | *2 - Percent Recovered* | *Limit* | *%RSD* | *Limit* |
|---|---|---|---|---|---|
| | | | | | |
| *Benzene* | 93 | 100 | (39-150) | 5 | 20% |
| *Toluene* | 78 | 86 | (46-148) | 6 | 20% |
| *Ethylbenzene* | 70 | 76 | (32-160) | 6 | 20% |
| *m,p-Xylene* | 66 | 72 | (35-145) | 6 | 20% |
| *o-Xylene* | 72 | 80 | (35-145) | 7 | 20% |

### *Surrogate Recoveries*

| *Laboratory Identification* | *S1 Percent Recovered* | *S2 Percent Recovered* | *Laboratory Identification* | *S1 Percent Recovered* | *S2 Percent Recovered* |
|---|---|---|---|---|---|
| *Limit Percent Recovery* | (70-130) | | *Limit Percent Recovery* | (70-130) | |
| *S1: Flourobenzene* | | | *S1: Flourobenzene* | | |
| | | | | | |
| *12329-4479* | 99 | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

# CHAIN OF CUSTODY RECORD

4479

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 1-31-96

Page 1 of 1

| | | | |
|---|---|---|---|
| Purchase Order No.: | Job No. 71-1095 | | |
| SEND INVOICE TO: Name | DJ Simmons | REPORT RESULTS TO: Name | Bob Evans / Title |
| Company | Dept. | Company | |
| Address | | Mailing Address | |
| City, State, Zip | | City, State, Zip | |
| | | Telephone No. | Telefax No. |
| Sampling Location: | Dunn Fed. #1 | | |
| Sampler: | RHC | | |

| SAMPLE IDENTIFICATION | SAMPLE DATE | SAMPLE TIME | MATRIX | PRES. | Number of Containers | 5015-mod | 8020/602 | LAB ID |
|---|---|---|---|---|---|---|---|---|
| Dunn Pit Composite | 1-31 | 1330 | Soil | X | | ✓ | ✓ | |

ANALYSIS REQUESTED

| | | | |
|---|---|---|---|
| Relinquished by: | Date/Time 1-31-96 1400 | Received by: | Date/Time |
| Relinquished by: | Date/Time | Received by: | Date/Time |
| Relinquished by: | Date/Time | Received by: | Date/Time |

Method of Shipment:

Authorized by: _____ Date 4-26-96
(Client Signature Must Accompany Request)

| Rush | 24-48 Hours | 10 Working Days | Special Instructions: |
|---|---|---|---|
| | | | |

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *AROMATIC VOLATILE ORGANICS*

| | | | |
|---|---|---|---|
| Attn: | *Bob Crabb* | Date: | 19-Aug-96 |
| Company: | *On Site Technologies, Ltd.* | *COC No.:* | *4296* |
| Address: | *612 E. Murray Drive* | *Sample No.* | *11773* |
| City, State: | *Farmington, NM 87401* | *Job No.* | *4-1095* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***Dunn #1 - Hole #1*** | | | | |
| Sampled by: | RC | Date: | 14-Aug-96 | Time: | 11:40 |
| Analyzed by: | HR | Date: | 15-Aug-96 | | |
| Sample Matrix: | *Soil* | | | | |

*Laboratory Analysis*

| *Parameter* | *Result* | *Units of Measure* | *Detection Limit* | *Units of Measure* |
|---|---|---|---|---|
| *Benzene* | <0.2 | ug/kg | 0.2 | ug/kg |
| *Toluene* | 4.2 | ug/kg | 0.2 | ug/kg |
| *Ethylbenzene* | 1.3 | ug/kg | 0.2 | ug/kg |
| *m,p-Xylene* | 3.7 | ug/kg | 0.2 | ug/kg |
| *o-Xylene* | 1.1 | ug/kg | 0.2 | ug/kg |
| *TOTAL* | 10.3 | ug/kg | | |

***Method*** - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

*Approved by:* JaC
*Date:* 8/19/96

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *QUALITY ASSURANCE REPORT*

*for EPA Method 8020*

*Date Analyzed:* 15-Aug-96

*Internal QC No.:* 0486-QC
*Surrogate QC No.:* 0488-QC
*Reference Standard QC No.:* 0417-QC

---

### *Method Blank*

| Analyte | Result | Units of Measure |
|---|---|---|
| Average Amount of All Analytes In Blank | <0.2 | ppb |

