# 3R-1011

# Release Report/ General Correspondence

# Enterprise SJ

# Trunk MD 16 Inch 2016

204

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South Line | Feet from | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **M** | **1** | **29N** | **11W** | the **1185** | North (South) | the **1361** | East (West) | **San Juan** |

**Latitude 36.750534 Longitude -107.947310**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro Static Test Water | Volume of Release **Estimated 1,113 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **6/16/2016 @ 6:30 p.m.** | Date and Hour of Discovery: **6/16/2016 @ 6:30 p.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Courtesy Notification – Vanessa Fields, NMOCD; Katherina Diemer | |
| By Whom? Thomas Long | Date and Time June 16, 2016 @ 8:55 p.m. | |
| Was a Watercourse Reached? ☒ Yes ☐ No | If YES, Volume | |

OIL CONS. DIV DIST. 3
NOV 28 2016

If a Watercourse was Impacted, Describe Fully.* Approximately 1,113 barrels of potable water was released to the ground surface and flowed south entering an ephemeral wash and continued a flowing south for approximately 0.5 miles.

Describe Cause of Problem and Remedial Action: At approximately 6:30 p.m., on June 16, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 1,113 barrels of potable water was released to the ground surface and flowed south entering an ephemeral wash and continued a flowing south for approximately 0.5 miles.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on June 17, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final." C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 9/20/2016 Expiration Date: |
| E-mail Address: jefields@eprod.com | Conditions of Approval: Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | NVF1616732247 |

* Attach Additional Sheets If Necessary

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# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

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|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner:**BLM** | Serial Number: |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South | Feet from | East/West | County |
|---|---|---|---|---|---|---|---|---|
| **M** | **1** | **29N** | **11W** | the **126** | Line | the **684** | Line | **San Juan** |

**Latitude 36.747770 Longitude -107.949616**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro Static Test Water | Volume of Release **Estimated 120 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **6/19/2016 @ 11:15 a.m.** | Date and Hour of Discovery: **6/19/2016 @ 11:15 a.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Courtesy Notification – Vanessa Fields, NMOCD; Katherina Diemer, BLM | |
| By Whom? Thomas Long | Date and Time June 19, 2016 @ 1:35 p.m. | |
| Was a Watercourse Reached? ☒ Yes ☐ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.* Approximately 120 barrels of potable water was released to the ground surface and flowed south entering an ephemeral wash and continued a flowing south for approximately 0.20 miles.

Describe Cause of Problem and Remedial Action: At approximately 6:30 p.m., on June 19, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 120 barrels of potable water was released to the ground surface and flowed south entering an ephemeral wash and continued a flowing south for approximately 0.20 miles.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on June 19-20, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final." C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 9/2/2016 Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | NVF1617448436 |

* Attach Additional Sheets If Necessary

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Energy Minerals and Natural Resources

Oil Conservation Division
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Santa Fe, NM 87505

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# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **State of NM** | Mineral Owner: **State of NM** | Serial Number: **RW-23639** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South | Feet from | East/West | County |
|---|---|---|---|---|---|---|---|---|
| **J** | **36** | **30N** | **11W** | the **2280** | Line | the **1520** | Line | **San Juan** |

**Latitude 36.76743 Longitude -107.93893**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 100 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **6/22/2016 @ 1:25 p.m.** | Date and Hour of Discovery: **6/22/2016 @ 1:25 p.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD | |
| By Whom? Thomas Long | Date and Time June 22, 2016 @ 2:25 p.m. | |
| Was a Watercourse Reached? ☒ Yes ☐ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.* Approximately 100 barrels of potable water was released to the ground surface and flowed west entering an ephemeral wash and continued a flowing west for approximately 0.50 miles.

Describe Cause of Problem and Remedial Action: At approximately 1:25 p.m., on June 22, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 100 barrels of potable water was released to the ground surface and flowed west entering an ephemeral wash and continued a flowing west for approximately 0.50 miles.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on June 23, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final." C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | | |
|---|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION | |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: | |
| Title: Director, Field Environmental | Approval Date: 12/1/2016 | Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: | Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | NVF1617954385 | |

* Attach Additional Sheets If Necessary

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# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: **SN 080782** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South Line | Feet from | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **L** | **30** | **30N** | **11W** | the **431** | (North) | the **1047** | (West) | **San Juan** |

**Latitude 36.788716 Longitude -107.930199**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 100 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **6/24/2016 @ 3:06 p.m.** | Date and Hour of Discovery: **6/24/2016 @ 3:06 p.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD; Katherina Diemer, BLM | |
| By Whom? Thomas Long | Date and Time June 24, 2016 @ 6:00 p.m. | |
| Was a Watercourse Reached? ☒ Yes ☐ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.* Approximately 100 barrels of potable water was released to the ground surface and flowed southwest entering an ephemeral wash to the southwest and continued a flowing south for approximately 0.35 miles.

Describe Cause of Problem and Remedial Action: At approximately 3:06 p.m., on June 24, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 100 barrels of potable water was released to the ground surface and flowed southwest entering an ephemeral wash to the southwest and continued a flowing south for approximately 0.35 miles.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on June 27-29, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final." C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 1/19/2017 Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | NVF1617953104 |

* Attach Additional Sheets If Necessary

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# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: **SN 080782** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South Line | Feet from | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **P** | **18** | **30N** | **10W** | **1017** | (South) | **1218** | (East) | **San Juan** |

**Latitude 36.807101 Longitude -107.920458**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 100 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **6/30/2016 @ 5:55 p.m.** | Date and Hour of Discovery: **6/30/2016 @ 5:55 p.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD; Katherina Diemer, BLM | |
| By Whom? Thomas Long | Date and Time June 30, 2016 @ 7:00 p.m. | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action: At approximately 5:55 p.m., on June 30, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 100 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way for approximately 500 feet.

Describe Area Affected and Cleanup Action: Approximately 100 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way for approximately 500 feet. Enterprise collected soil samples from the source and flow path of the release on July 1, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 1/19/2017 Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: NVF1701948247 Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | |

* Attach Additional Sheets If Necessary

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# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: **SN 080782** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South | Feet from | East/West | County |
|---|---|---|---|---|---|---|---|---|
| **B** | **19** | **30N** | **10W** | the **1323** | (North) South Line | the **2161** | (East) West Line | **San Juan** |

**Latitude 36.800683 Longitude -107.923786**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 700 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **7/5/2016 @ 9:30 a.m.** | Date and Hour of Discovery: **7/5/2016 @ 9:30 a.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD; Katherina Diemer, BLM | |
| By Whom? Thomas Long | Date and Time July 5, 2016 @ 3:15 p.m. | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.* Approximately 700 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way entering an ephemeral wash and flowed for approximately 1,500 feet.

Describe Cause of Problem and Remedial Action: At approximately 9:30 a.m., on July 5, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 700 barrels of potable was released to the ground surface and flowed southwest along the right-of-way entering an ephemeral wash and flowed for approximately 1,500 feet.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on July 5, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | | |
|---|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION | |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: | |
| Title: Director, Field Environmental | Approval Date: 11/9/2017 | Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: | Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | NVF1618848228 | |

* Attach Additional Sheets If Necessary

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|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: **SN 080782** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | North/South Line | Feet from the | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **P** | **18** | **30N** | **10W** | **991** | North/South | **1263** | East/West | **San Juan** |

**Latitude 36.8807050 Longitude -107.920570**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 100 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **7/8/2016 @ 12:51 p.m.** | Date and Hour of Discovery: **7/8/2016 @ 12:51 p.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD; Katherina Diemer, BLM | |
| By Whom? Thomas Long | Date and Time July 8, 2016 @ 1:59 p.m. | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action: At approximately 5:55 p.m., on June 30, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 100 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way for approximately 500 feet.

Describe Area Affected and Cleanup Action: Approximately 100 barrels of potable was released to the ground surface and flowed southwest along the right-of-way for approximately 500 feet. Enterprise collected soil samples from the source and flow path of the release on July 8, 2016 with NMOCD witnessing sample collection. Analytical results indicate no environmental impact. A third party corrective action report is included with this "Final" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

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|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 1/19/2017 Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | NVF1621727535 |

* Attach Additional Sheets If Necessary

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## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: **SN 080782** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South Line | Feet from | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **B** | **19** | **30N** | **10W** | the **1193** | (North) South | the **2118** | (East) West | **San Juan** |

**Latitude 36.801030 Longitude -107.923660**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 600 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **7/9/2016 @ 9:45 a.m.** | Date and Hour of Discovery: **7/9/2016 @ 9:45 a.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD; Katherina Diemer - BLM | |
| By Whom? Thomas Long | Date and Time July 9, 2016 @ 11:00 p.m. | |
| Was a Watercourse Reached? ☒ Yes ☐ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.* Approximately 600 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way entering an ephemeral wash and flowed for approximately 1,500 feet.

Describe Cause of Problem and Remedial Action: At approximately 9:45 a.m., on July 9, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 600 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way entering an ephemeral wash and flowed for approximately 1,500 feet.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on July 11, 2016 with NMOCD witnessing sample collection. Analytical results indicate on environmental impact. A third party corrective action report is included with this "Final" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 1/19/2017 Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: NVF1621729117 Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | |

* Attach Additional Sheets If Necessary

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

# Release Notification and Corrective Action

## OPERATOR

☐ Initial Report ☒ Final Report

| | |
|---|---|
| Name of Company: Enterprise Field Services LLC | Contact: Thomas Long |
| Address: 614 Reilly Ave, Farmington, NM 87401 | Telephone No. 505-599-2286 |
| Facility Name: **Trunk MD 16 Inch** | Facility Type: **Natural Gas Pipeline** |

| | | |
|---|---|---|
| Surface Owner: **BLM** | Mineral Owner: **BLM** | Serial Number: **SN 080782** |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from | North/South Line | Feet from | East/West Line | County |
|---|---|---|---|---|---|---|---|---|
| **B** | **19** | **30N** | **10W** | the **1193** | (North) South | the **2118** | (East) West | **San Juan** |

**Latitude 36.0076 Longitude -107.92376**

## NATURE OF RELEASE

| | | |
|---|---|---|
| Type of Release: Hydro-Static Test Water | Volume of Release **Estimated 600 barrels of potable water** | Volume Recovered: **None** |
| Source of Release: Ruptured Pipeline | Date and Hour of Occurrence: **7/11/2016 @ 9:45 a.m.** | Date and Hour of Discovery: **7/11/2016 @ 9:45 a.m.** |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Vanessa Fields, NMOCD; Katherina Diemer, BLM | |
| By Whom? Thomas Long | Date and Time July 11, 2016 @ 10:08 a.m. | |
| Was a Watercourse Reached? ☒ Yes ☐ No | If YES, Volume | |

If a Watercourse was Impacted, Describe Fully.* Approximately 600 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way entering an ephemeral wash and flowed for approximately 2,000 feet.

Describe Cause of Problem and Remedial Action: At approximately 9:45 a.m., on July 11, 2016, a rupture occurred during hydro-static testing of the Trunk MD 16 Inch pipeline. Approximately 600 barrels of potable water was released to the ground surface and flowed southwest along the right-of-way entering an ephemeral wash and flowed for approximately 2,000 feet.

Describe Area Affected and Cleanup Action: Enterprise collected soil samples from the source and flow path of the release on July 11, 2016 with NMOCD witnessing sample collection. Analytical results indicated no environmental impact. A third party corrective action report is included with this "Final" C-141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

| | |
|---|---|
| Signature: Jon E. Fields | OIL CONSERVATION DIVISION |
| Printed Name: Jon E. Fields | Approved by Environmental Specialist: |
| Title: Director, Field Environmental | Approval Date: 1/19/2017 Expiration Date: |
| E-mail Address:jefields@eprod.com | Conditions of Approval: NVF1621728758 Attached ☐ |
| Date: 10/10/2016 Phone: (713)381-6684 | |

* Attach Additional Sheets If Necessary

# ENVIRONMENTAL SITE INVESTIGATION REPORT

Property:

**Trunk MD 16" Pipeline Hydrostatic Test (Ruptures 1 through 9)**

**SW ¼ S1 T29N R11W (Rupture 1 and 2)**
**SE ¼ S36 T30N R11W (Rupture 3)**
**NW ¼ S30 T30 N R10W (Rupture 4)**
**SE ¼ S18 T30N R10W (Rupture 5 and 7)**
**NE ¼ S19 T30N R10W (Rupture 6, 8, and 9)**
**San Juan County, New Mexico**

September 12, 2016
Apex Project No. 725040112171

Prepared for:

**Enterprise Field Services, LLC**
**614 Reilly Avenue**
**Farmington, NM 87401**
**Attn: Mr. Thomas Long**

Prepared by:

Ranee Deechilly
Project Scientist

Kyle Summers, CPG
Branch Manager/Senior Geologist

## TABLE OF CONTENTS



### LIST OF APPENDICES

APEX

**ENVIRONMENTAL SITE INVESTIGATION REPORT**

**Trunk MD 16" Pipeline Hydrostatic Test (Ruptures 1 through 9)**

SW ¼ S1 T29N R11W (Rupture 1 and 2)
SE ¼ S36 T30N R11W (Rupture 3)
NW ¼ S30 T30 N R10W (Rupture 4)
SE ¼ S18 T30N R10W (Rupture 5 and 7)
NE ¼ S19 T30N R10W (Rupture 6, 8, and 9)
San Juan County, New Mexico

**Apex Project No.** 725040112171

## 1.0 INTRODUCTION

### 1.1 Site Description & Background

The Trunk MD 16" pipeline hydrostatic test release sites (Ruptures 1 through 9) originated within the Enterprise Field Services, LLC (Enterprise) pipeline right-of-way (ROW) in Section 1, Township 29 North, Range 11 West; Section 36, Township 30 North, Range 11 West; and Sections 18, 19, and 30, Township 30 North, Range 10 West, in San Juan County, New Mexico, referred to hereinafter as the "Site(s)".

Between June 17, 2016 and July 7, 2016, Enterprise performed a series of hydrostatic pressure tests on the Trunk MD 16" pipeline, which was separated into four test segments (Segment 1, 2A, 2B, and 3) covering a total span of approximately 10.6 miles, to evaluate the integrity of the pipeline. The hydrostatic pressure tests ultimately resulted in nine (9) ruptures (all in Segments 1 and 2A). The resulting pipeline failures were subsequently repaired and re-tested until the entire pipeline passed the over-pressure and sustained-pressure hydrostatic tests.

**Geospatial Positioning Coordinates (GPS)**

- Rupture-1: 36.75053N, 107.94731W (Segment 1)
- Rupture-2: 36.747890N, 107.949531W (Segment 1)
- Rupture-3: 36.767490N, 107.939080W (Segment 1)
- Rupture-4:36.78877N, 107.93019W (Segment 2A)
- Rupture-5:36.80710N, 107.92046W (Segment 2A)
- Rupture-6: 36.80065N,107.92373W (Segment 2A)
- Rupture-7: 36.80694 N, 107.92058W (Segment 2A)
- Rupture-8: 36.80097N, 107.92358W (Segment 2A)
- Rupture-9: 36.80079N, 107.92367W (Segment 2A)

Rupture Sites 1, 2, and 4 through 9 are located on land managed by the United States Bureau of Land Management (BLM). Rupture Site 3 is located on land owned by the State of New Mexico and managed by the New Mexico State Land Office. The Sites are surrounded by native-vegetation rangeland periodically interrupted by oil and gas gathering facilities, including the Enterprise MD 16" Trunk natural gas pipeline which traverses the area from approximately north to south.

A topographic map depicting the locations of the Sites is included as Figure 1, and a Site Vicinity Map is included as Figure 2 in Appendix A.

### 1.2 Project Objective

The primary objective of the Environmental Site Investigation (ESI) was to evaluate the potential impact to the environment from the released hydrostatic test water. The soils contacted by the test water (as well as the test water itself) were evaluated to determine if constituents of concern (COCs) affected the on-Site soils at concentrations above the applicable regulatory standards.

## 2.0 SITE RANKING

In accordance with the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) Oil Conservation Division (OCD) *Guidelines for Remediation of Leaks, Spills and Releases*, Apex utilized the general site characteristics obtained during the completion of corrective action activities to determine the appropriate "ranking" for the Site.

The ranking criteria are provided in the following table:

| Ranking Criteria | | |
|---|---|---|
| Depth to Groundwater | <50 feet | 20 |
| | 50 to 99 feet | 10 |
| | >100 feet | 0 |
| Wellhead Protection Area • <1,000 feet from a water source, or; <200 feet from private domestic water source. | Yes | 20 |
| | No | 0 |
| Distance to Surface Water Body | <200 feet | 20 |
| | 200 to 1,000 feet | 10 |
| | >1,000 feet | 0 |
| **Total Ranking Score** | | |

Based on the Apex TITAN, Inc. (Apex) evaluation of the scoring criteria, each of the nine (9) ruptures occurred in, or flowed into, areas that would rank ">19" in the OCD ranking system, due to the distance to surface water body ("blue line" ephemeral washes), and at some releases the projected depth to groundwater due to the duration of the flow path. No water source wells or private domestic water sources are present in the vicinity of the ruptures/releases.

A Site ranking of >19 correlates to the most stringent closure standards for an OCD regulated release, which includes: Benzene at 10 milligrams/kilogram (mg/kg); benzene, ethylbenzene, toluene and total xylenes (BTEX) at 50 mg/kg; and total petroleum hydrocarbon (TPH) combined gasoline range organics (GRO) and diesel range organics (DRO) at 100 mg/kg.

## 3.0 FIELD ACTIVITIES

### 3.1 Pipeline Testing and Repair

Between June 17, 2016 and July 7, 2016, Enterprise performed a series of hydrostatic pressure tests on the Trunk MD 16" pipeline, which was separated into four test segments (Segments 1, 2A, 2B, and 3), covering a total distance of approximately 10.6 miles, to evaluate the integrity of the pipeline. The hydrostatic pressure tests ultimately resulted in nine (9) ruptures (all occurring in Segments 1 and 2A). The resulting pipeline failures were subsequently repaired by replacing pipe, and were re-tested until the entire pipeline passed the over-pressure and sustained-pressure hydrostatic tests. During the pipeline repair and ESI activities, Halo Services, Inc.,

provided heavy equipment and labor support, and Ranee Deechilly, Chad D'Aponti, and Kyle Summers, Apex environmental professionals, provided environmental support.

### 3.2 Environmental Site Investigation

Enterprise's and Apex's soil sampling program combined to include the collection of 38 confirmation flow path samples from the nine (9) rupture Sites for laboratory analysis. Additionally, four (4) water samples were collected from the ruptured pipeline or from standing water at Rupture Sites 1, 2, 6, and 8.

The following table presents each of the Rupture Sites and identifies the corresponding release samples and sample matrices:

| Rupture Site | Sample Matrix | Sample I.D |
|---|---|---|
| 1 | Soil | Source and SC-3 –SC-4 |
| 2 | Soil | SR SC-1 and FP-1 through FP-4 |
| 3 | Soil | RP-1 through RP-8 |
| 4 | Soil | WP-1 through WP-6 |
| 5 | Soil | DP-1 through DP-4 |
| 6 | Soil | XP-1 through XP-4 |
| 7 | Soil | HP-1 through HP-3 |
| 8&9 | Soil | CP-1 through CP-5 |

| Rupture Site | Sample Matrix | Sample I.D |
|---|---|---|
| 1 | Water | Source |
| 2 | Water | SR WS-1 |
| 6 | Water | Rupture #6 |
| 8 | Water | Rupture #8 |

Enterprise coordinated with the New Mexico OCD to determine appropriate sample collection points and laboratory analytical methods for each Rupture Site. A representative from either the OCD or the BLM was present during each of the soil sampling events.

Domestic supply water from the city of Bloomfield was utilized as the test fluid during each of the hydrostatic tests. Enterprise collected one (1) sample from the pipeline on June 16, 2016, however it was later determined that the sample had been collected from pipeline fluids in front of the pipeline cleaning pig instead of from test water in the pressure test section. As a result, the June 16 sample was not included in this report. Enterprise subsequently collected two (2) samples (Header ES 480 and Header ES 571) of the test water from the water-filled pipeline on June 17, 2016.

Figures 3A through 3E depict the approximate flow paths and sampling locations in relation to pertinent land features (Appendix A). Photographic documentation of the field activities is included in Appendix B.

The flow path soil samples and water samples were collected and placed in laboratory prepared glassware, labeled/sealed using the laboratory supplied labels, and placed on ice in a cooler, which was secured with a custody seal. The samples and completed chain-of-custody form were relinquished to Hall Environmental Analysis Laboratory of Albuquerque, New Mexico for analysis.

### 3.3 Soil Laboratory Analytical Methods

The flow path soil samples from Rupture Sites 1 through 9 were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA SW-846 Method #8021, total petroleum hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) using EPA SW-846 Method #8015, and chlorides using EPA Method #300.0. The "Source" sample from Rupture Site 2 was also analyzed for RCRA 8 Metals. The soil samples from Rupture Sites 8 and 9 were also analyzed for anions and cations.

Laboratory results for Site soils are summarized in Tables 1 through 3, included in Appendix C. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

### 3.4 Water Laboratory Analytical Methods

The water sample from Rupture Site 2 was analyzed for volatile organic compounds (VOCs) using EPA Method #8260. The water samples collected from Header ES 480, Header ES 571, and Rupture Sites 1, 6, and 8 samples were analyzed for VOCs using EPA Method #8260, and RCRA 8 Metals. The water sample from Rupture Site 6 was also analyzed for Cations/Anions.

Laboratory results for the water samples are summarized in Tables 4 through 6, included in Appendix C. Due to the extensive list of VOC analytes, Table 4 includes only results for analytes that exceeded the practical quantitation limit (PQL) in one (1) or more samples. The executed chain-of-custody form and laboratory data sheets are provided in Appendix D.

## 4.0 DATA EVALUATION

The Site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to oil and gas releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19.15.29 *Release Notification*. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

### 4.1 Soil Samples

Apex compared the constituent concentrations or PQLs associated with the rupture soil samples to the OCD *Remediation Action Levels* (RALs), New Mexico Environmental Department (NMED) baseline Soil Screening Levels (SSLs) (Residential and Industrial), and historic background levels (Arsenic) from available United States Geological Survey (USGS)[1] records.

[1] *"Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States (1984)."* Hansford T. Shacklette and Josephine G. Boerngen, Professional Paper 1270 USGS.

**Benzene, BTEX, TPH, and Chlorides**

- The laboratory analyses of the confirmation soil samples collected from Rupture Sites 1 through 9 indicate benzene concentrations below the PQLs, which are below the OCD *RAL* of 10 milligram per kilogram (mg/kg).
- The laboratory analyses of the confirmation soil samples indicate total BTEX concentrations below the PQLs, which are below the OCD *RAL* of 50 mg/kg.
- The laboratory analyses of confirmation soil samples collected from Rupture Sites 1 through 9 indicate combined TPH GRO/DRO concentrations ranging from below PQLs to 25 mg/kg (XP-1), which are below the OCD *RAL* of 100 mg/kg.
- The laboratory analyses of confirmation soil samples indicate chloride concentrations ranging from below PQLs to 150 mg/kg (Source).

**RCRA 8 Metals**

- The laboratory analysis of the confirmation soil sample collected from the Rupture Site 2 source area ("Source") indicates an arsenic concentration of 6.9 mg/kg, which is above the NMED base-line Residential SSL of 4.25 mg/kg and below the base-line NMED Industrial SSL of 21.5 mg/kg. Available USGS data[1] suggests that background arsenic concentrations for surficial material in this region of New Mexico are >6.5 parts per million[2] (ppm), which would indicate that the arsenic level at Rupture Site 2 is on the lower end of anticipated background levels. Additionally, arsenic was not detected at elevated concentrations in the test water or release water samples.
- The remaining RCRA 8 analytes in the soil sample "Source", from Rupture Site 2, were detected at levels below the NMED Residential SSLs or were below the laboratory PQLs, which are below the NMED Residential SSLs.