### *Calibration Check*

| Analyte | Units of Measure | True Value | Analyzed Value | % Diff | Limit |
|---|---|---|---|---|---|
| | | | | | |
| Benzene | ppb | 20.0 | 19.0 | 5 | 15% |
| Toluene | ppb | 20.0 | 19.8 | 1 | 15% |
| Ethylbenzene | ppb | 20.0 | 20.2 | 1 | 15% |
| m,p-Xylene | ppb | 40.0 | 39.8 | 0 | 15% |
| o-Xylene | ppb | 20.0 | 19.8 | 1 | 15% |

### *Matrix Spike*

| Analyte | 1- Percent Recovered | 2 - Percent Recovered | Limit | %RSD | Limit |
|---|---|---|---|---|---|
| | | | | | |
| Benzene | 115 | 91 | (39-150) | 16 | 20% |
| Toluene | 119 | 94 | (46-148) | 17 | 20% |
| Ethylbenzene | 122 | 96 | (32-160) | 17 | 20% |
| m,p-Xylene | 117 | 92 | (35-145) | 17 | 20% |
| o-Xylene | 115 | 91 | (35-145) | 16 | 20% |

### *Surrogate Recoveries*

| Laboratory Identification | S1 Percent Recovered | S2 Percent Recovered | Laboratory Identification | S1 Percent Recovered | S2 Percent Recovered |
|---|---|---|---|---|---|
| Limit Percent Recovery | (70-130) | | Limit Percent Recovery | (70-130) | |
| S1: Flourobenzene | | | S1: Flourobenzene | | |
| | | | | | |
| 11773-4296 | 100 | | | | |
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# CHAIN OF CUSTODY RECORD

4296

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 5.14.96

Page 1 of 1

| | | | |
|---|---|---|---|
| Purchase Order No.: | Job No. 4-1275 | | |
| SEND INVOICE TO: Name | D. J. Simmons | REPORT RESULTS TO: Name | Bob Crabb |
| Company | Dept. | Company | |
| Address | | Mailing Address | |
| City, State, Zip | | City, State, Zip | |
| | | Telephone No. | Telefax No. |
| Sampling Location: | Dunn Fed. #1 | | |
| Sampler: | RLC | | |

| SAMPLE IDENTIFICATION | SAMPLE DATE | SAMPLE TIME | MATRIX | PRES. | Number of Containers | ANALYSIS REQUESTED: BTEX | LAB ID |
|---|---|---|---|---|---|---|---|
| Dunn # 1 - Hole #1 | 5.14 | 1140 | Soil | X | | ✓ | 11773-4296 |
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|---|---|---|---|
| Relinquished by: Robert L. Crabb | Date/Time 5.14.96 1445 | Received by: | Date/Time 5/14/96 1445 |
| Relinquished by: | Date/Time | Received by: | Date/Time |
| Relinquished by: | Date/Time | Received by: | Date/Time |

Method of Shipment:

Authorized by: Robert L. Crabb (Client Signature Must Accompany Request) Date 5.14.96

| Rush | 24-48 Hours | 10 Working Days | Special Instructions: |
|---|---|---|---|
| | | | |

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client

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ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *AROMATIC VOLATILE ORGANICS*

| | | | |
|---|---|---|---|
| Attn: | *Bob Crabb* | Date: | 19-Aug-96 |
| Company: | *On Site Technologies, Ltd.* | *COC No.:* | *4297* |
| Address: | *612 E. Murray Drive* | *Sample No.* | *11791* |
| City, State: | *Farmington, NM 87401* | *Job No.* | *4-1095* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***Dunn Federal #1 - Hole #2; 12ft.*** | | | | |
| Sampled by: | RC | Date: | 15-Aug-96 | Time: | 8:50 |
| Analyzed by: | HR | Date: | 15-Aug-96 | | |
| Sample Matrix: | *Soil* | | | | |

*Laboratory Analysis*

| *Parameter* | *Result* | *Units of Measure* | *Detection Limit* | *Units of Measure* |
|---|---|---|---|---|
| *Benzene* | <0.2 | ug/kg | 0.2 | ug/kg |
| *Toluene* | 2.3 | ug/kg | 0.2 | ug/kg |
| *Ethylbenzene* | <0.2 | ug/kg | 0.2 | ug/kg |
| *m,p-Xylene* | 1.6 | ug/kg | 0.2 | ug/kg |
| *o-Xylene* | 0.8 | ug/kg | 0.2 | ug/kg |
| *TOTAL* | 4.8 | ug/kg | | |