**Anions and Cations**

- NMED SSLs are not established for calcium, magnesium, potassium, sodium, and sulfates. The laboratory analyses of confirmation soil samples collected from Rupture Sites 8 and 9 indicate: calcium concentrations ranging from 660 mg/kg (CP-4) to 1,900 mg/kg (CP-1); magnesium concentrations ranging from 380 mg/kg (CP-4) to 1,300 mg/kg (CP-3); potassium concentrations ranging from 370 mg/kg (CP-4) to 870 mg/kg (CP-3); sodium concentrations ranging from below PQLs to 35 mg/kg (CP-5); and sulfate concentrations ranging from 5.7 mg/kg (CP-4) to 17 mg/kg (CP-1).
- The laboratory analyses of confirmation soil samples collected from Rupture Sites 8 and 9 indicate fluoride concentrations ranging from 0.45 mg/kg (CP-4) to 2.3 mg/kg (CP-5), which are below NMED SSLs.
- The laboratory analyses of confirmation soil samples collected from Rupture Sites 8 and 9 indicate nitrate concentrations ranging from below PQLs to 1.4 mg/kg (CP-2), which are below NMED SSLs.

Confirmation sample laboratory analytical results for soils are provided in Tables 1 through 3 in Appendix C.

[2] Part per million is equivalent to mg/kg

### 4.2 Water Samples

Apex compared constituent concentrations or method PQLs associated with the water samples collected from the test-water filled pipeline and Rupture Sites 1, 2, 6, and 8 to the New Mexico Water Quality Control Commission (WQCC) Human Health Standards (HHSs), and WQCC Domestic Water Supply Standards (DWSSs).

**VOCs**

- The test-water sample (Header ES 480) exhibited polycyclic aromatic hydrocarbons (PAHs) at a combined concentration of 44 micrograms/liter (µg/L), which exceeds the WQCC HHS of 30 µg/L. The test-water sample (Header ES 571) exhibited a benzene concentration of 16 µg/L, which exceeds the WQCC HHS of 10 µg/L. No other VOC exceedances were identified in the test-water samples.

- No VOC exceedances were identified in the Rupture Site water samples.

Naphthalene is not listed individually as a contaminant under the NM WQCC HHSs, but is included with the PAHs.

**RCRA 8 Metals**

- The two (2) test-water samples exhibited barium concentrations of 0.060 milligram per liter (mg/L) (Header ES 480) and 0.090 mg/L (Header ES 571), which are below the WQCC HHS of 1.0 mg/L. Arsenic, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver concentrations for the test-water samples are below PQLs, which are below applicable WQCC HHSs.

- The water samples collected from Rupture Sites 1, 6, and 8 exhibited barium concentrations ranging from 0.13 mg/L (Source) to 0.25 mg/L (Ruptures 6 and 8), which are below the WQCC HHS of 1.0 mg/L. Arsenic concentrations range from below PQLs to 0.011 mg/L (Rupture #6), which are below the WQCC HHS of 0.1 mg/L. Chromium concentrations range from below PQLs to 0.0047 mg/L (Rupture #6), which are below the WQCC HHS of 0.05 mg/L. Mercury concentrations range from below PQLs to 0.00019 mg/L (Rupture #6), which are below the WQCC HHS of 0.002 mg/L. Cadmium, Lead, Selenium, and Silver concentrations are below PQLs, which are below the applicable WQCC HHSs.

**Anions and Cations**

- The water sample collected from Rupture 6 exhibited concentrations of fluoride (0.35 mg/L), chloride (37 mg/L), bromide (0.93 mg/L), nitrate (0.32 mg/L), sulfate (54 mg/L), calcium (44mg/L), magnesium (7.8 mg/L), potassium (19 mg/L), and sodium (18 mg/L), which are within acceptable ranges with regards to established WQCC HSSs and DWSSs.

The results of the water sample analyses are summarized in Tables 4 through 6 of Appendix C. Due to the extensive list of VOC analytes, Table 4 includes only results for analytes that exceeded the PQL in one (1) or more samples. Laboratory data sheets and chain-of-custody documentation are provided as Appendix D.

## 5.0 FINDINGS AND RECOMMENDATIONS

The Trunk MD 16" pipeline hydrostatic test (Ruptures 1 through 9) Sites are located within the Enterprise pipeline ROW in Section 1, Township 29 North, Range 11 West, Section 36, Township 30 North, Range 11 West, and Sections 18, 19, and 30, Township 30 North, Range 10 West, in San Juan County, New Mexico. Rupture Sites 1, 2, and 4 through 9 are located on land managed by the BLM. Rupture Site 3 is located on land owned by the State of New Mexico and managed by the New Mexico State Land Office. The Sites are surrounded by native-vegetation rangeland periodically interrupted by oil and gas gathering facilities, including the Enterprise MD 16" Trunk natural gas pipeline which traverses the area from approximately north to south.

Between June 17, 2016 and July 7, 2016, Enterprise performed a series of hydrostatic pressure tests on the Trunk MD 16" pipeline, which was separated into four test segments (Segments 1, 2A, 2B, and 3), covering a total distance of approximately 10.6 miles, to evaluate the integrity of the pipeline. The hydrostatic pressure tests ultimately resulted in nine (9) ruptures (all occurring in Segments 1 and 2A). The resulting pipeline failures were subsequently repaired by replacing pipe, and were re-tested until the entire pipeline passed the over-pressure and sustained-pressure hydrostatic tests.

- The primary objective of the ESI was to evaluate the potential impact to the environment from the released hydrostatic test water. The soils contacted by the test water (as well as the test water itself) were evaluated to determine if COCs affected the on-Site soils at concentrations above the applicable regulatory standards.

- A total of 38 confirmation flow path soil samples were collected from the nine (9) rupture locations for laboratory analyses. Based on analytical results, soils remaining in place do not exhibit COC concentrations above the OCD *RAL*s for Site rankings of ">19".

- Sample SR SC-1 exhibited an arsenic concentration that exceeds the baseline NMED Residential SSLs, but appears to be on the lower end of the concentration range published by the USGS for this region of New Mexico.

- A total of four (4) water samples were collected from the ruptured pipeline or from standing water at Rupture Sites 1, 2, 6, and 8 for laboratory analyses. Based on analytical results, the release Site water samples exhibited COC concentrations below the NM WQCC HHSs and/or DWSSs.

- Two (2) samples of the test water from the water-filled pipeline were collected for laboratory analysis. Based on analytical results, test-water sample (Header ES 480) exhibited a combined PAH concentration above the WQCC HHS of 30 µg/L and test-water sample (Header ES 571) exhibited a benzene concentration above the WQCC HHS of 10 µg/L. No other VOC exceedances were identified in the hydrostatic test-water samples.

**Based on the laboratory analytical results, no additional investigation or corrective action appears warranted at this time.**

## 6.0 STANDARD OF CARE, LIMITATIONS, AND RELIANCE

Apex's services were performed in accordance with standards customarily provided by a firm rendering the same or similar services in the area during the same time period. Apex makes no warranties, expressed or implied, as to the services performed or described herein. Additionally, Apex does not warrant the work of third parties supplying information used in the report (e.g.

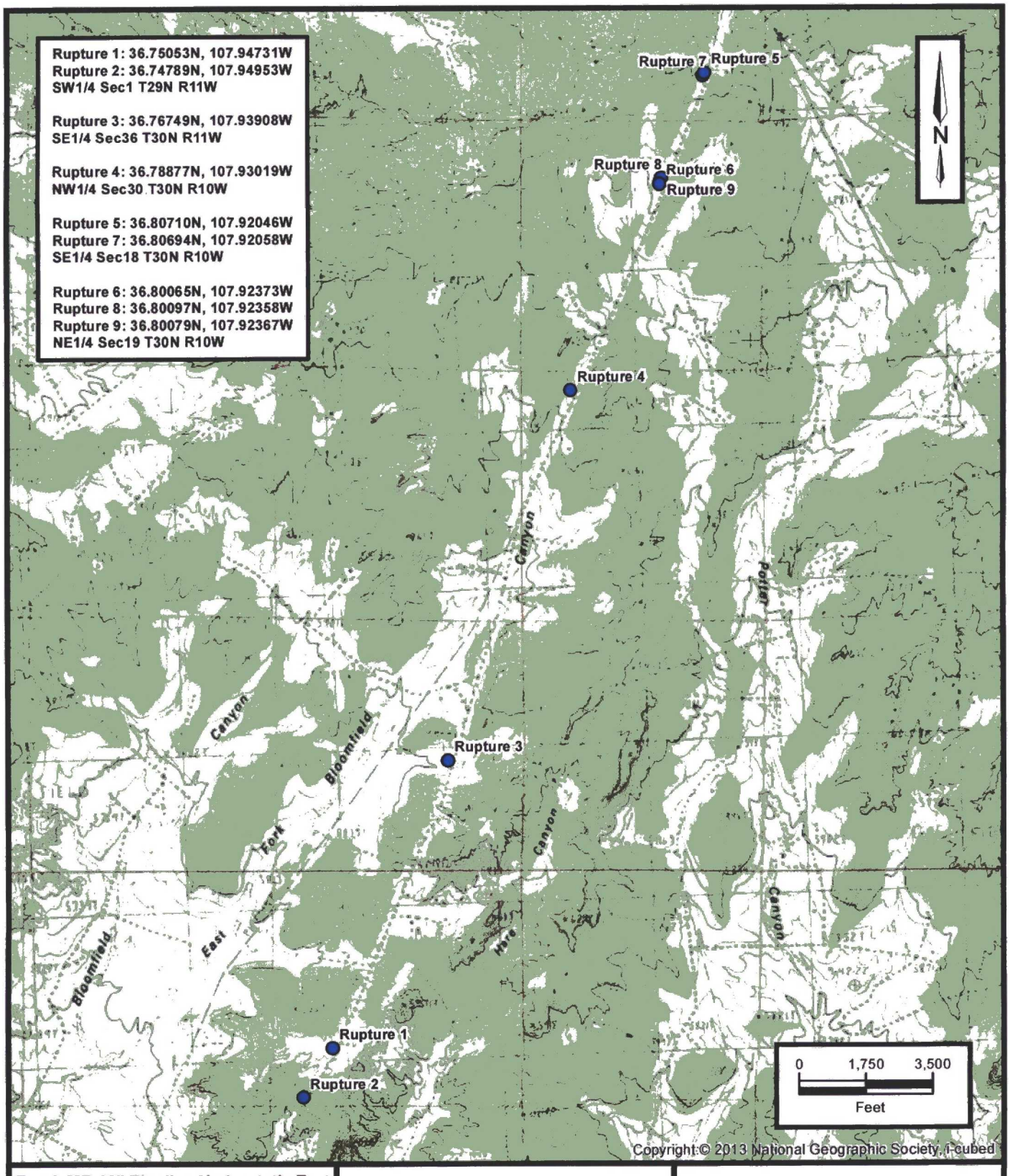
laboratories, regulatory agencies, or other third parties). This scope of services was performed in accordance with the scope of work agreed with the client.

Findings, conclusions and recommendations resulting from these services are based upon information derived from the on-Site activities and other services performed under this scope of work and it should be noted that this information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, or not present during these services, and Apex cannot represent that the Site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this scope of services. Environmental conditions at other areas or portions of the Site may vary from those encountered at actual sample locations. Apex's findings and recommendations are based solely upon data available to Apex at the time of these services.

This report has been prepared for the exclusive use of Enterprise, and any authorization for use or reliance by any other party (except a governmental entity having jurisdiction over the Site) is prohibited without the expressed written authorization of Enterprise and Apex. Any unauthorized distribution or reuse is at the client's sole risk. Notwithstanding the foregoing, reliance by authorized parties will be subject to the terms, conditions and limitations stated in the proposal, the report, and Apex's Agreement. The limitation of liability defined in the agreement is the aggregate limit of Apex's liability to the client.

# APPENDIX A

## Figures




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico

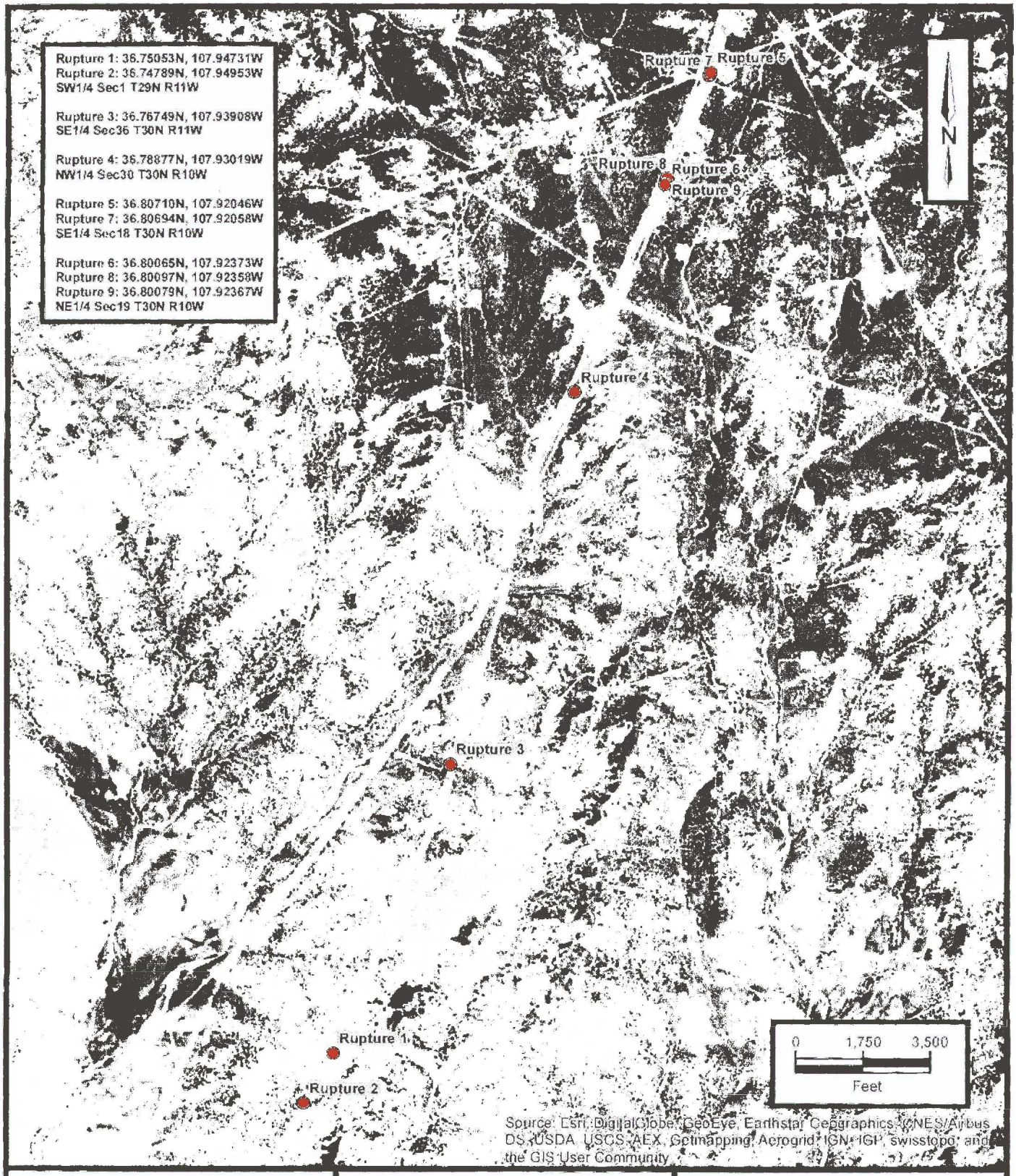
Project No. 725040112171

**Apex TITAN, Inc.**
606 South Rio Grande, Suite A
Aztec, NM 87410
*Phone: (505) 334-5200*
www.apexcos.com
***A Subsidiary of Apex Companies, LLC***

**FIGURE 1**

**Topographic Map**
**Rupture Locations**
Aztec, New Mexico Quadrangle
Bloomfield, New Mexico Quadrangle

Z:\Houston South\Drafting\New Mexico 04\2016\725040112171\Figure 1.mxd 8/8/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico

Project No. 725040112171

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Phone: (505) 334-5200
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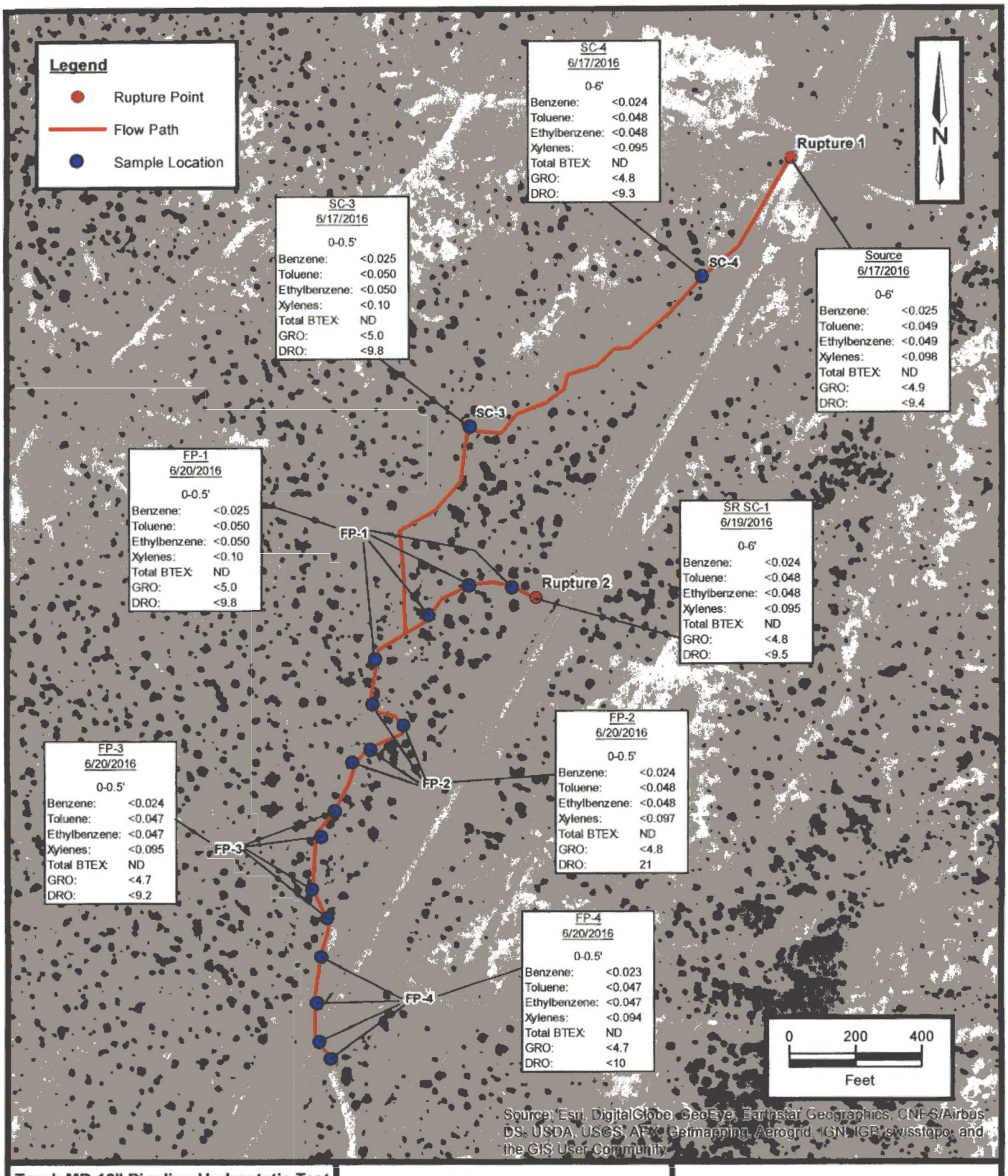
*A Subsidiary of Apex Companies, LLC*

**FIGURE 2**

**Site Vicinity Map**
**Rupture Locations**

Z:\Houston South\Drafting\New Mexico 04\2016\725\040112171\Figure 2.mxd 9/9/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico
Rupture 1: 36.75053N, 107.94731W
Rupture 2: 36.74789N, 107.94953W
SW1/4 Sec1 T29N R11W

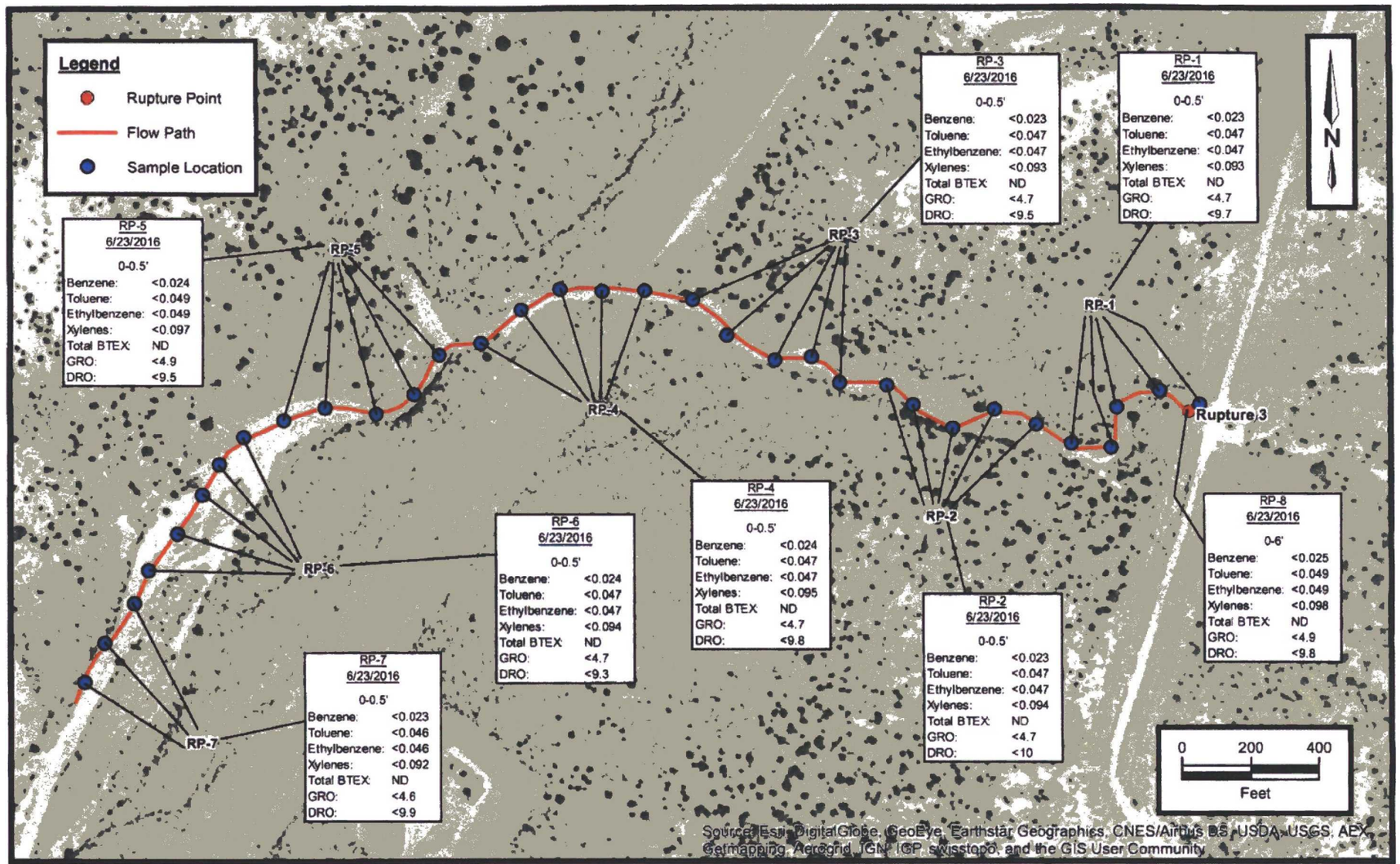
Project No. 725040112171

**Apex TITAN, Inc.**
606 South Rio Grande, Suite A
Aztec, NM 87410
*Phone: (505) 334-5200*
www.apexcos.com
*A Subsidiary of Apex Companies, LLC*

**FIGURE 3A**
**Rupture 1 and 2**

**Site Map with Flow Path**
**Soil Analytical Results**

Z:\Houston South\Drafting\New Mexico 04\2016\725040112171\Figure 3A.mxd 8/8/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico
Rupture 3: 36.76749N, 107.93908W
SE1/4 Sec36 T30N R11W

Project No. 725040112171

**Apex TITAN, Inc.**
606 South Rio Grande, Suite A
Aztec, NM 87410
*Phone: (505) 334-5200*
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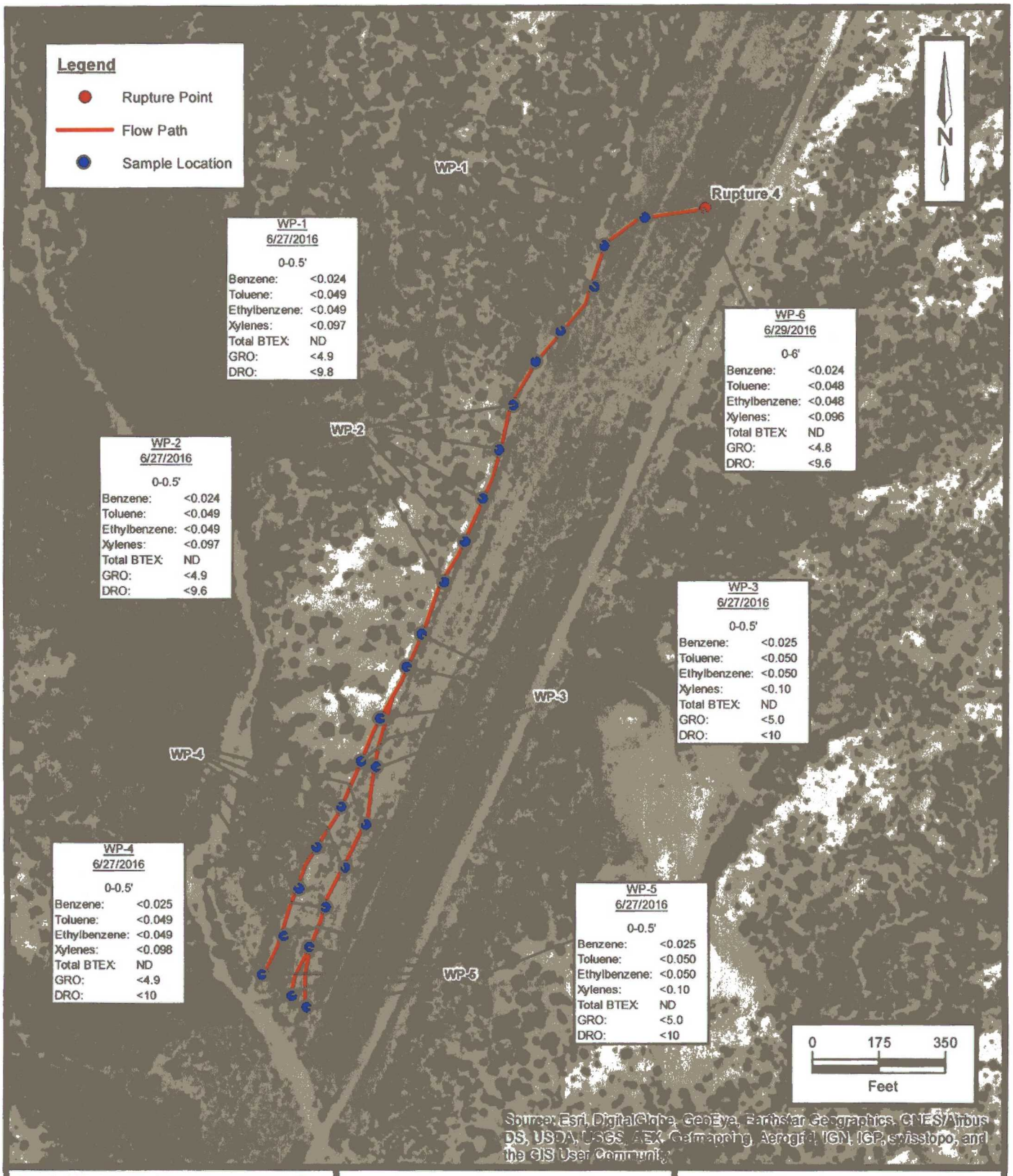
**FIGURE 3B**
**Rupture 3**

**Site Map with Flow Path**
**Soil Analytical Results**

Z:\Houston South\Drafting\New Mexico 04\2016\725040112171\Figure 3B.mxd 8/8/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico
Rupture 4: 36.78877N, 107.93019W
NW1/4 Sec30 T30N R10W

Project No. 725040112171

**Apex TITAN, Inc.**
606 South Rio Grande, Suite A
Aztec, NM 87410
*Phone: (505) 334-5200*
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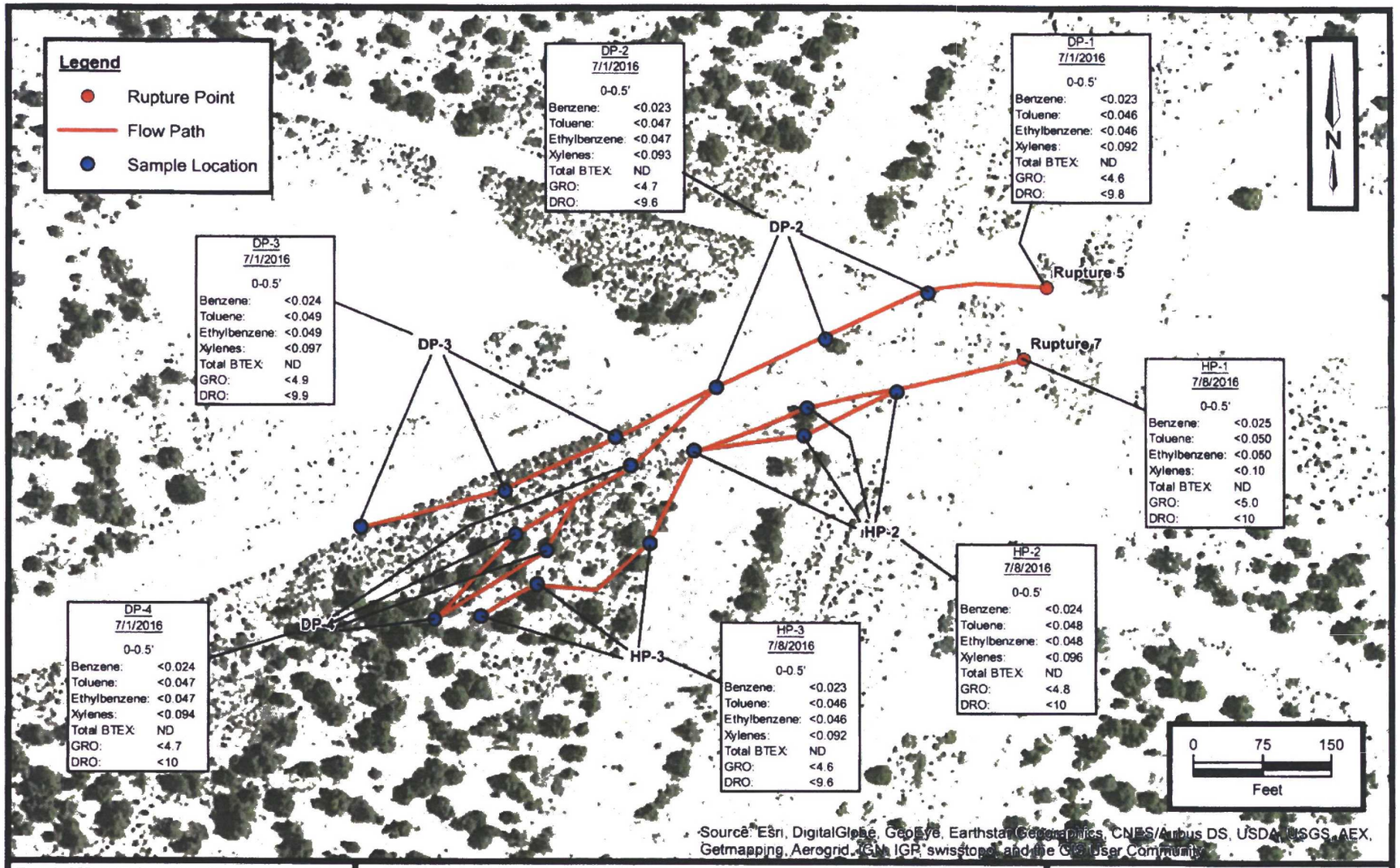
**FIGURE 3C**
**Rupture 4**

**Site Map with Flow Path**
**Soil Analytical Results**

Z:\Houston South\Drafting\New Mexico 04\2016\725040112171\Figure 3C.mxd 8/8/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico
Rupture 5: 36.80710N, 107.92046W
Rupture 7: 36.80694N, 107.92058W
SE1/4 Sec18 T30N R10W

Project No. 725040112171

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606 South Rio Grande, Suite A
Aztec, NM 87410
*Phone: (505) 334-5200*
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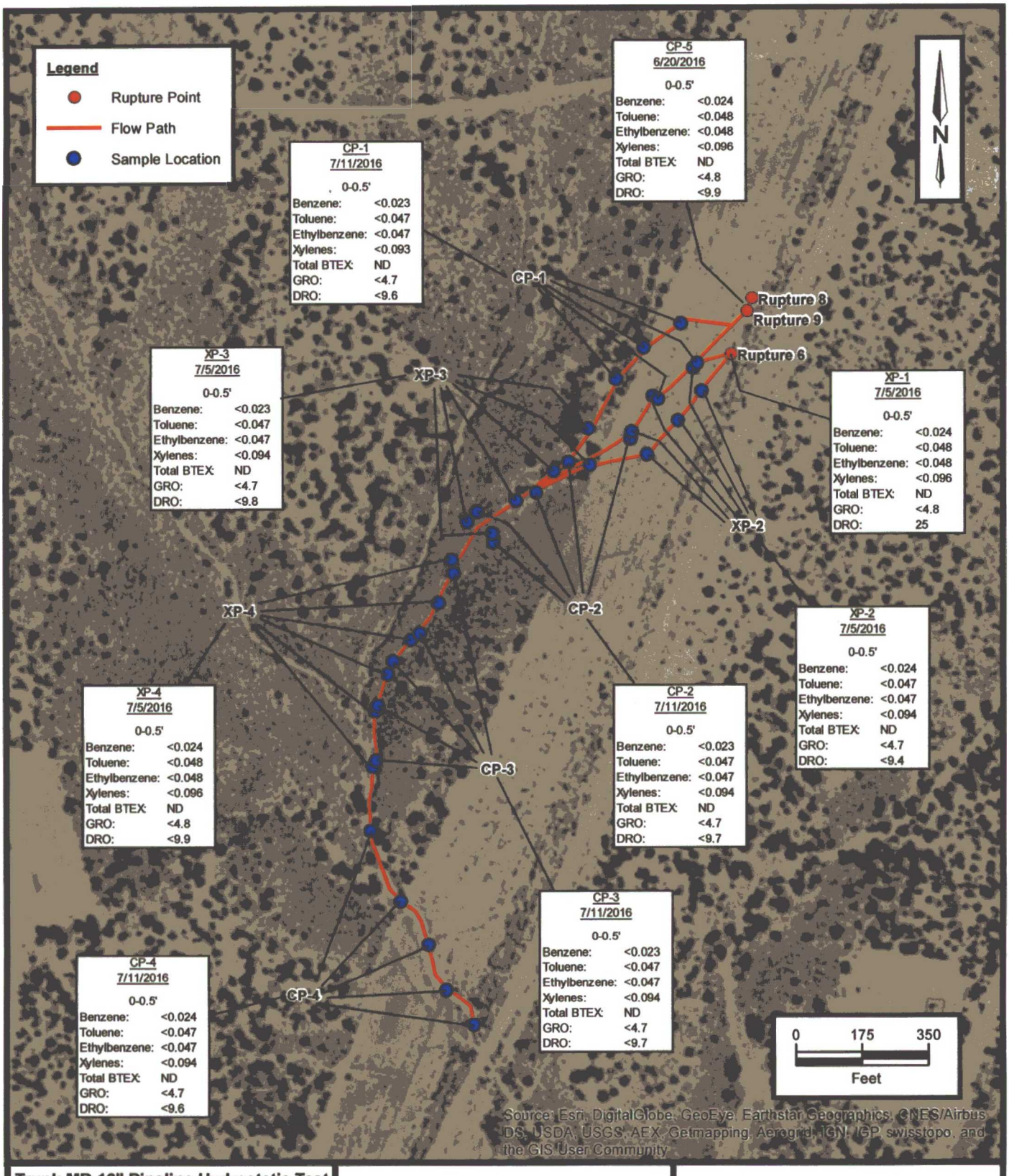
**FIGURE 3D**
**Rupture 5 and 7**

**Site Map with Flow Path**
**Soil Analytical Results**

Z:\Houston South\Drafting\New Mexico 04\2016\725040112171\Figure 3D.mxd 8/8/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System




**Trunk MD 16" Pipeline Hydrostatic Test**
**Ruptures 1 through 9**
San Juan County, New Mexico
Rupture 6: 36.80065N, 107.92373W
Rupture 8: 36.80097N, 107.92358W
Rupture 9: 36.80079N, 107.92367W
NE1/4 Sec19 T30N R10W

Project No. 725040112171

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606 South Rio Grande, Suite A
Aztec, NM 87410
*Phone: (505) 334-5200*
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**FIGURE 3E**
**Rupture 6, 8 and 9**

**Site Map with Flow Path**
**Soil Analytical Results**

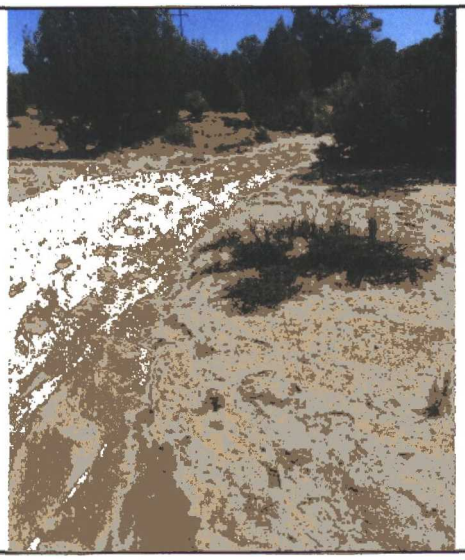
Z:\Houston South\Drafting\New Mexico 04\2016\725040112171\Figure 3E.mxd 9/8/2016 WGS 1984 Web Mercator Auxiliary Sphere Projected Coordinate System

# APPENDIX B

## Photographic Documentation

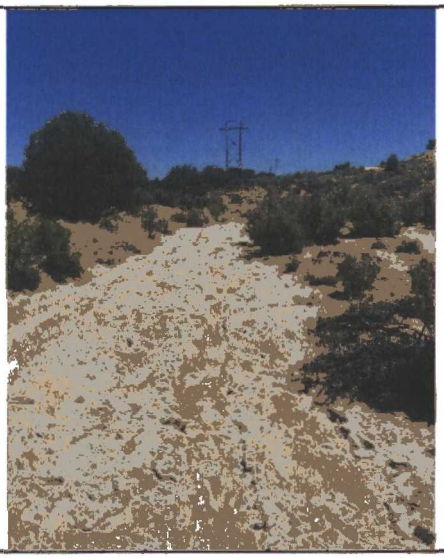
**Photograph 1**

View of the Rupture 2 flow path (mid-section), facing northeast.



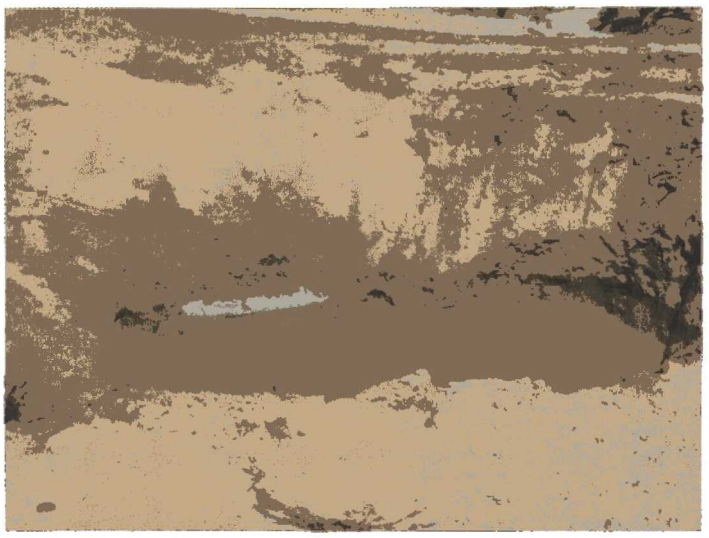
**Photograph 2**

View of the Rupture 2 flow path (southern section), facing northeast.



**Photograph 3**

View of the Rupture 3 source area, facing west.



**Photograph 4**

View of the end of the Rupture 3 flow path, facing north.

**Photograph 5**

View of the Rupture 4 source area, facing west.

**Photograph 6**

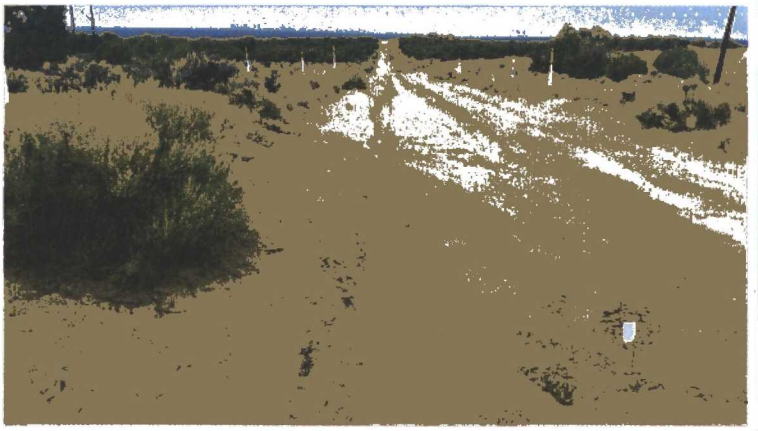
View of the Rupture 4 flow path (mid-section), facing north.

**Photograph 7**

View of the Rupture 5 source area, facing northwest.

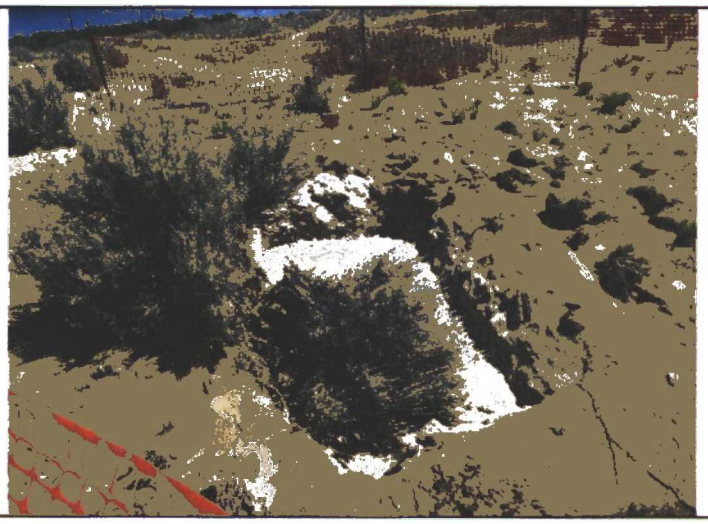
**Photograph 8**

View of the Rupture 5 flow path, facing southwest.



**Photograph 9**

View of the Rupture 6 source area, facing northwest.



**Photograph 10**

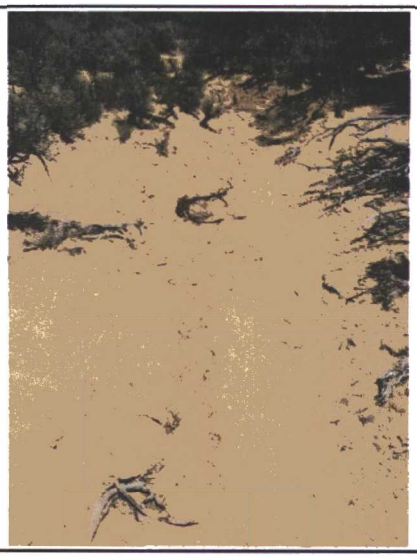
View of the end of the Rupture 6 flow path, facing northwest.

**Photograph 11**

View of the Rupture 7 source area, facing southwest.

**Photograph 12**

View of the end of the Rupture 7 flow path, facing northeast.



**Photograph 13**

View of the Rupture 8/9 source area, facing southwest.

**Photograph 14**

View of the end of the Rupture 8/9 flow path, facing northwest.