***Method*** - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

*Approved by:* JaC

*Date:* 8/19/96

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ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *AROMATIC VOLATILE ORGANICS*

| | | | |
|---|---|---|---|
| Attn: | *Bob Crabb* | Date: | 19-Aug-96 |
| Company: | *On Site Technologies, Ltd.* | *COC No.:* | *4297* |
| Address: | *612 E. Murray Drive* | *Sample No.* | *11789* |
| City, State: | *Farmington, NM 87401* | *Job No.* | *4-1095* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***Dunn Federal #1 - Hole #3*** | | | | |
| Sampled by: | RC | Date: | 15-Aug-96 | Time: | 7:45 |
| Analyzed by: | HR | Date: | 16-Aug-96 | | |
| Sample Matrix: | *Soil* | | | | |

## *Laboratory Analysis*

| *Parameter* | *Result* | *Units of Measure* | *Detection Limit* | *Units of Measure* |
|---|---|---|---|---|
| *Benzene* | 0.8 | ug/kg | 0.2 | ug/kg |
| *Toluene* | 2.2 | ug/kg | 0.2 | ug/kg |
| *Ethylbenzene* | 20.8 | ug/kg | 0.2 | ug/kg |
| *m,p-Xylene* | 21.2 | ug/kg | 0.2 | ug/kg |
| *o-Xylene* | 3.8 | ug/kg | 0.2 | ug/kg |
| *TOTAL* | 48.8 | ug/kg | | |

***Method*** - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

*Approved by:*
*Date:* 8/19/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *QUALITY ASSURANCE REPORT*

*for EPA Method 8020*

*Date Analyzed:* 15-Aug-96

*Internal QC No.:* 0486-QC
*Surrogate QC No.:* 0488-QC
*Reference Standard QC No.:* 0417-QC

---

### *Method Blank*

| Analyte | Result | Units of Measure |
|---|---|---|
| Average Amount of All Analytes In Blank | <0.2 | ppb |

### *Calibration Check*

| Analyte | Units of Measure | True Value | Analyzed Value | % Diff | Limit |
|---|---|---|---|---|---|
| | | | | | |
| Benzene | ppb | 20.0 | 19.0 | 5 | 15% |
| Toluene | ppb | 20.0 | 19.8 | 1 | 15% |
| Ethylbenzene | ppb | 20.0 | 20.2 | 1 | 15% |
| m,p-Xylene | ppb | 40.0 | 39.8 | 0 | 15% |
| o-Xylene | ppb | 20.0 | 19.8 | 1 | 15% |

### *Matrix Spike*

| Analyte | 1- Percent Recovered | 2 - Percent Recovered | Limit | %RSD | Limit |
|---|---|---|---|---|---|
| | | | | | |
| Benzene | 115 | 91 | (39-150) | 16 | 20% |
| Toluene | 119 | 94 | (46-148) | 17 | 20% |
| Ethylbenzene | 122 | 96 | (32-160) | 17 | 20% |
| m,p-Xylene | 117 | 92 | (35-145) | 17 | 20% |
| o-Xylene | 115 | 91 | (35-145) | 16 | 20% |

### *Surrogate Recoveries*

| Laboratory Identification | S1 Percent Recovered | S2 Percent Recovered | Laboratory Identification | S1 Percent Recovered | S2 Percent Recovered |
|---|---|---|---|---|---|
| Limit Percent Recovery | (70-130) | | Limit Percent Recovery | (70-130) | |
| S1: Flourobenzene | | | S1: Flourobenzene | | |
| | | | | | |
| 11790-4297 | 100 | | | | |
| 11791-4297 | 97 | | | | |
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TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *AROMATIC VOLATILE ORGANICS*

| | | | |
|---|---|---|---|
| Attn: | *Bob Crabb* | Date: | 19-Aug-96 |
| Company: | *On Site Technologies, Ltd.* | *COC No.:* | *4297* |
| Address: | *612 E. Murray Drive* | *Sample No.* | *11790* |
| City, State: | *Farmington, NM 87401* | *Job No.* | *4-1095* |

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | ***D.J. Simmons - Dunn Federal #1*** | | | | |
| Project Location: | ***Dunn Federal #1 - Hole #2; 6ft.*** | | | | |
| Sampled by: | RC | Date: | 15-Aug-96 | Time: | 8:20 |
| Analyzed by: | HR | Date: | 15-Aug-96 | | |
| Sample Matrix: | *Soil* | | | | |