# APPENDIX C

## Tables

APEX

# TABLE 1

## Trunk MD 16" Pipeline Hydrostatic Test - (Ruptures 1 through 9)

### SOIL ANALYTICAL SUMMARY - BTEX, TPH, AND CHLORIDES

| Sample I.D. | Date | Sample Depth (feet) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylenes (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH MRO (mg/kg) | Chlorides (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level | | | 10 | NE | NE | NE | 50 | 100 | | NE | NE |
| **Rupture 1 Flow Path Samples** | | | | | | | | | | | |
| Source | 6.17.16 | 0 to 0.5 | <0.025 | <0.049 | <0.049 | <0.098 | ND | <4.9 | <9.4 | <47 | 150 |
| SC-3 | 6.17.16 | 0 to 0.5 | <0.025 | <0.050 | <0.050 | <0.10 | ND | <5.0 | <9.8 | <49 | <30 |
| SC-4 | 6.17.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.095 | ND | <4.8 | <9.3 | <47 | <30 |
| **Rupture 2 Flow Path Samples** | | | | | | | | | | | |
| SR SC-1 | 6.19.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.095 | ND | <4.8 | <9.5 | NA | 1.5 |
| FP-1 | 6.20.16 | 0 to 0.5 | <0.025 | <0.050 | <0.050 | <0.10 | ND | <5.0 | <9.8 | NA | <30 |
| FP-2 | 6.20.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.097 | ND | <4.8 | 21 | NA | <30 |
| FP-3 | 6.20.16 | 0 to 0.5 | <0.024 | <0.047 | <0.047 | <0.095 | ND | <4.7 | <9.2 | NA | <30 |
| FP-4 | 6.20.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <10 | NA | <30 |
| **Rupture 3 Flow Path Samples** | | | | | | | | | | | |
| RP-1 | 6.23.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.093 | ND | <4.7 | <9.7 | NA | 1.5 |
| RP-2 | 6.23.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <10 | NA | <1.5 |
| RP-3 | 6.23.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.093 | ND | <4.7 | <9.5 | NA | <30 |
| RP-4 | 6.23.16 | 0 to 0.5 | <0.024 | <0.047 | <0.047 | <0.095 | ND | <4.7 | <9.8 | NA | <30 |
| RP-5 | 6.23.16 | 0 to 0.5 | <0.024 | <0.049 | <0.049 | <0.097 | ND | <4.9 | <9.5 | NA | <30 |
| RP-6 | 6.23.16 | 0 to 0.5 | <0.024 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <9.3 | NA | <30 |
| RP-7 | 6.23.16 | 0 to 0.5 | <0.023 | <0.046 | <0.046 | <0.092 | ND | <4.6 | <9.9 | NA | <30 |
| RP-8 | 6.23.16 | 0 to 0.5 | <0.025 | <0.049 | <0.049 | <0.098 | ND | <4.9 | <9.8 | NA | <30 |
| **Rupture 4 Flow Path Samples** | | | | | | | | | | | |
| WP-1 | 6.27.16 | 0 to 0.5 | <0.024 | <0.049 | <0.049 | <0.097 | ND | <4.9 | <9.8 | NA | <30 |
| WP-2 | 6.27.16 | 0 to 0.5 | <0.024 | <0.049 | <0.049 | <0.097 | ND | <4.9 | <9.6 | NA | <30 |
| WP-3 | 6.27.16 | 0 to 0.5 | <0.025 | <0.050 | <0.050 | <0.10 | ND | <5.0 | <10 | NA | <30 |
| WP-4 | 6.27.16 | 0 to 0.5 | <0.025 | <0.049 | <0.049 | <0.098 | ND | <4.9 | <10 | NA | <30 |
| WP-5 | 6.27.16 | 0 to 0.5 | <0.025 | <0.050 | <0.050 | <0.10 | ND | <5.0 | <10 | NA | <30 |
| WP-6 | 6.29.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.096 | ND | <4.8 | <9.6 | NA | <30 |

APEX

# TABLE 1

## Trunk MD 16" Pipeline Hydrostatic Test - (Ruptures 1 through 9)

### SOIL ANALYTICAL SUMMARY - BTEX, TPH, AND CHLORIDES

| Sample I.D. | Date | Sample Depth (feet) | Benzene (mg/kg) | Toluene (mg/kg) | Ethylbenzene (mg/kg) | Xylenes (mg/kg) | Total BTEX (mg/kg) | TPH GRO (mg/kg) | TPH DRO (mg/kg) | TPH MRO (mg/kg) | Chlorides (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| New Mexico Energy, Mineral & Natural Resources Department, Oil Conservation Division, Remediation Action Level | | | 10 | NE | NE | NE | 50 | 100 | | NE | NE |
| **Rupture 5 Flow Path Samples** | | | | | | | | | | | |
| DP-1 | 7.01.16 | 0 to 0.5 | <0.023 | <0.046 | <0.046 | <0.092 | ND | <4.6 | <9.8 | NA | <30 |
| DP-2 | 7.01.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.093 | ND | <4.7 | <9.6 | NA | <30 |
| DP-3 | 7.01.16 | 0 to 0.5 | <0.024 | <0.049 | <0.049 | <0.097 | ND | <4.9 | <9.9 | NA | <30 |
| DP-4 | 7.01.16 | 0 to 0.5 | <0.024 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <10 | NA | <30 |
| **Rupture 6 Flow Path Samples** | | | | | | | | | | | |
| XP-1 | 7.05.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.096 | ND | <4.8 | 25 | NA | <30 |
| XP-2 | 7.05.16 | 0 to 0.5 | <0.024 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <9.4 | NA | <30 |
| XP-3 | 7.05.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <9.8 | NA | <30 |
| XP-4 | 7.05.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.096 | ND | <4.8 | <9.9 | NA | <30 |
| **Rupture 7 Flow Path Samples** | | | | | | | | | | | |
| HP-1 | 7.08.16 | 0 to 0.5 | <0.025 | <0.050 | <0.050 | <0.10 | ND | <5.0 | <10 | NA | <30 |
| HP-2 | 7.08.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.096 | ND | <4.8 | <10 | NA | <30 |
| HP-3 | 7.08.16 | 0 to 0.5 | <0.023 | <0.046 | <0.046 | <0.092 | ND | <4.6 | <9.6 | NA | <30 |
| **Rupture 8/9 Flow Path Samples** | | | | | | | | | | | |
| CP-1 | 7.11.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.093 | ND | <4.7 | <9.6 | NA | 3.4 |
| CP-2 | 7.11.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <9.7 | NA | 3.6 |
| CP-3 | 7.11.16 | 0 to 0.5 | <0.023 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <9.7 | NA | 4.6 |
| CP-4 | 7.11.16 | 0 to 0.5 | <0.024 | <0.047 | <0.047 | <0.094 | ND | <4.7 | <9.6 | NA | 2.5 |
| CP-5 | 7.11.16 | 0 to 0.5 | <0.024 | <0.048 | <0.048 | <0.096 | ND | <4.8 | <9.9 | NA | 6.1 |

ND = Not Detected above the Laboratory Reporting Limits

NE = Not established

APEX

# TABLE 2

## Trunk MD 16" Pipeline Hydrostatic Test- (Ruptures 1 through 9)

### SOIL ANALYTICAL SUMMARY- RCRA 8 METALS

| Sample I.D. | Date | Sample Depth (feet) | Arsenic (mg/kg) | Barium (mg/kg) | Cadmium (mg/kg) | Chromium (mg/kg) | Lead (mg/kg) | Mercury (mg/kg) | Selenium (mg/kg) | Silver (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| **New Mexico Environmental Department (NMED) default Soil Screening Levels (SSLs) Residential** | | | **4.25** | **15,600** | **70.5** | **96.6** | **400** | **23.8** | **391** | **391** |
| **New Mexico Environmental Department (NMED) default Soil Screening Levels (SSLs) Industrial** | | | **21.5** | **255,000** | **1,100** | **505** | **800** | **112** | **6,490** | **6,490** |
| **Rupture 2 Flow Path Sample** | | | | | | | | | | |
| SR SC-1 | 6.19.16 | 0 to 0.5 | **6.9** | 45 | <0.099 | 1.3 | 3.7 | <0.032 | <2.5 | <0.25 |

Note: Concentrations in **bold** and yellow exceed a soil screening level

# TABLE 3
## Trunk MD 16" Pipeline Hydrostatic Test - (Ruptures 1 through 9)
### SOIL ANALYTICAL SUMMARY - ANION/CATIONS

| Sample I.D. | Date | Sample Depth (feet) | Calcium (mg/kg) | Magnesium (mg/kg) | Potassium (mg/kg) | Sodium (mg/kg) | Fluoride (mg/kg) | Nitrate (mg/kg) | Sulfate (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|
| **New Mexico Environmental Department (NMED) default Soil Screening Levels (SSLs) Residential** | | | **NE** | **NE** | **NE** | **NE** | **4,690** | **125,000** | **NE** |
| **New Mexico Environmental Department (NMED) default Soil Screening Levels (SSLs) Industrial** | | | **-** | **-** | **-** | **-** | **77,800** | **2,080,000** | **-** |
| **Rupture 8/9 Flow Path Samples** | | | | | | | | | |
| CP-1 | 7.11.16 | 0 to 0.5 | 1,900 | 1,100 | 730 | <50 | 0.71 | 0.84 | 17 |
| CP-2 | 7.11.16 | 0 to 0.5 | 790 | 590 | 550 | 29 | 0.74 | 1.4 | 11 |
| CP-3 | 7.11.16 | 0 to 0.5 | 1,400 | 1,300 | 870 | 32 | 1.2 | 1.0 | 10 |
| CP-4 | 7.11.16 | 0 to 0.5 | 660 | 380 | 370 | <25 | 0.45 | 0.55 | 5.7 |
| CP-5 | 7.11.16 | 0 to 0.5 | 1,100 | 570 | 440 | 35 | 2.3 | <0.30 | 15 |

NE = Not established

APEX

# TABLE 4
## Trunk MD 16" Pipeline Hydrostatic Test - (Ruptures 1 through 9)
### WATER ANALYTICAL SUMMARY- Volatile Organic Compounds

| Sample I.D. | Date | Benzene (µg/L) | Toluene (µg/L) | Ethylbenzene (µg/L) | Xylenes (µg/L) | 1,2,4- Trimethylbenzene (µg/L) | 1,3,5- Trimethylbenzene (µg/L) | Naphthalene (µg/L) | 1-Methylnaphthalene (µg/L) | 2-Methylnaphthalene (µg/L) | Acetone (µg/L) | Bromodichloromethane (µg/L) | Chloroform (µg/L) | Dibromochloromethane (µg/L) | Isopropylbenzene (µg/L) | n-Propylbenzene (µg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New Mexico Water Quality Control Commission Human Health Standards | | 10 | 750 | 750 | 620 | NE | NE | PAH-30 | | | NE | NE | 100 | NE | NE | NE |
| **Pipeline Header Water Samples** | | | | | | | | | | | | | | | | |
| Header ES 480 | 6.17.16 | 7.2 | 31 | 3.7 | 64 | 50 | 19 | **23** | **8.9** | **12** | 50 | 2.7 | 24 | <1.0 | 2.1 | 6.8 |
| Header ES 571 | 6.17.16 | **16** | 58 | 5.6 | 80 | 25 | 9.3 | 10 | <4.0 | 4.5 | <10 | 4.8 | 19 | <1.0 | 1.8 | 4.3 |
| **Rupture 1 Water Sample** | | | | | | | | | | | | | | | | |
| Source | 6.16.16 | 3.5 | 43 | 11 | 120 | 26 | 12 | 9.1 | 7.4 | 9.8 | <10 | 10 | 67 | <1.0 | 2.6 | 3.1 |
| **Rupture 2 Water Sample** | | | | | | | | | | | | | | | | |
| SR WS-1 | 6.19.16 | <1.0 | 1.1 | <1.0 | 4.9 | 1.6 | 1.1 | <2.0 | <4.0 | <4.0 | <10 | 8.8 | 74 | 1.1 | <1.0 | <1.0 |
| **Rupture 6 Water Sample** | | | | | | | | | | | | | | | | |
| Rupture #6* | 7.5.16 | <200 | <200 | <200 | <300 | <200 | <200 | <400 | <800 | <800 | <2,000 | <200 | 85 (J) | <200 | <200 | <200 |
| **Rupture 8 Water Sample** | | | | | | | | | | | | | | | | |
| Rupture #8 | 7.9.16 | <1.0 | <1.0 | <1.0 | <1.5 | <1.0 | <1.0 | <2.0 | <4.0 | <4.0 | <10 | 6.6 | 47 | <1.0 | 47 | <1.0 |

Note: Concentrations in **bold** and yellow exceed a WQCC Human Health Standard.

1,2,4-Trimethylbenzene,1,3,5-Trimethylbenzene, bromodichloromethane, dibromochloromethane, isopropylbenzene, and n-propylbenzene are not priority pollutants under the federal Clean Water Act (CWA) or the NM WQCC.

NE = Not Established

NA = Not Analyzed

* Sample was diluted due to TCLP reporting request.

J= Analyte dected below quantitation limits

APEX

# TABLE 5

## Trunk MD 16" Pipeline Hydrostatic Test - (Ruptures 1 through 9)

### WATER ANALYTICAL SUMMARY- RCRA 8 METALS

| Sample I.D. | Date | Arsenic (mg/L) | Barium (mg/L) | Cadmium (mg/L) | Chromium (mg/L) | Lead (mg/L) | Mercury (mg/L) | Selenium (mg/L) | Silver (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| New Mexico Water Quality Control Commission Human Health Standards | | 0.1 | 1.0 | 0.01 | 0.05 | 0.05 | 0.002 | 0.05 | 0.05 |
| **Pipeline Header Water Samples** | | | | | | | | | |
| Header ES 480 | 6.17.16 | <0.020 | 0.060 | <0.0020 | <0.0060 | <0.0050 | 0.00023 | <0.050 | <0.0050 |
| Header ES 571 | 6.17.16 | <0.020 | 0.090 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| **Rupture 1 Water Sample** | | | | | | | | | |
| Source | 6.16.16 | <0.020 | 0.13 | <0.0020 | <0.0060 | <0.0050 | <0.00020 | <0.050 | <0.0050 |
| **Rupture 6 Water Sample** | | | | | | | | | |
| Rupture #6 | 7.5.16 | 0.011 (J) | 0.25 | <0.0020 | 0.0047 (J) | <0.0050 | 0.00019 (J) | <0.050 | <0.0050 |
| **Rupture 8 Water Sample** | | | | | | | | | |
| Rupture #8 | 7.9.16 | <0.020 | 0.25 | <0.0020 | <0.0060 | 0.0066 | <0.00020 | <0.050 | <0.0050 |

Note: All RCRA 8 Metals are priority pollutants under the NM WQCC and federal CWA except Barium.
Barium is a priority pollutant under NM WQCC but not under the federal CWA.
J= Analyte dected below quantitation limits

# TABLE 6

## Trunk MD 16" Pipeline Hydrostatic Test - (Ruptures 1 through 9)

### WATER ANALYTICAL SUMMARY- ANIONS AND CATIONS

| Sample I.D. | Date | Fluoride (mg/L) | Chloride (mg/L) | Bromide (mg/L) | Nitrate (mg/L) | Sulfate (mg/L) | Calcium (mg/L) | Magnesium (mg/L) | Potassium (mg/L) | Sodium (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|
| **New Mexico Water Quality Control Commission Human Health and Domestic Water Supply Standards** | | **1.6** | **250** | **NE** | **10** | **600** | **NE** | **NE** | **NE** | **NE** |
| **Rupture 6 Water Sample** | | | | | | | | | | |
| Rupture #6 | 7.5.16 | 0.35 (J) | 37 | 0.93 | 0.32 (J) | 54 | 44 | 7.8 | 19 | 18 |

Note: Bromide, calcium, mangesium, potassium, and sodium are not priority pollutants under the federal CWA or the NM WQCC.

Chloride and sulfate priority pollutants under NM WQCC but not under the federal CWA.

NE = Not Established

J= Analyte detected below quantitation limits

APEX

# APPENDIX D

## Laboratory Data Sheets & Chain of Custody Documentation

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

June 27, 2016

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: MD 16 Inch Trunk Rupture OrderNo.: 1606A37

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/18/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1606A37**
Date Reported: **6/27/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** MD 16 Inch Trunk Rupture
**Lab ID:** 1606A37-001 **Matrix:** SOIL

**Client Sample ID:** Source 36.750534-107.947310
**Collection Date:** 6/17/2016 8:30:00 AM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | 150 | 30 | | mg/Kg | 20 | 6/20/2016 4:23:06 PM | 25953 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 6/20/2016 6:21:15 PM | 25934 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 6/20/2016 6:21:15 PM | 25934 |
| Surr: DNOP | 88.7 | 70-130 | | %Rec | 1 | 6/20/2016 6:21:15 PM | 25934 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/21/2016 12:52:31 PM | 25948 |
| Surr: BFB | 102 | 80-120 | | %Rec | 1 | 6/21/2016 12:52:31 PM | 25948 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/21/2016 12:52:31 PM | 25948 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/21/2016 12:52:31 PM | 25948 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/21/2016 12:52:31 PM | 25948 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 6/21/2016 12:52:31 PM | 25948 |
| Surr: 4-Bromofluorobenzene | 114 | 80-120 | | %Rec | 1 | 6/21/2016 12:52:31 PM | 25948 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** MD 16 Inch Trunk Rupture
**Lab ID:** 1606A37-004 **Matrix:** SOIL

**Client Sample ID:** SC-3 36.748655-107.950182
**Collection Date:** 6/17/2016 9:06:00 AM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/20/2016 4:35:31 PM | 25953 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/20/2016 6:49:30 PM | 25934 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 6/20/2016 6:49:30 PM | 25934 |
| Surr: DNOP | 90.2 | 70-130 | | %Rec | 1 | 6/20/2016 6:49:30 PM | 25934 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 6/21/2016 1:17:01 PM | 25948 |
| Surr: BFB | 101 | 80-120 | | %Rec | 1 | 6/21/2016 1:17:01 PM | 25948 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/21/2016 1:17:01 PM | 25948 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 6/21/2016 1:17:01 PM | 25948 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 6/21/2016 1:17:01 PM | 25948 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 6/21/2016 1:17:01 PM | 25948 |
| Surr: 4-Bromofluorobenzene | 115 | 80-120 | | %Rec | 1 | 6/21/2016 1:17:01 PM | 25948 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** MD 16 Inch Trunk Rupture
**Lab ID:** 1606A37-005 **Matrix:** SOIL

**Client Sample ID:** SC-4 36-749991-107.948064
**Collection Date:** 6/17/2016 9:16:00 AM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/20/2016 4:47:56 PM | 25953 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | ND | 9.3 | | mg/Kg | 1 | 6/20/2016 7:17:45 PM | 25934 |
| Motor Oil Range Organics (MRO) | ND | 47 | | mg/Kg | 1 | 6/20/2016 7:17:45 PM | 25934 |
| Surr: DNOP | 90.1 | 70-130 | | %Rec | 1 | 6/20/2016 7:17:45 PM | 25934 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 6/21/2016 1:41:34 PM | 25948 |
| Surr: BFB | 98.8 | 80-120 | | %Rec | 1 | 6/21/2016 1:41:34 PM | 25948 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/21/2016 1:41:34 PM | 25948 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 6/21/2016 1:41:34 PM | 25948 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 6/21/2016 1:41:34 PM | 25948 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 6/21/2016 1:41:34 PM | 25948 |
| Surr: 4-Bromofluorobenzene | 112 | 80-120 | | %Rec | 1 | 6/21/2016 1:41:34 PM | 25948 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A37**

*27-Jun-16*

**Client:** Enterprise Field Services

**Project:** MD 16 Inch Trunk Rupture

| Sample ID **MB-25953** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25953** | RunNo: **35022** |
| Prep Date: **6/20/2016** | Analysis Date: **6/20/2016** | SeqNo: **1083001** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID **LCS-25953** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25953** | RunNo: **35022** |
| Prep Date: **6/20/2016** | Analysis Date: **6/20/2016** | SeqNo: **1083002** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.2 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A37**

*27-Jun-16*

**Client:** Enterprise Field Services
**Project:** MD 16 Inch Trunk Rupture

| Sample ID **MB-25888** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25888** | RunNo: **35005** |
| Prep Date: **6/16/2016** | Analysis Date: **6/20/2016** | SeqNo: **1082125** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 9.0 | | 10.00 | | 90.4 | 70 | 130 | | | |

| Sample ID **LCS-25888** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25888** | RunNo: **35005** |
| Prep Date: **6/16/2016** | Analysis Date: **6/20/2016** | SeqNo: **1082126** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: DNOP | 4.5 | | 5.000 | | 90.3 | 70 | 130 | | | |

| Sample ID **MB-25934** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25934** | RunNo: **35006** |
| Prep Date: **6/20/2016** | Analysis Date: **6/20/2016** | SeqNo: **1082985** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Motor Oil Range Organics (MRO) | ND | 50 | | | | | | | | |
| Surr: DNOP | 10 | | 10.00 | | 105 | 70 | 130 | | | |

| Sample ID **LCS-25934** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25934** | RunNo: **35006** |
| Prep Date: **6/20/2016** | Analysis Date: **6/20/2016** | SeqNo: **1082986** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 103 | 62.6 | 124 | | | |
| Surr: DNOP | 4.7 | | 5.000 | | 93.1 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A37**

*27-Jun-16*

**Client:** Enterprise Field Services
**Project:** MD 16 Inch Trunk Rupture

| Sample ID **MB-25948** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25948** | RunNo: **35050** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1084234** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1000 | | 1000 | | 102 | 80 | 120 | | | |

| Sample ID **LCS-25948 C** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25948** | RunNo: **35050** |
| Prep Date: | Analysis Date: **6/21/2016** | SeqNo: **1084235** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 23 | 5.0 | 25.00 | 0 | 93.3 | 80 | 120 | | | |
| Surr: BFB | 1000 | | 1000 | | 105 | 80 | 120 | | | |

| Sample ID **1606A37-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **Source 36.750534-1** | Batch ID: **25948** | RunNo: **35050** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1084236** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 19 | 4.8 | 24.11 | 0 | 77.2 | 59.3 | 143 | | | |
| Surr: BFB | 1000 | | 964.3 | | 105 | 80 | 120 | | | |

| Sample ID **1606A37-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **Source 36.750534-1** | Batch ID: **25948** | RunNo: **35050** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1084238** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 18 | 4.7 | 23.30 | 0 | 78.6 | 59.3 | 143 | 1.51 | 20 | |
| Surr: BFB | 1000 | | 932.0 | | 108 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A37**

***27-Jun-16***

**Client:** Enterprise Field Services

**Project:** MD 16 Inch Trunk Rupture

| Sample ID **MB-25948** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25948** | RunNo: **35050** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1084239** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 113 | 80 | 120 | | | |

| Sample ID **LCS-25948** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25948** | RunNo: **35050** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1084240** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.98 | 0.025 | 1.000 | 0 | 97.5 | 75.3 | 123 | | | |
| Toluene | 0.85 | 0.050 | 1.000 | 0 | 84.7 | 80 | 124 | | | |
| Ethylbenzene | 0.83 | 0.050 | 1.000 | 0 | 83.3 | 82.8 | 121 | | | |
| Xylenes, Total | 2.5 | 0.10 | 3.000 | 0 | 83.8 | 83.9 | 122 | | | S |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 113 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: **Enterprise** Work Order Number: **1606A37** RcptNo: **1**

Received by/date: 06/18/16

Logged By: **Lindsay Mangin** 6/18/2016 8:00:00 AM

Completed By: **Lindsay Mangin** 6/18/2016 8:50:35 AM

Reviewed By: 06/20/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.4 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Enterprise Products Operating

Mailing Address: 614 Reilly Ave. Farmington NM 87401

Phone #: 505-599-2286

email or Fax#: tjlong@eprod.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: Next Day

☐ Standard ☒ Rush

Project Name: ~~Trunk~~ MD 16 Inch Trunk Rupture

Project #:

Project Manager: Thomas Long

Sampler: TJL

On Ice: ☒ Yes ☐ No

Sample Temperature: 4


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH Method 8015B (Gas/Diesel) | TPH (Method 418.1) | EDB (Method 504.1) | 8310 (PNA or PAH) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Chloride | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10-17-16 | 0830 | Soil | Source 36.750534, -107.947310 | 4oz Jars | Cool | -001 | X | | X | | | | | | | | | X | | | | |
| | 0856 | | SC-1 36.749708, -107.951213 | | | -002 | X | | X | | | | | | | | | X | | | | |
| | 0900 | | SC-2 36.746138, -107.951291 | | | -003 | X | | X | | | | | | | | | X | | | | |
| | 0906 | | SC-3 36.748655, -107.950182 | | | -004 | X | | X | | | | | | | | | X | | | | |
| | 0916 | | SC-4 36.749991, -107.948064 | | | -005 | X | | X | | | | | | | | | X | | | | |

| Date: | Time: | Relinquished by: | Received by: | Date | Time | Remarks: |
|---|---|---|---|---|---|---|
| 10/17/16 | 1716 | Thomas Long | | 10/18/16 | 0800 | CANCEL SC-1, SC-2 (-002 & -003) PER TOM LONG |
| Date: | Time: | Relinquished by: | Received by: | Date | Time | |

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

June 29, 2016

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Trunk MD 16 Inch OrderNo.: 1606A36

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 3 sample(s) on 6/18/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued June 27, 2016.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-001 **Matrix:** AQUEOUS

**Client Sample ID:** Source 36.750534-107.947310
**Collection Date:** 6/16/2016 8:40:00 PM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **pmf** | |
| Mercury | ND | 0.00020 | | mg/L | 1 | 6/20/2016 3:48:59 PM | 25939 |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **MED** | |
| Arsenic | ND | 0.020 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| Barium | 0.13 | 0.020 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| Chromium | ND | 0.0060 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| Lead | ND | 0.0050 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| Selenium | ND | 0.050 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| Silver | ND | 0.0050 | | mg/L | 1 | 6/21/2016 8:20:18 AM | 25941 |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Benzene | 3.5 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Toluene | 43 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Ethylbenzene | 11 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2,4-Trimethylbenzene | 26 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,3,5-Trimethylbenzene | 12 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Naphthalene | 9.1 | 2.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1-Methylnaphthalene | 7.4 | 4.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 2-Methylnaphthalene | 9.8 | 4.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Acetone | ND | 10 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Bromodichloromethane | 10 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Bromoform | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 2-Butanone | ND | 10 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Chloroform | 67 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-001 **Matrix:** AQUEOUS

**Client Sample ID:** Source 36.750534-107.947310
**Collection Date:** 6/16/2016 8:40:00 PM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Isopropylbenzene | 2.6 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| n-Butylbenzene | ND | 3.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| n-Propylbenzene | 3.1 | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Styrene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Xylenes, Total | 120 | 1.5 | | µg/L | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Surr: 1,2-Dichloroethane-d4 | 85.8 | 70-130 | | %Rec | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Surr: 4-Bromofluorobenzene | 96.5 | 70-130 | | %Rec | 1 | 6/21/2016 5:23:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

**Analytical Report**
Lab Order **1606A36**
Date Reported: **6/29/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-001 **Matrix:** AQUEOUS

**Client Sample ID:** Source 36.750534-107.947310
**Collection Date:** 6/16/2016 8:40:00 PM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Surr: Dibromofluoromethane | 93.6 | 70-130 | | %Rec | 1 | 6/21/2016 5:23:00 PM | R35071 |
| Surr: Toluene-d8 | 98.6 | 70-130 | | %Rec | 1 | 6/21/2016 5:23:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-002 **Matrix:** AQUEOUS

**Client Sample ID:** Header ES 480
**Collection Date:** 6/17/2016 12:03:00 PM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **pmf** | |
| Mercury | 0.00023 | 0.00020 | | mg/L | 1 | 6/20/2016 3:55:06 PM | 25939 |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **MED** | |
| Arsenic | ND | 0.020 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| Barium | 0.060 | 0.020 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| Chromium | ND | 0.0060 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| Lead | ND | 0.0050 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| Selenium | ND | 0.050 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| Silver | ND | 0.0050 | | mg/L | 1 | 6/21/2016 8:23:51 AM | 25941 |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Benzene | 7.2 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Toluene | 31 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Ethylbenzene | 3.7 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2,4-Trimethylbenzene | 50 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,3,5-Trimethylbenzene | 19 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Naphthalene | 23 | 2.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1-Methylnaphthalene | 8.9 | 4.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 2-Methylnaphthalene | 12 | 4.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Acetone | 50 | 10 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Bromodichloromethane | 2.7 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Bromoform | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 2-Butanone | ND | 10 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Chloroform | 24 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-002 **Matrix:** AQUEOUS

**Client Sample ID:** Header ES 480
**Collection Date:** 6/17/2016 12:03:00 PM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Isopropylbenzene | 2.1 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| n-Butylbenzene | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| n-Propylbenzene | 6.8 | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Styrene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Xylenes, Total | 64 | 1.5 | | µg/L | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Surr: 1,2-Dichloroethane-d4 | 87.6 | 70-130 | | %Rec | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Surr: 4-Bromofluorobenzene | 104 | 70-130 | | %Rec | 1 | 6/21/2016 6:34:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-002 **Matrix:** AQUEOUS

**Client Sample ID:** Header ES 480
**Collection Date:** 6/17/2016 12:03:00 PM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Surr: Dibromofluoromethane | 94.2 | 70-130 | | %Rec | 1 | 6/21/2016 6:34:00 PM | R35071 |
| Surr: Toluene-d8 | 97.3 | 70-130 | | %Rec | 1 | 6/21/2016 6:34:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-003 **Matrix:** AQUEOUS

**Client Sample ID:** Header ES 571
**Collection Date:** 6/17/2016 11:39:00 AM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **pmf** | |
| Mercury | ND | 0.00020 | | mg/L | 1 | 6/20/2016 3:57:08 PM | 25939 |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **MED** | |
| Arsenic | ND | 0.020 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| Barium | 0.090 | 0.020 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| Chromium | ND | 0.0060 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| Lead | ND | 0.0050 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| Selenium | ND | 0.050 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| Silver | ND | 0.0050 | | mg/L | 1 | 6/21/2016 8:25:02 AM | 25941 |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Benzene | 16 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Toluene | 58 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Ethylbenzene | 5.6 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2,4-Trimethylbenzene | 25 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,3,5-Trimethylbenzene | 9.3 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Naphthalene | 10 | 2.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 2-Methylnaphthalene | 4.5 | 4.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Acetone | ND | 10 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Bromodichloromethane | 4.8 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Bromoform | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 2-Butanone | ND | 10 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Chloroform | 19 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-003 **Matrix:** AQUEOUS

**Client Sample ID:** Header ES 571
**Collection Date:** 6/17/2016 11:39:00 AM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Isopropylbenzene | 1.8 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| n-Butylbenzene | ND | 3.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| n-Propylbenzene | 4.3 | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Styrene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Xylenes, Total | 80 | 1.5 | | µg/L | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Surr: 1,2-Dichloroethane-d4 | 86.3 | 70-130 | | %Rec | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Surr: 4-Bromofluorobenzene | 100 | 70-130 | | %Rec | 1 | 6/21/2016 6:58:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606A36-003 **Matrix:** AQUEOUS

**Client Sample ID:** Header ES 571
**Collection Date:** 6/17/2016 11:39:00 AM
**Received Date:** 6/18/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **BCN** | |
| Surr: Dibromofluoromethane | 94.0 | 70-130 | | %Rec | 1 | 6/21/2016 6:58:00 PM | R35071 |
| Surr: Toluene-d8 | 97.7 | 70-130 | | %Rec | 1 | 6/21/2016 6:58:00 PM | R35071 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A36**

***29-Jun-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **tune 6** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R35071** | RunNo: **35071** |
| Prep Date: | Analysis Date: **6/21/2016** | SeqNo: **1084527** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A36**

***29-Jun-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **tune 6** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **R35071** | RunNo: **35071** |
| Prep Date: | Analysis Date: **6/21/2016** | SeqNo: **1084527** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.0 | | 10.00 | | 89.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 94.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |

| Sample ID **1606a36-001ams** | SampType: **MS** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **Source 36.750534-1** | Batch ID: **R35071** | RunNo: **35071** |
| Prep Date: | Analysis Date: **6/21/2016** | SeqNo: **1084538** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 23 | 1.0 | 20.00 | 3.962 | 97.6 | 70 | 130 | | | |
| Toluene | 63 | 1.0 | 20.00 | 46.34 | 81.3 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A36**

***29-Jun-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

Sample ID **1606a36-001ams** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **Source 36.750534-1** Batch ID: **R35071** RunNo: **35071**

Prep Date: Analysis Date: **6/21/2016** SeqNo: **1084538** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.9 | | 10.00 | | 88.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.4 | | 10.00 | | 93.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.7 | 70 | 130 | | | |

Sample ID **1606a36-001amsd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **Source 36.750534-1** Batch ID: **R35071** RunNo: **35071**

Prep Date: Analysis Date: **6/21/2016** SeqNo: **1084539** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 24 | 1.0 | 20.00 | 3.962 | 98.2 | 70 | 130 | 0.467 | 20 | |
| Toluene | 61 | 1.0 | 20.00 | 46.34 | 74.8 | 70 | 130 | 2.09 | 20 | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | 2.01 | 20 | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 93.7 | 70 | 130 | 7.96 | 20 | |
| Trichloroethene (TCE) | 19 | 1.0 | 20.00 | 0 | 95.9 | 70 | 130 | 5.55 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 8.8 | | 10.00 | | 88.3 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 102 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 9.5 | | 10.00 | | 95.3 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 97.0 | 70 | 130 | 0 | 0 | |

Sample ID **100ng lcs** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**

Client ID: **LCSW** Batch ID: **R35071** RunNo: **35071**

Prep Date: Analysis Date: **6/21/2016** SeqNo: **1084542** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 21 | 1.0 | 20.00 | 0 | 103 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Chlorobenzene | 21 | 1.0 | 20.00 | 0 | 104 | 70 | 130 | | | |
| 1,1-Dichloroethene | 19 | 1.0 | 20.00 | 0 | 96.1 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 102 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.7 | | 10.00 | | 86.9 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.6 | | 10.00 | | 96.0 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 95.8 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A36**

***29-Jun-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID | **MB-25939** | SampType: | **MBLK** | | TestCode: | **EPA Method 7470: Mercury** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBW** | Batch ID: | **25939** | | RunNo: | **35037** | | | | |
| Prep Date: | **6/20/2016** | Analysis Date: | **6/20/2016** | | SeqNo: | **1083381** | Units: | **mg/L** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | ND | 0.00020 | | | | | | | | |

| Sample ID | **LCS-25939** | SampType: | **LCS** | | TestCode: | **EPA Method 7470: Mercury** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSW** | Batch ID: | **25939** | | RunNo: | **35037** | | | | |
| Prep Date: | **6/20/2016** | Analysis Date: | **6/20/2016** | | SeqNo: | **1083382** | Units: | **mg/L** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0048 | 0.00020 | 0.005000 | 0 | 96.3 | 80 | 120 | | | |

| Sample ID | **1606A36-001BMS** | SampType: | **MS** | | TestCode: | **EPA Method 7470: Mercury** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **Source 36.750534-1** | Batch ID: | **25939** | | RunNo: | **35037** | | | | |
| Prep Date: | **6/20/2016** | Analysis Date: | **6/20/2016** | | SeqNo: | **1083384** | Units: | **mg/L** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0050 | 0.00020 | 0.005000 | 0 | 100 | 75 | 125 | | | |

| Sample ID | **1606A36-001BMSD** | SampType: | **MSD** | | TestCode: | **EPA Method 7470: Mercury** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **Source 36.750534-1** | Batch ID: | **25939** | | RunNo: | **35037** | | | | |
| Prep Date: | **6/20/2016** | Analysis Date: | **6/20/2016** | | SeqNo: | **1083385** | Units: | **mg/L** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0050 | 0.00020 | 0.005000 | 0 | 99.5 | 75 | 125 | 0.754 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A36**

***29-Jun-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **MB-25941** | SampType: **MBLK** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **25941** | RunNo: **35033** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1083100** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.020 | | | | | | | | |
| Barium | ND | 0.020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| Lead | ND | 0.0050 | | | | | | | | |
| Selenium | ND | 0.050 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |

| Sample ID **LCS-25941** | SampType: **LCS** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **25941** | RunNo: **35033** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1083101** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.50 | 0.020 | 0.5000 | 0 | 101 | 80 | 120 | | | |
| Barium | 0.49 | 0.020 | 0.5000 | 0 | 98.3 | 80 | 120 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 98.9 | 80 | 120 | | | |
| Chromium | 0.49 | 0.0060 | 0.5000 | 0 | 98.7 | 80 | 120 | | | |
| Lead | 0.49 | 0.0050 | 0.5000 | 0 | 98.4 | 80 | 120 | | | |
| Selenium | 0.51 | 0.050 | 0.5000 | 0 | 103 | 80 | 120 | | | |
| Silver | 0.10 | 0.0050 | 0.1000 | 0 | 99.6 | 80 | 120 | | | |

| Sample ID **1606A36-001BMS** | SampType: **MS** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **Source 36.750534-1** | Batch ID: **25941** | RunNo: **35033** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1083104** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.52 | 0.020 | 0.5000 | 0 | 104 | 75 | 125 | | | |
| Barium | 0.62 | 0.020 | 0.5000 | 0.1331 | 96.6 | 75 | 125 | | | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.3 | 75 | 125 | | | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0.003980 | 95.4 | 75 | 125 | | | |
| Lead | 0.48 | 0.0050 | 0.5000 | 0 | 95.3 | 75 | 125 | | | |
| Selenium | 0.50 | 0.050 | 0.5000 | 0 | 99.9 | 75 | 125 | | | |
| Silver | 0.099 | 0.0050 | 0.1000 | 0 | 98.6 | 75 | 125 | | | |

| Sample ID **1606A36-001BMSD** | SampType: **MSD** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **Source 36.750534-1** | Batch ID: **25941** | RunNo: **35033** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1083105** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.52 | 0.020 | 0.5000 | 0 | 104 | 75 | 125 | 0.110 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606A36**

***29-Jun-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **1606A36-001BMSD** | SampType: **MSD** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **Source 36.750534-1** | Batch ID: **25941** | RunNo: **35033** |
| Prep Date: **6/20/2016** | Analysis Date: **6/21/2016** | SeqNo: **1083105** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 0.60 | 0.020 | 0.5000 | 0.1331 | 94.2 | 75 | 125 | 1.93 | 20 | |
| Cadmium | 0.49 | 0.0020 | 0.5000 | 0 | 97.4 | 75 | 125 | 0.0801 | 20 | |
| Chromium | 0.48 | 0.0060 | 0.5000 | 0.003980 | 95.7 | 75 | 125 | 0.330 | 20 | |
| Lead | 0.48 | 0.0050 | 0.5000 | 0 | 95.6 | 75 | 125 | 0.340 | 20 | |
| Selenium | 0.52 | 0.050 | 0.5000 | 0 | 103 | 75 | 125 | 3.42 | 20 | |
| Silver | 0.098 | 0.0050 | 0.1000 | 0 | 97.6 | 75 | 125 | 1.07 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: **Enterprise** Work Order Number: **1606A36** RcptNo: **1**

Received by/date: 06/18/16
Logged By: **Lindsay Mangin** 6/18/2016 8:00:00 AM
Completed By: **Lindsay Mangin** 6/18/2016 8:43:53 AM
Reviewed By: 06/20/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA Vials ☐ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.4 | Good | Yes | | | |

# Chain-of-Custody Record

Client: Enterprise Products Operating

Mailing Address: 614 Reilly Ave. Farmington, NM 87401

Phone #: 505-599-2286

Email or Fax#: tjlong@eprod.com

QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)

Accreditation: NELAP ☐ Other

EDD (Type)

Turn-Around Time: ☐ Standard ☒ Rush Next Day

Project Name: Trunk MD 16 Inch

Project #:

Project Manager: Thomas Long

Sampler: TJC

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.4

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1606A26 |
|---|---|---|---|---|---|---|
| 16-16 | 2040 | Water | Source 36.750534 -107.944310 | 3 VOAs 500ml | HCl/HNO3 | -001 |
| 7-16 | 1203 | ↓ | Header ES 480 | ↓ | ↓ | -002 |
| ↓ | 1139 | ↓ | Header ES 571 | ↓ | ↓ | -003 |

| Date: | Time: | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 1716 | | Thomas Long | | 06/17/16 | 0700 |
| Date: | Time: | Relinquished by: | Received by: | Date | Time |

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.


**HALL ENVIRONMENTAL ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107


Analysis Request

| BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | | | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | X | | | X | | | | | | | |
| | | | | | | X | | | X | | | | | | | |
| | | | | | | X | | | X | | | | | | | |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 14, 2016

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Trunk MD 16 Inch OrderNo.: 1606B73

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/21/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1606B73**
Date Reported: **7/14/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606B73-001 **Matrix:** SOIL

**Client Sample ID:** SR SC-1
**Collection Date:** 6/19/2016 1:30:00 PM
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | 1.5 | 1.5 | | mg/Kg | 1 | 6/24/2016 5:25:57 PM | 26073 |
| **EPA METHOD 7471: MERCURY** | | | | | | Analyst: **pmf** | |
| Mercury | ND | 0.032 | | mg/Kg | 1 | 6/24/2016 12:20:25 PM | 26037 |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: **MED** | |
| Arsenic | 6.9 | 2.5 | | mg/Kg | 1 | 6/30/2016 10:22:10 AM | 26038 |
| Barium | 45 | 0.099 | | mg/Kg | 1 | 6/30/2016 10:22:10 AM | 26038 |
| Cadmium | ND | 0.099 | | mg/Kg | 1 | 6/27/2016 11:39:27 AM | 26038 |
| Chromium | 1.3 | 0.30 | | mg/Kg | 1 | 6/27/2016 11:39:27 AM | 26038 |
| Lead | 3.7 | 0.25 | | mg/Kg | 1 | 6/30/2016 10:22:10 AM | 26038 |
| Selenium | ND | 2.5 | | mg/Kg | 1 | 6/30/2016 10:22:10 AM | 26038 |
| Silver | ND | 0.25 | | mg/Kg | 1 | 6/27/2016 11:39:27 AM | 26038 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 6/27/2016 3:45:24 PM | 25992 |
| Surr: DNOP | 94.6 | 70-130 | | %Rec | 1 | 6/27/2016 3:45:24 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 6/27/2016 1:21:07 AM | 25994 |
| Surr: BFB | 99.2 | 80-120 | | %Rec | 1 | 6/27/2016 1:21:07 AM | 25994 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/27/2016 1:21:07 AM | 25994 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 6/27/2016 1:21:07 AM | 25994 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 6/27/2016 1:21:07 AM | 25994 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 6/27/2016 1:21:07 AM | 25994 |
| Surr: 4-Bromofluorobenzene | 96.2 | 80-120 | | %Rec | 1 | 6/27/2016 1:21:07 AM | 25994 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606B73-002 **Matrix:** AQUEOUS

**Client Sample ID:** SR WS-1
**Collection Date:** 6/19/2016 12:05:00 PM
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Toluene | 1.1 | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2,4-Trimethylbenzene | 1.6 | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,3,5-Trimethylbenzene | 1.1 | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Acetone | ND | 10 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Bromodichloromethane | 8.8 | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Bromoform | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 2-Butanone | ND | 10 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Chloroform | 74 | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Dibromochloromethane | 1.1 | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1606B73-002 **Matrix:** AQUEOUS

**Client Sample ID:** SR WS-1
**Collection Date:** 6/19/2016 12:05:00 PM
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **DJF** | |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| n-Butylbenzene | ND | 3.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Styrene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Xylenes, Total | 4.9 | 1.5 | | µg/L | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Surr: 1,2-Dichloroethane-d4 | 100 | 70-130 | | %Rec | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Surr: 4-Bromofluorobenzene | 98.7 | 70-130 | | %Rec | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Surr: Dibromofluoromethane | 99.7 | 70-130 | | %Rec | 1 | 6/27/2016 9:17:19 PM | A35244 |
| Surr: Toluene-d8 | 92.5 | 70-130 | | %Rec | 1 | 6/27/2016 9:17:19 PM | A35244 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID | **MB-26073** | SampType: | **MBLK** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **26073** | | RunNo: | **35186** | | | | |
| Prep Date: | **6/24/2016** | Analysis Date: | **6/24/2016** | | SeqNo: | **1088718** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-26073** | SampType: | **LCS** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **26073** | | RunNo: | **35186** | | | | |
| Prep Date: | **6/24/2016** | Analysis Date: | **6/24/2016** | | SeqNo: | **1088719** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.2 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **MB-25992** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25992** | RunNo: **35221** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089257** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.9 | | 10.00 | | 88.6 | 70 | 130 | | | |

| Sample ID **LCS-25992** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25992** | RunNo: **35221** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089274** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | 52 | 10 | 50.00 | 0 | 103 | 62.6 | 124 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 96.6 | 70 | 130 | | | |

| Sample ID **1606B73-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **SR SC-1** | Batch ID: **25992** | RunNo: **35219** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089739** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | 39 | 9.2 | 45.87 | 2.122 | 80.5 | 33.9 | 141 | | | |
| Surr: DNOP | 4.3 | | 4.587 | | 93.9 | 70 | 130 | | | |

| Sample ID **1606B73-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **SR SC-1** | Batch ID: **25992** | RunNo: **35219** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089740** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | 41 | 9.4 | 46.90 | 2.122 | 82.9 | 33.9 | 141 | 4.91 | 20 | |
| Surr: DNOP | 4.3 | | 4.690 | | 92.3 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **MB-25994** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25994** | RunNo: **35223** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089084** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 990 | | 1000 | | 99.1 | 80 | 120 | | | |

| Sample ID **LCS-25994** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25994** | RunNo: **35223** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089085** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 28 | 5.0 | 25.00 | 0 | 111 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 109 | 80 | 120 | | | |

| Sample ID **1606B73-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **SR SC-1** | Batch ID: **25994** | RunNo: **35223** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089087** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 24 | 5.0 | 24.80 | 0 | 96.5 | 59.3 | 143 | | | |
| Surr: BFB | 1100 | | 992.1 | | 107 | 80 | 120 | | | |

| Sample ID **1606B73-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **SR SC-1** | Batch ID: **25994** | RunNo: **35223** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089088** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 25 | 4.8 | 24.06 | 0 | 103 | 59.3 | 143 | 3.16 | 20 | |
| Surr: BFB | 1000 | | 962.5 | | 109 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **MB-25994** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25994** | RunNo: **35223** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089121** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.97 | | 1.000 | | 96.8 | 80 | 120 | | | |

| Sample ID **LCS-25994** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25994** | RunNo: **35223** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089124** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 1.1 | 0.025 | 1.000 | 0 | 106 | 75.3 | 123 | | | |
| Toluene | 1.1 | 0.050 | 1.000 | 0 | 108 | 80 | 124 | | | |
| Ethylbenzene | 1.1 | 0.050 | 1.000 | 0 | 109 | 82.8 | 121 | | | |
| Xylenes, Total | 3.2 | 0.10 | 3.000 | 0 | 107 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 105 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35244** | RunNo: **35244** |
| Prep Date: | Analysis Date: **6/27/2016** | SeqNo: **1089953** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35244** | RunNo: **35244** |
| Prep Date: | Analysis Date: **6/27/2016** | SeqNo: **1089953** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.8 | | 10.00 | | 98.2 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 99.8 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.4 | | 10.00 | | 93.9 | 70 | 130 | | | |

| Sample ID **100ng lcs** | SampType: **LCS** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A35244** | RunNo: **35244** |
| Prep Date: | Analysis Date: **6/27/2016** | SeqNo: **1089954** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Toluene | 18 | 1.0 | 20.00 | 0 | 91.4 | 70 | 130 | | | |
| Chlorobenzene | 18 | 1.0 | 20.00 | 0 | 90.1 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **100ng lcs** | SampType: **LCS** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A35244** | RunNo: **35244** |
| Prep Date: | Analysis Date: **6/27/2016** | SeqNo: **1089954** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Trichloroethene (TCE) | 21 | 1.0 | 20.00 | 0 | 105 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.7 | | 10.00 | | 96.7 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 99.5 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 99.1 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.1 | | 10.00 | | 90.9 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID | MB-26037 | SampType: | MBLK | TestCode: | EPA Method 7471: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 26037 | RunNo: | 35191 | | | | | |
| Prep Date: | 6/23/2016 | Analysis Date: | 6/24/2016 | SeqNo: | 1088910 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| ury | ND | 0.033 | | | | | | | | |