*Laboratory Analysis*

| *Parameter* | *Result* | *Units of Measure* | *Detection Limit* | *Units of Measure* |
|---|---|---|---|---|
| *Benzene* | 0.7 | ug/kg | 0.2 | ug/kg |
| *Toluene* | 3.0 | ug/kg | 0.2 | ug/kg |
| *Ethylbenzene* | 1.3 | ug/kg | 0.2 | ug/kg |
| *m,p-Xylene* | 3.8 | ug/kg | 0.2 | ug/kg |
| *o-Xylene* | 3.0 | ug/kg | 0.2 | ug/kg |
| *TOTAL* | 11.8 | ug/kg | | |

***Method*** - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

*Approved by:* DaG
*Date:* 8/19/96

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

# *QUALITY ASSURANCE REPORT*

*for EPA Method 8020*

*Date Analyzed:* 16-Aug-96

*Internal QC No.:* 0486-QC
*Surrogate QC No.:* 0488-QC
*Reference Standard QC No.:* 0417-QC

---

### *Method Blank*

| *Analyte* | *Result* | *Units of Measure* |
|---|---|---|
| *Average Amount of All Analytes In Blank* | <0.2 | ppb |

### *Calibration Check*

| *Analyte* | *Units of Measure* | *True Value* | *Analyzed Value* | *% Diff* | *Limit* |
|---|---|---|---|---|---|
| | | | | | |
| *Benzene* | ppb | 20.0 | 18.9 | 6 | 15% |
| *Toluene* | ppb | 20.0 | 19.9 | 1 | 15% |
| *Ethylbenzene* | ppb | 20.0 | 20.4 | 2 | 15% |
| *m,p-Xylene* | ppb | 40.0 | 40.2 | 0 | 15% |
| *o-Xylene* | ppb | 20.0 | 19.8 | 1 | 15% |

### *Matrix Spike*

| *Analyte* | *1- Percent Recovered* | *2 - Percent Recovered* | *Limit* | *%RSD* | *Limit* |
|---|---|---|---|---|---|
| | | | | | |
| *Benzene* | 115 | 91 | (39-150) | 16 | 20% |
| *Toluene* | 119 | 94 | (46-148) | 17 | 20% |
| *Ethylbenzene* | 122 | 96 | (32-160) | 17 | 20% |
| *m,p-Xylene* | 117 | 92 | (35-145) | 17 | 20% |
| *o-Xylene* | 115 | 91 | (35-145) | 16 | 20% |

### *Surrogate Recoveries*

| *Laboratory Identification* | *S1 Percent Recovered* | *S2 Percent Recovered* | *Laboratory Identification* | *S1 Percent Recovered* | *S2 Percent Recovered* |
|---|---|---|---|---|---|
| *Limit Percent Recovery* | (70-130) | | *Limit Percent Recovery* | (70-130) | |
| *S1: Flourobenzene* | | | *S1: Flourobenzene* | | |
| | | | | | |
| *11789-4297* | 109 | | | | |
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4297

# CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

Date: 5-15-96

Page 1 of 1

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

| | | | |
|---|---|---|---|
| Purchase Order No.: | Job No. 4-1795 | | |
| SEND INVOICE TO: Name | | REPORT RESULTS TO: Name B. B CMBS | Title |
| Company D. J. Simmons | Dept. | Company | |
| Address | | Mailing Address | |
| City, State, Zip | | City, State, Zip | |
| | | Telephone No. | Telefax No. |

Sampling Location: Dunn Fed #1

Sampler:

| SAMPLE IDENTIFICATION | SAMPLE DATE | SAMPLE TIME | MATRIX | PRES. | Number of Containers | ANALYSIS REQUESTED: BTEX | LAB ID |
|---|---|---|---|---|---|---|---|
| Dunn Fed #1 Hole #3 | 5-15 | 0745 | Soil | X | | ✓ | |
| Dunn Fed #1 Hole 2-6 FT | 5-15 | 0820 | Soil | X | | ✓ | |
| Dunn Fed #1 Hole 2-12 FT | 5-15 | 0850 | soil | X | | ✓ | |
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|---|---|---|---|
| Relinquished by: | Date/Time 5-15/1045 | Received by: | Date/Time 5/16/96 1045 |
| Relinquished by: | Date/Time | Received by: | Date/Time |
| Relinquished by: | Date/Time | Received by: | Date/Time |

Method of Shipment:

Authorized by: _____ Date 5-15-96
(Client Signature Must Accompany Request)

| Rush | 24-48 Hours | 10 Working Days | Special Instructions: |
|---|---|---|---|
| | | | |

Distribution: White – On Site Yellow – LAB Pink – Sampler Goldenrod – Client