| Sample ID | LCS-26037 | SampType: | LCS | TestCode: | EPA Method 7471: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 26037 | RunNo: | 35191 | | | | | |
| Prep Date: | 6/23/2016 | Analysis Date: | 6/24/2016 | SeqNo: | 1088911 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.17 | 0.033 | 0.1667 | 0 | 102 | 80 | 120 | | | |

| Sample ID | 1606B73-001AMS | SampType: | MS | TestCode: | EPA Method 7471: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SR SC-1 | Batch ID: | 26037 | RunNo: | 35191 | | | | | |
| Prep Date: | 6/23/2016 | Analysis Date: | 6/24/2016 | SeqNo: | 1088913 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| ury | 0.17 | 0.032 | 0.1620 | 0.003284 | 103 | 75 | 125 | | | |

| Sample ID | 1606B73-001AMSD | SampType: | MSD | TestCode: | EPA Method 7471: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | SR SC-1 | Batch ID: | 26037 | RunNo: | 35191 | | | | | |
| Prep Date: | 6/23/2016 | Analysis Date: | 6/24/2016 | SeqNo: | 1088914 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.18 | 0.033 | 0.1671 | 0.003284 | 105 | 75 | 125 | 4.59 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **MB-26038** | SampType: **MBLK** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26038** | RunNo: **35227** |
| Prep Date: **6/23/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089173** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 2.5 | | | | | | | | |
| Barium | ND | 0.10 | | | | | | | | |
| Cadmium | ND | 0.10 | | | | | | | | |
| Chromium | ND | 0.30 | | | | | | | | |
| Lead | ND | 0.25 | | | | | | | | |
| Selenium | ND | 2.5 | | | | | | | | |
| Silver | ND | 0.25 | | | | | | | | |

| Sample ID **LCS-26038** | SampType: **LCS** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26038** | RunNo: **35227** |
| Prep Date: **6/23/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089174** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 23 | 2.5 | 25.00 | 0 | 93.0 | 80 | 120 | | | |
| Barium | 23 | 0.10 | 25.00 | 0 | 93.0 | 80 | 120 | | | |
| Cadmium | 24 | 0.10 | 25.00 | 0 | 95.4 | 80 | 120 | | | |
| Chromium | 23 | 0.30 | 25.00 | 0 | 92.8 | 80 | 120 | | | |
| Lead | 22 | 0.25 | 25.00 | 0 | 89.1 | 80 | 120 | | | |
| Selenium | 24 | 2.5 | 25.00 | 0 | 95.8 | 80 | 120 | | | |
| Silver | 4.8 | 0.25 | 5.000 | 0 | 95.4 | 80 | 120 | | | |

| Sample ID **1606B73-001AMS** | SampType: **MS** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **SR SC-1** | Batch ID: **26038** | RunNo: **35227** |
| Prep Date: **6/23/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089256** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 20 | 0.099 | 24.81 | 0 | 79.1 | 75 | 125 | | | |
| Chromium | 20 | 0.30 | 24.81 | 1.261 | 76.5 | 75 | 125 | | | |
| Silver | 4.0 | 0.25 | 4.961 | 0 | 81.3 | 75 | 125 | | | |

| Sample ID **1606B73-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **SR SC-1** | Batch ID: **26038** | RunNo: **35227** |
| Prep Date: **6/23/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089278** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Cadmium | 21 | 0.10 | 25.14 | 0 | 83.2 | 75 | 125 | 6.36 | 20 | |
| Chromium | 22 | 0.30 | 25.14 | 1.261 | 83.3 | 75 | 125 | 9.21 | 20 | |
| Silver | 4.2 | 0.25 | 5.027 | 0 | 84.3 | 75 | 125 | 4.90 | 20 | |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B73**

***14-Jul-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID | **1606B73-001AMS** | SampType: | **MS** | | TestCode: | **EPA Method 6010B: Soil Metals** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **SR SC-1** | Batch ID: | **26038** | | RunNo: | **35332** | | | | |
| Prep Date: | **6/23/2016** | Analysis Date: | **6/30/2016** | | SeqNo: | **1093135** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| A c | 26 | 2.5 | 24.81 | 6.922 | 77.0 | 75 | 125 | | | |
| Barium | 61 | 0.099 | 24.81 | 45.48 | 60.7 | 75 | 125 | | | S |
| I | 23 | 0.25 | 24.81 | 3.701 | 79.2 | 75 | 125 | | | |
| Selenium | 22 | 2.5 | 24.81 | 0 | 86.9 | 75 | 125 | | | |

| Sample ID | **1606B73-001AMSD** | SampType: | **MSD** | | TestCode: | **EPA Method 6010B: Soil Metals** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **SR SC-1** | Batch ID: | **26038** | | RunNo: | **35332** | | | | |
| Prep Date: | **6/23/2016** | Analysis Date: | **6/30/2016** | | SeqNo: | **1093136** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| A : | 27 | 2.5 | 25.14 | 6.922 | 78.0 | 75 | 125 | 1.96 | 20 | |
| Barium | 83 | 0.10 | 25.14 | 45.48 | 148 | 75 | 125 | 30.8 | 20 | RS |
| I | 24 | 0.25 | 25.14 | 3.701 | 80.3 | 75 | 125 | 2.33 | 20 | |
| S m | 21 | 2.5 | 25.14 | 0 | 83.6 | 75 | 125 | 2.56 | 20 | |

| Sample ID | **1606B73-001APS** | SampType: | **PS** | | TestCode: | **EPA Method 6010B: Soil Metals** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **SR SC-1** | Batch ID: | **26038** | | RunNo: | **35332** | | | | |
| Prep Date: | | Analysis Date: | **6/30/2016** | | SeqNo: | **1093137** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Barium | 73 | 0.099 | 24.82 | 45.48 | 109 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: Enterprise | Work Order Number: 1606B73 | RcptNo: 1

Received by/date: LM 06/21/16

Logged By: Joe Archuleta 6/21/2016 8:00:00 AM

Completed By: Joe Archuleta 6/21/2016 3:04:21 PM

Reviewed By: aJ 6/21/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA Vials ☐ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 3.5 | Good | Yes | | | |

# Chain-of-Custody Record

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Client: Enterprise Products Operating
Mailing Address: 614 Reilly Ave. Farmington, NM 87401
Phone #: 505-599-2286
Email or Fax#: fjlong@eprod.com
QA/QC Package: ☑ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ NELAP ☐ Other
EDD (Type):

Turn-Around Time: ☑ Standard ☐ Rush
Project Name: Trunk MD 16 Inch
Project #:
Project Manager: Thomas Long
Sampler: TJL
On Ice: ☐ Yes ☐ No
Sample Temperature: 3.5

| Date | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. 1606373 | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 8015B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions (F,Cl,$NO_3$,$NO_2$,$PO_4$,$SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Chlorides | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6-16 | 1330 | Soil | SR SC-1 | 4oz Jar | cool | -001 | X | | X | | | | X | | | | | X | | | | |
| 6-16 | 1205 | Water | SR WS-1 | 2 VOA's | HgCl2 | -002 | | | | | | | | | | X | | | | | | |

| Date | Time | Relinquished by: | Received by: | Date | Time |
|---|---|---|---|---|---|
| 6-16 | | Thomas Long | | 06/24/16 | 0800 |
| | | Relinquished by: | Received by: | Date | Time |

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

June 29, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1606B27

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/21/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1606B27**
Date Reported: **6/29/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** FP-1
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/20/2016 10:50:00 AM
**Lab ID:** 1606B27-001
**Matrix:** SOIL
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/24/2016 5:02:07 AM | 26042 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/23/2016 4:46:52 PM | 25944 |
| Surr: DNOP | 108 | 70-130 | | %Rec | 1 | 6/23/2016 4:46:52 PM | 25944 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 6/22/2016 5:00:53 PM | 25976 |
| Surr: BFB | 99.4 | 80-120 | | %Rec | 1 | 6/22/2016 5:00:53 PM | 25976 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/22/2016 5:00:53 PM | 25976 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 6/22/2016 5:00:53 PM | 25976 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 6/22/2016 5:00:53 PM | 25976 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 6/22/2016 5:00:53 PM | 25976 |
| Surr: 4-Bromofluorobenzene | 95.1 | 80-120 | | %Rec | 1 | 6/22/2016 5:00:53 PM | 25976 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** FP-2
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/20/2016 11:00:00 AM
**Lab ID:** 1606B27-002
**Matrix:** SOIL
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/24/2016 5:14:31 AM | 26042 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | 21 | 9.9 | | mg/Kg | 1 | 6/23/2016 5:08:37 PM | 25944 |
| Surr: DNOP | 107 | 70-130 | | %Rec | 1 | 6/23/2016 5:08:37 PM | 25944 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 6/22/2016 6:11:39 PM | 25976 |
| Surr: BFB | 97.6 | 80-120 | | %Rec | 1 | 6/22/2016 6:11:39 PM | 25976 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/22/2016 6:11:39 PM | 25976 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 6/22/2016 6:11:39 PM | 25976 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 6/22/2016 6:11:39 PM | 25976 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/22/2016 6:11:39 PM | 25976 |
| Surr: 4-Bromofluorobenzene | 96.3 | 80-120 | | %Rec | 1 | 6/22/2016 6:11:39 PM | 25976 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** FP-3
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/20/2016 11:10:00 AM
**Lab ID:** 1606B27-003
**Matrix:** SOIL
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/24/2016 11:50:52 AM | 26073 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | ND | 9.2 | | mg/Kg | 1 | 6/23/2016 5:30:31 PM | 25944 |
| Surr: DNOP | 107 | 70-130 | | %Rec | 1 | 6/23/2016 5:30:31 PM | 25944 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/22/2016 7:22:36 PM | 25976 |
| Surr: BFB | 97.2 | 80-120 | | %Rec | 1 | 6/22/2016 7:22:36 PM | 25976 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/22/2016 7:22:36 PM | 25976 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/22/2016 7:22:36 PM | 25976 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/22/2016 7:22:36 PM | 25976 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 6/22/2016 7:22:36 PM | 25976 |
| Surr: 4-Bromofluorobenzene | 94.4 | 80-120 | | %Rec | 1 | 6/22/2016 7:22:36 PM | 25976 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** FP-4
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/20/2016 11:20:00 AM
**Lab ID:** 1606B27-004
**Matrix:** SOIL
**Received Date:** 6/21/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/24/2016 12:28:05 PM | 26073 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **JME** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 6/23/2016 5:52:18 PM | 25944 |
| Surr: DNOP | 109 | 70-130 | | %Rec | 1 | 6/23/2016 5:52:18 PM | 25944 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **DJF** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/22/2016 7:46:09 PM | 25976 |
| Surr: BFB | 102 | 80-120 | | %Rec | 1 | 6/22/2016 7:46:09 PM | 25976 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 6/22/2016 7:46:09 PM | 25976 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/22/2016 7:46:09 PM | 25976 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/22/2016 7:46:09 PM | 25976 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 6/22/2016 7:46:09 PM | 25976 |
| Surr: 4-Bromofluorobenzene | 96.8 | 80-120 | | %Rec | 1 | 6/22/2016 7:46:09 PM | 25976 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B27**

***29-Jun-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID | MB-26042 | SampType: | MBLK | | TestCode: | EPA Method 300.0: Anions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 26042 | | RunNo: | 35149 | | | | |
| Prep Date: | 6/23/2016 | Analysis Date: | 6/23/2016 | | SeqNo: | 1087334 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | LCS-26042 | SampType: | LCS | | TestCode: | EPA Method 300.0: Anions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 26042 | | RunNo: | 35149 | | | | |
| Prep Date: | 6/23/2016 | Analysis Date: | 6/23/2016 | | SeqNo: | 1087335 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.6 | 90 | 110 | | | |

| Sample ID | MB-26073 | SampType: | MBLK | | TestCode: | EPA Method 300.0: Anions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBS | Batch ID: | 26073 | | RunNo: | 35186 | | | | |
| Prep Date: | 6/24/2016 | Analysis Date: | 6/24/2016 | | SeqNo: | 1088718 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | LCS-26073 | SampType: | LCS | | TestCode: | EPA Method 300.0: Anions | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSS | Batch ID: | 26073 | | RunNo: | 35186 | | | | |
| Prep Date: | 6/24/2016 | Analysis Date: | 6/24/2016 | | SeqNo: | 1088719 | Units: | mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.2 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B27**

***29-Jun-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-25944** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25944** | RunNo: **35116** |
| Prep Date: **6/20/2016** | Analysis Date: **6/23/2016** | SeqNo: **1086562** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| I Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.8 | | 10.00 | | 88.1 | 70 | 130 | | | |

| Sample ID **LCS-25944** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25944** | RunNo: **35116** |
| Prep Date: **6/20/2016** | Analysis Date: **6/23/2016** | SeqNo: **1086657** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 38 | 10 | 50.00 | 0 | 75.2 | 62.6 | 124 | | | |
| Surr: DNOP | 4.4 | | 5.000 | | 87.1 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B27**

***29-Jun-16***

**Client:** APEX TITAN
**Project:** Trunk MD 16" Hydro

| Sample ID **MB-25976** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **25976** | RunNo: **35097** | | | | | | | |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085943** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1000 | | 1000 | | 101 | 80 | 120 | | | |

| Sample ID **1606B27-002AMS** | SampType: **MS** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **FP-2** | Batch ID: **25976** | RunNo: **35097** | | | | | | | |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085947** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23 | 5.0 | 24.83 | 0 | 94.2 | 59.3 | 143 | | | |
| Surr: BFB | 1100 | | 993.0 | | 106 | 80 | 120 | | | |

| Sample ID **1606B27-002AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **FP-2** | Batch ID: **25976** | RunNo: **35097** | | | | | | | |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085948** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 24 | 4.7 | 23.56 | 0 | 99.9 | 59.3 | 143 | 0.589 | 20 | |
| Surr: BFB | 1100 | | 942.5 | | 118 | 80 | 120 | 0 | 0 | |

| Sample ID **LCS-25976** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **25976** | RunNo: **35174** | | | | | | | |
| Prep Date: **6/21/2016** | Analysis Date: **6/25/2016** | SeqNo: **1088116** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 29 | 5.0 | 25.00 | 0 | 116 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 107 | 80 | 120 | | | |

| Sample ID **LCS-26055** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26055** | RunNo: **35174** | | | | | | | |
| Prep Date: **6/24/2016** | Analysis Date: **6/25/2016** | SeqNo: **1088117** | Units: **%Rec** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 1100 | | 1000 | | 107 | 80 | 120 | | | |

| Sample ID **MB-26055** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26055** | RunNo: **35174** | | | | | | | |
| Prep Date: **6/24/2016** | Analysis Date: **6/25/2016** | SeqNo: **1088118** | Units: **%Rec** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 970 | | 1000 | | 97.4 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B27**

***29-Jun-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-25976** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25976** | RunNo: **35097** |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085953** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| ) es, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 97.5 | 80 | 120 | | | |

| Sample ID **LCS-25976** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25976** | RunNo: **35097** |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085954** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.95 | 0.025 | 1.000 | 0 | 94.7 | 75.3 | 123 | | | |
| Toluene | 0.98 | 0.050 | 1.000 | 0 | 97.7 | 80 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.4 | 82.8 | 121 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 98.2 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

| Sample ID **1606B27-001AMS** | SampType: **MS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **FP-1** | Batch ID: **25976** | RunNo: **35097** |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085956** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.96 | 0.023 | 0.9285 | 0 | 103 | 71.5 | 122 | | | |
| Toluene | 0.98 | 0.046 | 0.9285 | 0 | 106 | 71.2 | 123 | | | |
| Ethylbenzene | 0.99 | 0.046 | 0.9285 | 0 | 107 | 75.2 | 130 | | | |
| Xylenes, Total | 2.9 | 0.093 | 2.786 | 0.01671 | 103 | 72.4 | 131 | | | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 0.9285 | | 101 | 80 | 120 | | | |

| Sample ID **1606B27-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **FP-1** | Batch ID: **25976** | RunNo: **35097** |
| Prep Date: **6/21/2016** | Analysis Date: **6/22/2016** | SeqNo: **1085957** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.95 | 0.024 | 0.9785 | 0 | 97.1 | 71.5 | 122 | 0.686 | 20 | |
| Toluene | 1.0 | 0.049 | 0.9785 | 0 | 102 | 71.2 | 123 | 1.71 | 20 | |
| Ethylbenzene | 1.0 | 0.049 | 0.9785 | 0 | 105 | 75.2 | 130 | 3.94 | 20 | |
| Xylenes, Total | 3.0 | 0.098 | 2.935 | 0.01671 | 103 | 72.4 | 131 | 5.38 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 0.9785 | | 100 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S % Recovery outside of range due to dilution or matrix
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606B27**

***29-Jun-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **LCS-26055** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26055** | RunNo: **35174** |
| Prep Date: **6/24/2016** | Analysis Date: **6/25/2016** | SeqNo: **1088135** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.99 | | 1.000 | | 98.6 | 80 | 120 | | | |

| Sample ID **MB-26055** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26055** | RunNo: **35174** |
| Prep Date: **6/24/2016** | Analysis Date: **6/25/2016** | SeqNo: **1088136** Units: **%Rec** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Surr: 4-Bromofluorobenzene | 0.94 | | 1.000 | | 94.4 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: APEX AZTEC  Work Order Number: 1606B27  RcptNo: 1

Received by/date: 06/21/16

Logged By: Ashley Gallegos  6/21/2016 8:00:00 AM

Completed By: Ashley Gallegos  6/21/2016 10:13:59 AM

Reviewed By: 6/21/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 4.8 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Project Manager: K. Summers

Laboratory: Hall Environmental

Address: Albuquerque, NM

Contact: A. Freeman

Phone:

PO/SO #:

Sampler's Name: Ranee Deechilly

Sampler's Signature: R Deechilly

Proj. No.

Project Name: Trunk MD 16" Hydro

No/Type of Containers

ANALYSIS REQUESTED

Lab use only
Due Date:

Temp. of coolers when received (C°): 4.8

1 2 3 4 5

Page 1 of 1

| Matrix | Date | Time | Composite | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt | 250 ml | Glass Jar | P/O | 8021 BTEX | 8015 TPH (GRO/DRO) | Chlorides | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 6/20/16 | 1050 | | | FP-1 | | | | | | 1 | | X | X | X | 1606B27 001 |
| S | | 1100 | | | FP-2 | | | | | | 1 | | X | X | X | -002 |
| S | | 1110 | | | FP-3 | | | | | | 1 | | X | X | X | -003 |
| S | | 1120 | | | FP-4 | | | | | | 1 | | X | X | X | -004 |

AES

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| R Deechilly | 6/20/16 | 1630 | | 06/21/16 | 0700 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |

NOTES:

Bill to Tom Long EPROD

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 06, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1606D44

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 8 sample(s) on 6/24/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-1
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 9:50:00 AM
**Lab ID:** 1606D44-001
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | 1.5 | 1.5 | | mg/Kg | 1 | 6/28/2016 12:54:41 AM | 26092 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 6/27/2016 8:51:37 PM | 25992 |
| Surr: DNOP | 94.7 | 70-130 | | %Rec | 1 | 6/27/2016 8:51:37 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/27/2016 6:33:33 PM | 26054 |
| Surr: BFB | 99.1 | 80-120 | | %Rec | 1 | 6/27/2016 6:33:33 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 6/27/2016 6:33:33 PM | 26054 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 6:33:33 PM | 26054 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 6:33:33 PM | 26054 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 6/27/2016 6:33:33 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 94.2 | 80-120 | | %Rec | 1 | 6/27/2016 6:33:33 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-2
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 10:00:00 AM
**Lab ID:** 1606D44-002
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 1.5 | | mg/Kg | 1 | 6/28/2016 1:19:31 AM | 26092 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 6/27/2016 9:13:31 PM | 25992 |
| Surr: DNOP | 98.3 | 70-130 | | %Rec | 1 | 6/27/2016 9:13:31 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/27/2016 6:57:04 PM | 26054 |
| Surr: BFB | 96.2 | 80-120 | | %Rec | 1 | 6/27/2016 6:57:04 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 6/27/2016 6:57:04 PM | 26054 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 6:57:04 PM | 26054 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 6:57:04 PM | 26054 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 6/27/2016 6:57:04 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 91.6 | 80-120 | | %Rec | 1 | 6/27/2016 6:57:04 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-3
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 10:10:00 AM
**Lab ID:** 1606D44-003
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/29/2016 10:50:34 AM | 26161 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 6/27/2016 9:35:16 PM | 25992 |
| Surr: DNOP | 97.0 | 70-130 | | %Rec | 1 | 6/27/2016 9:35:16 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/27/2016 7:20:31 PM | 26054 |
| Surr: BFB | 97.9 | 80-120 | | %Rec | 1 | 6/27/2016 7:20:31 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 6/27/2016 7:20:31 PM | 26054 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 7:20:31 PM | 26054 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 7:20:31 PM | 26054 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 6/27/2016 7:20:31 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 92.7 | 80-120 | | %Rec | 1 | 6/27/2016 7:20:31 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-4
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 10:20:00 AM
**Lab ID:** 1606D44-004
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/29/2016 11:52:37 AM | 26161 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/27/2016 9:57:18 PM | 25992 |
| Surr: DNOP | 97.4 | 70-130 | | %Rec | 1 | 6/27/2016 9:57:18 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/27/2016 7:43:59 PM | 26054 |
| Surr: BFB | 97.2 | 80-120 | | %Rec | 1 | 6/27/2016 7:43:59 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/27/2016 7:43:59 PM | 26054 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 7:43:59 PM | 26054 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 7:43:59 PM | 26054 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 6/27/2016 7:43:59 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 92.0 | 80-120 | | %Rec | 1 | 6/27/2016 7:43:59 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-5
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 10:30:00 AM
**Lab ID:** 1606D44-005
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/29/2016 12:05:01 PM | 26161 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 6/27/2016 10:19:06 PM | 25992 |
| Surr: DNOP | 95.6 | 70-130 | | %Rec | 1 | 6/27/2016 10:19:06 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/27/2016 8:07:26 PM | 26054 |
| Surr: BFB | 98.5 | 80-120 | | %Rec | 1 | 6/27/2016 8:07:26 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/27/2016 8:07:26 PM | 26054 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/27/2016 8:07:26 PM | 26054 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/27/2016 8:07:26 PM | 26054 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/27/2016 8:07:26 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 93.7 | 80-120 | | %Rec | 1 | 6/27/2016 8:07:26 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-6
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 10:40:00 AM
**Lab ID:** 1606D44-006
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/29/2016 12:17:25 PM | 26161 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.3 | | mg/Kg | 1 | 6/27/2016 10:41:03 PM | 25992 |
| Surr: DNOP | 96.2 | 70-130 | | %Rec | 1 | 6/27/2016 10:41:03 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 6/27/2016 8:30:50 PM | 26054 |
| Surr: BFB | 98.0 | 80-120 | | %Rec | 1 | 6/27/2016 8:30:50 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/27/2016 8:30:50 PM | 26054 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 8:30:50 PM | 26054 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 6/27/2016 8:30:50 PM | 26054 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 6/27/2016 8:30:50 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 92.1 | 80-120 | | %Rec | 1 | 6/27/2016 8:30:50 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-7
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 10:50:00 AM
**Lab ID:** 1606D44-007 **Matrix:** SOIL **Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/29/2016 12:29:50 PM | 26161 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 6/27/2016 11:02:50 PM | 25992 |
| Surr: DNOP | 95.9 | 70-130 | | %Rec | 1 | 6/27/2016 11:02:50 PM | 25992 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 6/27/2016 8:54:23 PM | 26054 |
| Surr: BFB | 98.3 | 80-120 | | %Rec | 1 | 6/27/2016 8:54:23 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 6/27/2016 8:54:23 PM | 26054 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 6/27/2016 8:54:23 PM | 26054 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 6/27/2016 8:54:23 PM | 26054 |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 6/27/2016 8:54:23 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 92.6 | 80-120 | | %Rec | 1 | 6/27/2016 8:54:23 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** RP-8
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/23/2016 11:30:00 AM
**Lab ID:** 1606D44-008
**Matrix:** SOIL
**Received Date:** 6/24/2016 7:47:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 6/29/2016 12:42:15 PM | 26161 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/27/2016 2:20:27 PM | 26058 |
| Surr: DNOP | 77.9 | 70-130 | | %Rec | 1 | 6/27/2016 2:20:27 PM | 26058 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/27/2016 9:17:52 PM | 26054 |
| Surr: BFB | 97.9 | 80-120 | | %Rec | 1 | 6/27/2016 9:17:52 PM | 26054 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/27/2016 9:17:52 PM | 26054 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/27/2016 9:17:52 PM | 26054 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/27/2016 9:17:52 PM | 26054 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 6/27/2016 9:17:52 PM | 26054 |
| Surr: 4-Bromofluorobenzene | 93.5 | 80-120 | | %Rec | 1 | 6/27/2016 9:17:52 PM | 26054 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606D44**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26092** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26092** | RunNo: **35241** | | | | | | | |
| Prep Date: **6/27/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089804** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID **LCS-26092** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26092** | RunNo: **35241** | | | | | | | |
| Prep Date: **6/27/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089805** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.7 | 90 | 110 | | | |

| Sample ID **MB-26161** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26161** | RunNo: **35326** | | | | | | | |
| Prep Date: **6/30/2016** | Analysis Date: **6/29/2016** | SeqNo: **1092908** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID **LCS-26161** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26161** | RunNo: **35326** | | | | | | | |
| Prep Date: **6/30/2016** | Analysis Date: **6/29/2016** | SeqNo: **1092909** | Units: **mg/Kg** | | | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.1 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606D44**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **LCS-26058** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26058** | RunNo: **35221** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089122** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 50 | 10 | 50.00 | 0 | 99.4 | 62.6 | 124 | | | |
| Surr: DNOP | 4.7 | | 5.000 | | 94.7 | 70 | 130 | | | |

| Sample ID **MB-26058** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26058** | RunNo: **35221** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089123** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.6 | | 10.00 | | 95.6 | 70 | 130 | | | |

| Sample ID **MB-25992** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **25992** | RunNo: **35221** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089257** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.9 | | 10.00 | | 88.6 | 70 | 130 | | | |

| Sample ID **LCS-25992** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **25992** | RunNo: **35221** |
| Prep Date: **6/22/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089274** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 52 | 10 | 50.00 | 0 | 103 | 62.6 | 124 | | | |
| Surr: DNOP | 4.8 | | 5.000 | | 96.6 | 70 | 130 | | | |

| Sample ID **1606D44-008AMS** | SampType: **MS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **RP-8** | Batch ID: **26058** | RunNo: **35220** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089551** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 35 | 9.5 | 47.53 | 0 | 74.5 | 33.9 | 141 | | | |
| Surr: DNOP | 3.7 | | 4.753 | | 77.1 | 70 | 130 | | | |

| Sample ID **1606D44-008AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **RP-8** | Batch ID: **26058** | RunNo: **35220** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1090134** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606D44**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **1606D44-008AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **RP-8** | Batch ID: **26058** | RunNo: **35220** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1090134** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 36 | 9.5 | 47.26 | 0 | 75.4 | 33.9 | 141 | 0.651 | 20 | |
| Surr: DNOP | 3.8 | | 4.726 | | 80.5 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606D44**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26054** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26054** | RunNo: **35243** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089910** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 980 | | 1000 | | 97.6 | 80 | 120 | | | |

| Sample ID **LCS-26054** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26054** | RunNo: **35243** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089911** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 27 | 5.0 | 25.00 | 0 | 109 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 109 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606D44**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26054** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26054** | RunNo: **35243** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089938** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| e | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 1.000 | | 94.3 | 80 | 120 | | | |

| Sample ID **LCS-26054** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26054** | RunNo: **35243** |
| Prep Date: **6/24/2016** | Analysis Date: **6/27/2016** | SeqNo: **1089939** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.99 | 0.025 | 1.000 | 0 | 99.2 | 75.3 | 123 | | | |
| Toluene | 0.99 | 0.050 | 1.000 | 0 | 99.5 | 80 | 124 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 102 | 82.8 | 121 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 99.7 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 99.8 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1606D44 | RcptNo: 1

Received by/date: AT 06/24/16

Logged By: Anne Thorne 6/24/2016 7:47:00 AM Anne Thorne

Completed By: Anne Thorne 6/24/2016 Anne Thorne

Reviewed By: JA 06/24/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: ____ (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? ____ |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: ____ |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 2.4 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Laboratory: Hall Environmental
Address: ABQ, NM
Contact: A. Freeman
Phone:
PO/SO #:

Project Manager: K. Summers

Sampler's Name: Rance Deechilly
Sampler's Signature:

Proj No:
Project Name: Trunk MD 16" Hydro
No/Type of Containers:

Lab use only
Due Date: 2-7
Temp. of cooler when received (C°): 2 3 4 5
Page 1 of 1

ANALYSIS REQUESTED: 8021 BTEX, 8015 TPH GRO / DRO, Chlorides

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 6/23/16 | 950 | | | RP-1 | | | | | | 1 | | 1606044-001 |
| S | | 1000 | | | RP-2 | | | | | | 1 | | -002 |
| S | | 1010 | | | RP-3 | | | | | | 1 | | -003 |
| S | | 1020 | | | RP-4 | | | | | | 1 | | -004 |
| S | | 1030 | | | RP-5 | | | | | | 1 | | -005 |
| S | | 1040 | | | RP-6 | | | | | | 1 | | -006 |
| S | | 1050 | | | RP-7 | | | | | | 1 | | -007 |
| S | V | 130 | | | RP-8 | | | | | | 1 | | -008 |

NFS

Turn around time: X Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| Rance Deechilly | 6/23/16 | 1442 | | 6/23/16 | 1442 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Master Sealer | 6/23/16 | 1844 | | 06/24/16 | 0747 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |

NOTES: Bill to Tom Long EPRD

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 14, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1607041

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/30/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** WP-6
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/29/2016 7:50:00 AM
**Lab ID:** 1607041-001 **Matrix:** SOIL **Received Date:** 6/30/2016 8:05:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/8/2016 5:56:39 PM | 26308 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 7/6/2016 1:06:57 PM | 26224 |
| Surr: DNOP | 94.6 | 70-130 | | %Rec | 1 | 7/6/2016 1:06:57 PM | 26224 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/5/2016 1:20:58 PM | 26197 |
| Surr: BFB | 97.8 | 80-120 | | %Rec | 1 | 7/5/2016 1:20:58 PM | 26197 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/5/2016 1:20:58 PM | 26197 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/5/2016 1:20:58 PM | 26197 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/5/2016 1:20:58 PM | 26197 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/5/2016 1:20:58 PM | 26197 |
| Surr: 4-Bromofluorobenzene | 95.0 | 80-120 | | %Rec | 1 | 7/5/2016 1:20:58 PM | 26197 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607041**

***14-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26308** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26308** | RunNo: **35546** | | | | | | |
| Prep Date: **7/8/2016** | Analysis Date: **7/8/2016** | SeqNo: **1100588** | Units: **mg/Kg** | | | | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID **LCS-26308** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26308** | RunNo: **35546** | | | | | | |
| Prep Date: **7/8/2016** | Analysis Date: **7/8/2016** | SeqNo: **1100589** | Units: **mg/Kg** | | | | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.1 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607041**

***14-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26224** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26224** | RunNo: **35437** |
| Prep Date: **7/5/2016** | Analysis Date: **7/6/2016** | SeqNo: **1096560** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.5 | | 10.00 | | 94.6 | 70 | 130 | | | |

| Sample ID **LCS-26224** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26224** | RunNo: **35437** |
| Prep Date: **7/5/2016** | Analysis Date: **7/6/2016** | SeqNo: **1096561** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | 37 | 10 | 50.00 | 0 | 74.7 | 62.6 | 124 | | | |
| Surr: DNOP | 4.1 | | 5.000 | | 82.6 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607041**

***14-Jul-16***

**Client:** APEX TITAN
**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26197** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26197** | RunNo: **35429** |
| Prep Date: **7/1/2016** | Analysis Date: **7/5/2016** | SeqNo: **1096243** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 960 | | 1000 | | 95.8 | 80 | 120 | | | |

| Sample ID **LCS-26197** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26197** | RunNo: **35429** |
| Prep Date: **7/1/2016** | Analysis Date: **7/5/2016** | SeqNo: **1096244** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 105 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 107 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607041**

***14-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26197** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26197** | RunNo: **35429** |
| Prep Date: **7/1/2016** | Analysis Date: **7/5/2016** | SeqNo: **1096264** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.95 | | 1.000 | | 94.6 | 80 | 120 | | | |

| Sample ID **LCS-26197** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26197** | RunNo: **35429** |
| Prep Date: **7/1/2016** | Analysis Date: **7/5/2016** | SeqNo: **1096265** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.92 | 0.025 | 1.000 | 0 | 91.8 | 75.3 | 123 | | | |
| Toluene | 0.93 | 0.050 | 1.000 | 0 | 92.7 | 80 | 124 | | | |
| Ethylbenzene | 0.96 | 0.050 | 1.000 | 0 | 96.3 | 82.8 | 121 | | | |
| Xylenes, Total | 2.8 | 0.10 | 3.000 | 0 | 94.4 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1607041 | RcptNo: 1

Received by/date: [signature] 6/30/16

Logged By: Lindsay Mangin 6/30/2016 8:05:00 AM [signature]

Completed By: Lindsay Mangin 7/1/2016 12:36:12 PM [signature]

Reviewed By: aJ 7/1/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | |

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.1 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Project Manager: K Summers

Laboratory: Hall Environmental

Address: Albuquerque, NM

Contact: A. Freeman

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.1

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

Page 1 of 1

Sampler's Name: Ranee Deechilly

Sampler's Signature: R Deechilly

Proj. No.

Project Name: Trunk M10 16" Hybrid

| Matrix | Date | Time | Composite | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 LT | 250 ml | Glass Jar | P/O | 8021 BTEX | 8015 TPH GRO/DRO | Chlorides | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 6/29/16 | 0750 | | | WP-6 | | | | | | 1 | | X | X | X | 1607041-001 |

NFS

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| | 6/29/16 | 1254 | | 6/29/16 | 1254 |
| | 6/29/16 | 1851 | | 06/30/16 | 0805 |
| | | | | | |
| | | | | | |

NOTES:

Bill to Tom Long EPROD

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

Apex TITAN, Inc. • 606 S. Rio Grande, Suite A, Downstairs • Aztec, New Mexico 87410 • Office: 505-334-5200 • Fax: 505-334-5204

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 06, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1606F25

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/28/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** WP-1
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/27/2016 11:40:00 AM
**Lab ID:** 1606F25-001
**Matrix:** SOIL
**Received Date:** 6/28/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/1/2016 2:41:18 PM | 26203 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 6/30/2016 10:20:04 AM | 26153 |
| Surr: DNOP | 90.5 | 70-130 | | %Rec | 1 | 6/30/2016 10:20:04 AM | 26153 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/29/2016 9:07:51 PM | 26117 |
| Surr: BFB | 98.1 | 80-120 | | %Rec | 1 | 6/29/2016 9:07:51 PM | 26117 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/29/2016 9:07:51 PM | 26117 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/29/2016 9:07:51 PM | 26117 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/29/2016 9:07:51 PM | 26117 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/29/2016 9:07:51 PM | 26117 |
| Surr: 4-Bromofluorobenzene | 91.9 | 80-120 | | %Rec | 1 | 6/29/2016 9:07:51 PM | 26117 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** WP-2
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/27/2016 11:50:00 AM
**Lab ID:** 1606F25-002
**Matrix:** SOIL
**Received Date:** 6/28/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/1/2016 3:18:32 PM | 26203 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 6/30/2016 11:49:23 AM | 26153 |
| Surr: DNOP | 90.3 | 70-130 | | %Rec | 1 | 6/30/2016 11:49:23 AM | 26153 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/29/2016 9:31:24 PM | 26117 |
| Surr: BFB | 98.7 | 80-120 | | %Rec | 1 | 6/29/2016 9:31:24 PM | 26117 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 6/29/2016 9:31:24 PM | 26117 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/29/2016 9:31:24 PM | 26117 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/29/2016 9:31:24 PM | 26117 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 6/29/2016 9:31:24 PM | 26117 |
| Surr: 4-Bromofluorobenzene | 93.7 | 80-120 | | %Rec | 1 | 6/29/2016 9:31:24 PM | 26117 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** WP-3
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/27/2016 12:00:00 PM
**Lab ID:** 1606F25-003
**Matrix:** SOIL
**Received Date:** 6/28/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/1/2016 3:30:57 PM | 26203 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 6/30/2016 12:11:14 PM | 26153 |
| Surr: DNOP | 97.6 | 70-130 | | %Rec | 1 | 6/30/2016 12:11:14 PM | 26153 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 6/29/2016 9:54:56 PM | 26117 |
| Surr: BFB | 99.0 | 80-120 | | %Rec | 1 | 6/29/2016 9:54:56 PM | 26117 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/29/2016 9:54:56 PM | 26117 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 6/29/2016 9:54:56 PM | 26117 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 6/29/2016 9:54:56 PM | 26117 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 6/29/2016 9:54:56 PM | 26117 |
| Surr: 4-Bromofluorobenzene | 95.3 | 80-120 | | %Rec | 1 | 6/29/2016 9:54:56 PM | 26117 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** WP-4
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/27/2016 12:10:00 PM
**Lab ID:** 1606F25-004
**Matrix:** SOIL
**Received Date:** 6/28/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/1/2016 3:43:21 PM | 26203 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 6/30/2016 12:33:00 PM | 26153 |
| Surr: DNOP | 90.3 | 70-130 | | %Rec | 1 | 6/30/2016 12:33:00 PM | 26153 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 6/29/2016 10:18:25 PM | 26117 |
| Surr: BFB | 101 | 80-120 | | %Rec | 1 | 6/29/2016 10:18:25 PM | 26117 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/29/2016 10:18:25 PM | 26117 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 6/29/2016 10:18:25 PM | 26117 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 6/29/2016 10:18:25 PM | 26117 |
| Xylenes, Total | ND | 0.098 | | mg/Kg | 1 | 6/29/2016 10:18:25 PM | 26117 |
| Surr: 4-Bromofluorobenzene | 94.8 | 80-120 | | %Rec | 1 | 6/29/2016 10:18:25 PM | 26117 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** WP-5
**Project:** Trunk MD 16" Hydro
**Collection Date:** 6/27/2016 12:20:00 PM
**Lab ID:** 1606F25-005
**Matrix:** SOIL
**Received Date:** 6/28/2016 8:00:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/1/2016 3:55:46 PM | 26203 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 6/30/2016 12:55:02 PM | 26153 |
| Surr: DNOP | 88.2 | 70-130 | | %Rec | 1 | 6/30/2016 12:55:02 PM | 26153 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 6/29/2016 10:41:55 PM | 26117 |
| Surr: BFB | 97.8 | 80-120 | | %Rec | 1 | 6/29/2016 10:41:55 PM | 26117 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 6/29/2016 10:41:55 PM | 26117 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 6/29/2016 10:41:55 PM | 26117 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 6/29/2016 10:41:55 PM | 26117 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 6/29/2016 10:41:55 PM | 26117 |
| Surr: 4-Bromofluorobenzene | 90.5 | 80-120 | | %Rec | 1 | 6/29/2016 10:41:55 PM | 26117 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606F25**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID | **MB-26203** | SampType: | **MBLK** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **26203** | | RunNo: | **35411** | | | | |
| Prep Date: | **7/1/2016** | Analysis Date: | **7/1/2016** | | SeqNo: | **1095690** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-26203** | SampType: | **LCS** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **26203** | | RunNo: | **35411** | | | | |
| Prep Date: | **7/1/2016** | Analysis Date: | **7/1/2016** | | SeqNo: | **1095691** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.8 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606F25**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **LCS-26153** | SampType: **LCS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26153** | | | RunNo: **35335** | | | | | |
| Prep Date: **6/29/2016** | Analysis Date: **6/30/2016** | | | SeqNo: **1093643** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 103 | 62.6 | 124 | | | |
| Surr: DNOP | 4.6 | | 5.000 | | 91.0 | 70 | 130 | | | |

| Sample ID **MB-26153** | SampType: **MBLK** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26153** | | | RunNo: **35335** | | | | | |
| Prep Date: **6/29/2016** | Analysis Date: **6/30/2016** | | | SeqNo: **1093644** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.6 | | 10.00 | | 86.4 | 70 | 130 | | | |

| Sample ID **1606F25-001AMS** | SampType: **MS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **WP-1** | Batch ID: **26153** | | | RunNo: **35334** | | | | | |
| Prep Date: **6/29/2016** | Analysis Date: **6/30/2016** | | | SeqNo: **1094441** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 43 | 9.6 | 48.03 | 2.386 | 84.6 | 33.9 | 141 | | | |
| Surr: DNOP | 4.2 | | 4.803 | | 86.6 | 70 | 130 | | | |

| Sample ID **1606F25-001AMSD** | SampType: **MSD** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **WP-1** | Batch ID: **26153** | | | RunNo: **35334** | | | | | |
| Prep Date: **6/29/2016** | Analysis Date: **6/30/2016** | | | SeqNo: **1094442** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 10 | 50.56 | 2.386 | 87.0 | 33.9 | 141 | 7.55 | 20 | |
| Surr: DNOP | 4.6 | | 5.056 | | 91.5 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606F25**

***06-Jul-16***

**Cl t:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26117** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26117** | RunNo: **35307** |
| Prep Date: **6/28/2016** | Analysis Date: **6/29/2016** | SeqNo: **1092208** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 990 | | 1000 | | 99.3 | 80 | 120 | | | |

| Sample ID **LCS-26117** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26117** | RunNo: **35307** |
| Prep Date: **6/28/2016** | Analysis Date: **6/29/2016** | SeqNo: **1092209** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 27 | 5.0 | 25.00 | 0 | 110 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 111 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1606F25**

***06-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26117** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26117** | RunNo: **35307** |
| Prep Date: **6/28/2016** | Analysis Date: **6/29/2016** | SeqNo: **1092238** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.95 | | 1.000 | | 95.0 | 80 | 120 | | | |

| Sample ID **LCS-26117** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26117** | RunNo: **35307** |
| Prep Date: **6/28/2016** | Analysis Date: **6/29/2016** | SeqNo: **1092239** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.96 | 0.025 | 1.000 | 0 | 95.9 | 75.3 | 123 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 96.9 | 80 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.4 | 82.8 | 121 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 98.4 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 97.9 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: APEX AZTEC Work Order Number: 1606F25 RcptNo: 1

Received by/date: 06/28/16

Logged By: Ashley Gallegos 6/28/2016 8:00:00 AM

Completed By: Ashley Gallegos 6/28/2016 11:51:34 AM

Reviewed By: 06/28/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Client | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | |

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.8 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Project Manager: K. Summers

Laboratory: Hall Environmental

Address: Albuquerque, NM

Contact: A. Freeman

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 1.8

1 | 2 | 3 | 4 | 5

Page 1 of 1

Sampler's Name: Ranee Deechilly

Sampler's Signature: R Deechilly

Proj. No.

Project Name: Trunk M9 16" Hydro

No/Type of Containers

ANALYSIS REQUESTED: 8021 BTEX; 8015 TPH GRO/DRO; Chlorides

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 L | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 6/27/16 | 1140 | | | WP-1 | | | | | | 1 | | 1606F85-001 |
| S | | 1150 | | | WP-2 | | | | | | 1 | | -002 |
| S | | 1200 | | | WP-3 | | | | | | 1 | | -003 |
| S | | 1210 | | | WP-4 | | | | | | 1 | | -004 |
| S | | 1220 | | | WP-5 | | | | | | 1 | | -005 |

NFS

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| | 6/27/16 | 1540 | | 6/27/16 | 1540 |
| | 6/27/16 | 1910 | | 06/28/16 | 0800 |
| | | | | | |
| | | | | | |

NOTES: Bill to Tom Long EPROD

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 13, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Suite A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: MD16 Hydro 5 OrderNo.: 1607083

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/2/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1607083**
Date Reported: **7/13/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** MD16 Hydro 5
**Lab ID:** 1607083-001 **Matrix:** SOIL

**Client Sample ID:** DP-1
**Collection Date:** 7/1/2016 8:45:00 AM
**Received Date:** 7/2/2016 10:15:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 9:52:16 PM | 26315 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 7/7/2016 2:21:40 PM | 26260 |
| Surr: DNOP | 85.4 | 70-130 | | %Rec | 1 | 7/7/2016 2:21:40 PM | 26260 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 7/6/2016 1:28:52 PM | 26229 |
| Surr: BFB | 99.3 | 80-120 | | %Rec | 1 | 7/6/2016 1:28:52 PM | 26229 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/6/2016 1:28:52 PM | 26229 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 7/6/2016 1:28:52 PM | 26229 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 7/6/2016 1:28:52 PM | 26229 |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 7/6/2016 1:28:52 PM | 26229 |
| Surr: 4-Bromofluorobenzene | 95.8 | 80-120 | | %Rec | 1 | 7/6/2016 1:28:52 PM | 26229 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** MD16 Hydro 5
**Lab ID:** 1607083-002
**Matrix:** SOIL
**Client Sample ID:** DP-2
**Collection Date:** 7/1/2016 8:50:00 AM
**Received Date:** 7/2/2016 10:15:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 10:04:40 PM | 26315 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 7/7/2016 2:43:48 PM | 26260 |
| Surr: DNOP | 87.6 | 70-130 | | %Rec | 1 | 7/7/2016 2:43:48 PM | 26260 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/6/2016 5:01:06 PM | 26229 |
| Surr: BFB | 101 | 80-120 | | %Rec | 1 | 7/6/2016 5:01:06 PM | 26229 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/6/2016 5:01:06 PM | 26229 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/6/2016 5:01:06 PM | 26229 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/6/2016 5:01:06 PM | 26229 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 7/6/2016 5:01:06 PM | 26229 |
| Surr: 4-Bromofluorobenzene | 96.1 | 80-120 | | %Rec | 1 | 7/6/2016 5:01:06 PM | 26229 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** DP-3
**Project:** MD16 Hydro 5
**Collection Date:** 7/1/2016 9:00:00 AM
**Lab ID:** 1607083-003
**Matrix:** SOIL
**Received Date:** 7/2/2016 10:15:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 10:17:05 PM | 26315 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 7/7/2016 3:05:41 PM | 26260 |
| Surr: DNOP | 93.6 | 70-130 | | %Rec | 1 | 7/7/2016 3:05:41 PM | 26260 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 7/6/2016 5:24:40 PM | 26229 |
| Surr: BFB | 99.3 | 80-120 | | %Rec | 1 | 7/6/2016 5:24:40 PM | 26229 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/6/2016 5:24:40 PM | 26229 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 7/6/2016 5:24:40 PM | 26229 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 7/6/2016 5:24:40 PM | 26229 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 7/6/2016 5:24:40 PM | 26229 |
| Surr: 4-Bromofluorobenzene | 94.3 | 80-120 | | %Rec | 1 | 7/6/2016 5:24:40 PM | 26229 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** MD16 Hydro 5
**Lab ID:** 1607083-004 **Matrix:** SOIL

**Client Sample ID:** DP-4
**Collection Date:** 7/1/2016 9:10:00 AM
**Received Date:** 7/2/2016 10:15:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 10:54:19 PM | 26315 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 7/7/2016 3:27:48 PM | 26260 |
| Surr: DNOP | 88.1 | 70-130 | | %Rec | 1 | 7/7/2016 3:27:48 PM | 26260 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/6/2016 5:48:15 PM | 26229 |
| Surr: BFB | 101 | 80-120 | | %Rec | 1 | 7/6/2016 5:48:15 PM | 26229 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/6/2016 5:48:15 PM | 26229 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/6/2016 5:48:15 PM | 26229 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/6/2016 5:48:15 PM | 26229 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 7/6/2016 5:48:15 PM | 26229 |
| Surr: 4-Bromofluorobenzene | 96.3 | 80-120 | | %Rec | 1 | 7/6/2016 5:48:15 PM | 26229 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607083**

***13-Jul-16***

**Client:** APEX TITAN
**Project:** MD16 Hydro 5

| Sample ID | **MB-26315** | SampType: | **MBLK** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **26315** | | RunNo: | **35578** | | | | |
| Prep Date: | **7/8/2016** | Analysis Date: | **7/11/2016** | | SeqNo: | **1101772** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-26315** | SampType: | **LCS** | | TestCode: | **EPA Method 300.0: Anions** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **26315** | | RunNo: | **35578** | | | | |
| Prep Date: | **7/8/2016** | Analysis Date: | **7/11/2016** | | SeqNo: | **1101773** | Units: | **mg/Kg** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.2 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607083**

*13-Jul-16*

**Client:** APEX TITAN
**Project:** MD16 Hydro 5

| Sample ID **MB-26260** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26260** | RunNo: **35477** |
| Prep Date: **7/6/2016** | Analysis Date: **7/7/2016** | SeqNo: **1098295** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.1 | | 10.00 | | 91.4 | 70 | 130 | | | |

| Sample ID **LCS-26260** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26260** | RunNo: **35477** |
| Prep Date: **7/6/2016** | Analysis Date: **7/7/2016** | SeqNo: **1098315** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics (DRO) | 49 | 10 | 50.00 | 0 | 98.6 | 62.6 | 124 | | | |
| Surr: DNOP | 4.4 | | 5.000 | | 87.5 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607083**

***13-Jul-16***

**Client:** APEX TITAN

**Project:** MD16 Hydro 5

| Sample ID **MB-26229** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26229** | RunNo: **35443** |
| Prep Date: **7/5/2016** | Analysis Date: **7/6/2016** | SeqNo: **1097615** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 960 | | 1000 | | 95.5 | 80 | 120 | | | |

| Sample ID **LCS-26229** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26229** | RunNo: **35443** |
| Prep Date: **7/5/2016** | Analysis Date: **7/6/2016** | SeqNo: **1097616** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 105 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 108 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607083**

***13-Jul-16***

**Client:** APEX TITAN
**Project:** MD16 Hydro 5

| Sample ID **MB-26229** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26229** | RunNo: **35443** |
| Prep Date: **7/5/2016** | Analysis Date: **7/6/2016** | SeqNo: **1097633** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.93 | | 1.000 | | 92.8 | 80 | 120 | | | |

| Sample ID **LCS-26229** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26229** | RunNo: **35443** |
| Prep Date: **7/5/2016** | Analysis Date: **7/6/2016** | SeqNo: **1097635** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.98 | 0.025 | 1.000 | 0 | 97.8 | 75.3 | 123 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 96.9 | 80 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.4 | 82.8 | 121 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 99.2 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 0.99 | | 1.000 | | 98.6 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

# Sample Log-In Check List

Client Name: **APEX AZTEC** Work Order Number: **1607083** RcptNo: **1**

Received by/date: LM 07/02/16

Logged By: **Joe Archuleta** 7/2/2016 10:15:00 AM JCA

Completed By: **Joe Archuleta** 7/5/2016 8:51:58 AM JCA

Reviewed By: aJ 7/5/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 2.3 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, N.M

Project Manager: K. Summers

Laboratory: Hall Env

Address: Albq N.M

Contact: A Freeman

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 2.3

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

Page 1 of 1

Sampler's Name: Chad D'Aponti

Sampler's Signature:

Proj. No.: 725040112171

Project Name: MD16 Hydro #5

ANALYSIS REQUESTED: BTEX 8021 / TPH DRO/GRO 8015 / Chlorides

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | No/Type of Containers: VOA | A/G 1 L. | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 7/1/16 | 8:45 | | | DP-1 | | | | | | 1 | | 1607083 -001 |
| S | 7/1/16 | 8:50 | | | DP-2 | | | | | | 1 | | -002 |
| S | 7/1/16 | 9:00 | | | DP-3 | | | | | | 1 | | -003 |
| S | 7/1/16 | 9:10 | | | DP-4 | | | | | | 1 | | -004 |

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| | 7-1-16 | 1200 | Mista Waeta | 7/1/16 | 1200 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| | 7/1/16 | 1624 | | 07/02/16 | 1015 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |

NOTES: Bill to Tom Long

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 18, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1607307

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 4 sample(s) on 7/6/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1607307**
Date Reported: **7/18/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** Trunk MD 16" Hydro
**Lab ID:** 1607307-001 **Matrix:** SOIL

**Client Sample ID:** XP-1
**Collection Date:** 7/5/2016 2:30:00 PM
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 3:52:20 PM | 26328 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | 25 | 9.3 | | mg/Kg | 1 | 7/11/2016 1:06:02 PM | 26309 |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 7/11/2016 1:06:02 PM | 26309 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/8/2016 8:46:15 PM | 26286 |
| Surr: BFB | 99.8 | 80-120 | | %Rec | 1 | 7/8/2016 8:46:15 PM | 26286 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/8/2016 8:46:15 PM | 26286 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/8/2016 8:46:15 PM | 26286 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/8/2016 8:46:15 PM | 26286 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/8/2016 8:46:15 PM | 26286 |
| Surr: 4-Bromofluorobenzene | 97.4 | 80-120 | | %Rec | 1 | 7/8/2016 8:46:15 PM | 26286 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** Trunk MD 16" Hydro
**Lab ID:** 1607307-002 **Matrix:** SOIL

**Client Sample ID:** XP-2
**Collection Date:** 7/5/2016 2:40:00 PM
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 4:04:45 PM | 26328 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.4 | | mg/Kg | 1 | 7/11/2016 2:34:49 PM | 26309 |
| Surr: DNOP | 95.1 | 70-130 | | %Rec | 1 | 7/11/2016 2:34:49 PM | 26309 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/8/2016 9:09:42 PM | 26286 |
| Surr: BFB | 104 | 80-120 | | %Rec | 1 | 7/8/2016 9:09:42 PM | 26286 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/8/2016 9:09:42 PM | 26286 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/8/2016 9:09:42 PM | 26286 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/8/2016 9:09:42 PM | 26286 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 7/8/2016 9:09:42 PM | 26286 |
| Surr: 4-Bromofluorobenzene | 99.4 | 80-120 | | %Rec | 1 | 7/8/2016 9:09:42 PM | 26286 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** XP-3
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/5/2016 2:50:00 PM
**Lab ID:** 1607307-003
**Matrix:** SOIL
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 4:17:10 PM | 26328 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 7/11/2016 2:57:03 PM | 26309 |
| Surr: DNOP | 94.4 | 70-130 | | %Rec | 1 | 7/11/2016 2:57:03 PM | 26309 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/8/2016 9:33:03 PM | 26286 |
| Surr: BFB | 101 | 80-120 | | %Rec | 1 | 7/8/2016 9:33:03 PM | 26286 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/8/2016 9:33:03 PM | 26286 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/8/2016 9:33:03 PM | 26286 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/8/2016 9:33:03 PM | 26286 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 7/8/2016 9:33:03 PM | 26286 |
| Surr: 4-Bromofluorobenzene | 96.5 | 80-120 | | %Rec | 1 | 7/8/2016 9:33:03 PM | 26286 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** XP-4
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/5/2016 3:00:00 PM
**Lab ID:** 1607307-004
**Matrix:** SOIL
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/11/2016 4:29:35 PM | 26328 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 7/11/2016 3:19:27 PM | 26309 |
| Surr: DNOP | 85.7 | 70-130 | | %Rec | 1 | 7/11/2016 3:19:27 PM | 26309 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/8/2016 9:56:28 PM | 26286 |
| Surr: BFB | 99.2 | 80-120 | | %Rec | 1 | 7/8/2016 9:56:28 PM | 26286 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/8/2016 9:56:28 PM | 26286 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/8/2016 9:56:28 PM | 26286 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/8/2016 9:56:28 PM | 26286 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/8/2016 9:56:28 PM | 26286 |
| Surr: 4-Bromofluorobenzene | 93.9 | 80-120 | | %Rec | 1 | 7/8/2016 9:56:28 PM | 26286 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607307**

***18-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID | **MB-26328** | SampType: **MBLK** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: **26328** | | | RunNo: **35578** | | | | | |
| Prep Date: | **7/11/2016** | Analysis Date: **7/11/2016** | | | SeqNo: **1101743** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-26328** | SampType: **LCS** | | | TestCode: **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: **26328** | | | RunNo: **35578** | | | | | |
| Prep Date: | **7/11/2016** | Analysis Date: **7/11/2016** | | | SeqNo: **1101744** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 93.3 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607307**

***18-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **LCS-26309** | SampType: **LCS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26309** | | | RunNo: **35548** | | | | | |
| Prep Date: **7/8/2016** | Analysis Date: **7/11/2016** | | | SeqNo: **1100969** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 38 | 10 | 50.00 | 0 | 75.6 | 62.6 | 124 | | | |
| Surr: DNOP | 4.1 | | 5.000 | | 81.5 | 70 | 130 | | | |

| Sample ID **MB-26309** | SampType: **MBLK** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26309** | | | RunNo: **35548** | | | | | |
| Prep Date: **7/8/2016** | Analysis Date: **7/11/2016** | | | SeqNo: **1100970** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 8.5 | | 10.00 | | 84.8 | 70 | 130 | | | |

| Sample ID **1607307-001AMS** | SampType: **MS** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **XP-1** | Batch ID: **26309** | | | RunNo: **35548** | | | | | |
| Prep Date: **7/8/2016** | Analysis Date: **7/11/2016** | | | SeqNo: **1101096** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 100 | 10 | 50.81 | 0 | 203 | 33.9 | 141 | | | S |
| Surr: DNOP | 4.7 | | 5.081 | | 92.5 | 70 | 130 | | | |

| Sample ID **1607307-001AMSD** | SampType: **MSD** | | | TestCode: **EPA Method 8015M/D: Diesel Range Organics** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **XP-1** | Batch ID: **26309** | | | RunNo: **35548** | | | | | |
| Prep Date: **7/8/2016** | Analysis Date: **7/11/2016** | | | SeqNo: **1101097** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 120 | 9.5 | 47.26 | 0 | 247 | 33.9 | 141 | 12.0 | 20 | S |
| Surr: DNOP | 4.2 | | 4.726 | | 89.1 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607307**

***18-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26286** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26286** | RunNo: **35527** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1100342** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 1000 | | 1000 | | 102 | 80 | 120 | | | |

| Sample ID **LCS-26286** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26286** | RunNo: **35527** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1100343** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 103 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 112 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607307**

***18-Jul-16***

**Client:** APEX TITAN
**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26286** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26286** | RunNo: **35527** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1100371** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.99 | | 1.000 | | 98.9 | 80 | 120 | | | |

| Sample ID **LCS-26286** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26286** | RunNo: **35527** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1100372** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.99 | 0.025 | 1.000 | 0 | 98.6 | 75.3 | 123 | | | |
| Toluene | 0.96 | 0.050 | 1.000 | 0 | 95.8 | 80 | 124 | | | |
| Ethylbenzene | 0.98 | 0.050 | 1.000 | 0 | 98.3 | 82.8 | 121 | | | |
| Xylenes, Total | 2.9 | 0.10 | 3.000 | 0 | 97.6 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 103 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1607307 | RcptNo: 1

Received by/date: AT 07/06/16

Logged By: Lindsay Mangin 7/6/2016 7:35:00 AM

Completed By: Lindsay Mangin 7/7/2016 1:15:37 PM

Reviewed By: JA 07/07/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Project Manager: K. Summers

Laboratory: Hall

Address: ABQ, NM

Contact: A. Freeman

Phone:

PO/SO #:

Lab use only
Due Date: 1.0

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Page 1 of 1

Sampler's Name: Ranee Deechilly

Sampler's Signature: Ranee Deechilly

Proj. No.

Project Name: Trunk M016" Hydro

No/Type of Containers

ANALYSIS REQUESTED: 8021 BTEX; 8015 TPH (GRO/DRO); Chlorides

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt. | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 7/5/16 | 1430 | | | XP-1 | | | | | | 1 | | 1607307-001 |
| S | | 1440 | | | XP-2 | | | | | | 1 | | -002 |
| S | | 1450 | | | XP-3 | | | | | | 1 | | -003 |
| S | | 1500 | | | XP-4 | | | | | | 1 | | -004 |

MFS

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date | Time | Received by: (Signature) | Date | Time |
|---|---|---|---|---|---|
| Ranee Deechilly | 7/5/16 | 1740 | [signature] | 7/5/16 | 1740 |
| [signature] | 7/5/16 | 1846 | [signature] | 07/06/16 | 0735 |
| | | | | | |
| | | | | | |

NOTES: Bill to Tom Long EPROD

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

August 20, 2016

Thomas Long
Enterprise Field Services
614 Reilly Ave.
Farmington, NM 87401
TEL: (505) 599-2141
FAX

RE: Trunk MD 16 Inch OrderNo.: 1607128

Dear Thomas Long:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/6/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 13, 2016.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1607128-001 **Matrix:** AQUEOUS

**Client Sample ID:** Rupture #6
**Collection Date:** 7/5/2016 11:30:00 AM
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | | Analyst: **LGT** | |
| Fluoride | 0.35 | 0.14 | 0.50 | J | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| Chloride | 37 | 0.14 | 2.5 | | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| Nitrogen, Nitrite (As N) | ND | 0.26 | 0.50 | | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| Bromide | 0.93 | 0.22 | 0.50 | | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| Nitrogen, Nitrate (As N) | 0.32 | 0.20 | 0.50 | J | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| Phosphorus, Orthophosphate (As P) | ND | 1.1 | 2.5 | | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| Sulfate | 54 | 0.71 | 2.5 | | mg/L | 5 | 7/6/2016 5:20:12 PM | A35474 |
| **EPA METHOD 7470: MERCURY** | | | | | | | Analyst: **pmf** | |
| Mercury | 0.00019 | 0.000053 | 0.00020 | J | mg/L | 1 | 7/8/2016 1:56:42 PM | 26294 |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | | Analyst: **MED** | |
| Arsenic | 0.011 | 0.0082 | 0.020 | J | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Barium | 0.25 | 0.00070 | 0.020 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Cadmium | ND | 0.00078 | 0.0020 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Calcium | 44 | 0.066 | 1.0 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Chromium | 0.0047 | 0.0012 | 0.0060 | J | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Lead | ND | 0.0041 | 0.0050 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Magnesium | 7.8 | 0.020 | 1.0 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Potassium | 19 | 0.12 | 1.0 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Selenium | ND | 0.025 | 0.050 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Silver | ND | 0.00072 | 0.0050 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| Sodium | 18 | 0.21 | 1.0 | | mg/L | 1 | 7/8/2016 11:39:42 AM | 26285 |
| **EPA METHOD 8260B: VOLATILES** | | | | | | | Analyst: **DJF** | |
| Benzene | ND | 19 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Toluene | ND | 24 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Ethylbenzene | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Methyl tert-butyl ether (MTBE) | ND | 42 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2,4-Trimethylbenzene | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,3,5-Trimethylbenzene | ND | 23 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2-Dichloroethane (EDC) | ND | 23 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2-Dibromoethane (EDB) | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Naphthalene | ND | 19 | 400 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1-Methylnaphthalene | ND | 41 | 800 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 2-Methylnaphthalene | ND | 32 | 800 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Acetone | ND | 980 | 2000 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Bromobenzene | ND | 20 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Bromodichloromethane | ND | 28 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Bromoform | ND | 20 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Bromomethane | ND | 160 | 600 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1607128-001 **Matrix:** AQUEOUS

**Client Sample ID:** Rupture #6
**Collection Date:** 7/5/2016 11:30:00 AM
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | | Analyst: **DJF** | |
| 2-Butanone | ND | 150 | 2000 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Carbon disulfide | ND | 120 | 2000 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Carbon Tetrachloride | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Chlorobenzene | ND | 23 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Chloroethane | ND | 38 | 400 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Chloroform | 85 | 18 | 200 | J | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Chloromethane | ND | 43 | 600 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 2-Chlorotoluene | ND | 80 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 4-Chlorotoluene | ND | 26 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| cis-1,2-DCE | ND | 25 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| cis-1,3-Dichloropropene | ND | 21 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2-Dibromo-3-chloropropane | ND | 47 | 400 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Dibromochloromethane | ND | 17 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Dibromomethane | ND | 24 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2-Dichlorobenzene | ND | 80 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,3-Dichlorobenzene | ND | 29 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,4-Dichlorobenzene | ND | 29 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Dichlorodifluoromethane | ND | 71 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1-Dichloroethane | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1-Dichloroethene | ND | 21 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2-Dichloropropane | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,3-Dichloropropane | ND | 31 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 2,2-Dichloropropane | ND | 33 | 400 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1-Dichloropropene | ND | 27 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Hexachlorobutadiene | ND | 40 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 2-Hexanone | ND | 170 | 2000 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Isopropylbenzene | ND | 21 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 4-Isopropyltoluene | ND | 28 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 4-Methyl-2-pentanone | ND | 86 | 2000 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Methylene Chloride | ND | 37 | 600 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| n-Butylbenzene | ND | 32 | 600 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| n-Propylbenzene | ND | 26 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| sec-Butylbenzene | ND | 25 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Styrene | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| tert-Butylbenzene | ND | 23 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1,1,2-Tetrachloroethane | ND | 22 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1,2,2-Tetrachloroethane | ND | 26 | 400 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Tetrachloroethene (PCE) | ND | 30 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| trans-1,2-DCE | ND | 80 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Enterprise Field Services
**Project:** Trunk MD 16 Inch
**Lab ID:** 1607128-001 **Matrix:** AQUEOUS

**Client Sample ID:** Rupture #6
**Collection Date:** 7/5/2016 11:30:00 AM
**Received Date:** 7/6/2016 7:35:00 AM

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|---|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | | Analyst: **DJF** | |
| trans-1,3-Dichloropropene | ND | 21 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2,3-Trichlorobenzene | ND | 23 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2,4-Trichlorobenzene | ND | 27 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1,1-Trichloroethane | ND | 18 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,1,2-Trichloroethane | ND | 25 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Trichloroethene (TCE) | ND | 35 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Trichlorofluoromethane | ND | 41 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| 1,2,3-Trichloropropane | ND | 40 | 400 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Vinyl chloride | ND | 39 | 200 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Xylenes, Total | ND | 73 | 300 | | µg/L | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Surr: 1,2-Dichloroethane-d4 | 97.7 | 0 | 70-130 | | %Rec | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 70-130 | | %Rec | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Surr: Dibromofluoromethane | 100 | 0 | 70-130 | | %Rec | 200 | 7/6/2016 11:14:45 PM | A35447 |
| Surr: Toluene-d8 | 96.1 | 0 | 70-130 | | %Rec | 200 | 7/6/2016 11:14:45 PM | A35447 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

***20-Aug-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **MB** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35474** | RunNo: **35474** |
| Prep Date: | Analysis Date: **7/6/2016** | SeqNo: **1098104** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | |
| Chloride | ND | 0.50 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.10 | | | | | | | | |
| Bromide | ND | 0.10 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.10 | | | | | | | | |
| Phosphorus, Orthophosphate (As P | ND | 0.50 | | | | | | | | |
| Sulfate | ND | 0.50 | | | | | | | | |

| Sample ID **LCS** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A35474** | RunNo: **35474** |
| Prep Date: | Analysis Date: **7/6/2016** | SeqNo: **1098105** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.51 | 0.10 | 0.5000 | 0 | 102 | 90 | 110 | | | |
| Chloride | 4.9 | 0.50 | 5.000 | 0 | 97.4 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 0.94 | 0.10 | 1.000 | 0 | 93.9 | 90 | 110 | | | |
| Bromide | 2.5 | 0.10 | 2.500 | 0 | 99.4 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 2.5 | 0.10 | 2.500 | 0 | 101 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P | 5.0 | 0.50 | 5.000 | 0 | 99.0 | 90 | 110 | | | |
| Sulfate | 9.9 | 0.50 | 10.00 | 0 | 99.3 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

***20-Aug-16***

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35447** | RunNo: **35447** |
| Prep Date: | Analysis Date: **7/6/2016** | SeqNo: **1097715** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | 0.28 | 1.0 | | | | | | | | J |
| Chloroethane | ND | 2.0 | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

*20-Aug-16*

**Client:** Enterprise Field Services
**Project:** Trunk MD 16 Inch

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35447** | RunNo: **35447** |
| Prep Date: | Analysis Date: **7/6/2016** | SeqNo: **1097715** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | 0.50 | 10 | | | | | | | | J |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| trans-1,2-DCE | ND | 1.0 | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 99.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 99.5 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 102 | 70 | 130 | | | |

| Sample ID **100ng lcs2** | SampType: **LCS** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A35447** | RunNo: **35447** |
| Prep Date: | Analysis Date: **7/6/2016** | SeqNo: **1097716** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 20 | 1.0 | 20.00 | 0 | 98.7 | 70 | 130 | | | |
| Toluene | 20 | 1.0 | 20.00 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 20 | 1.0 | 20.00 | 0 | 97.6 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

*20-Aug-16*

**Client:** Enterprise Field Services
**Project:** Trunk MD 16 Inch

Sample ID **100ng lcs2** SampType: **LCS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW** Batch ID: **A35447** RunNo: **35447**
Prep Date: Analysis Date: **7/6/2016** SeqNo: **1097716** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 21 | 1.0 | 20.00 | 0 | 107 | 70 | 130 | | | |
| Trichloroethene (TCE) | 20 | 1.0 | 20.00 | 0 | 97.7 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 9.9 | | 10.00 | | 98.6 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 11 | | 10.00 | | 107 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.9 | | 10.00 | | 98.7 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10 | | 10.00 | | 99.6 | 70 | 130 | | | |

Sample ID **1607128-001a ms** SampType: **MS** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Rupture #6** Batch ID: **A35447** RunNo: **35447**
Prep Date: Analysis Date: **7/6/2016** SeqNo: **1097718** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 4100 | 200 | 4000 | 0 | 102 | 70 | 130 | | | |
| Toluene | 4000 | 200 | 4000 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 3800 | 200 | 4000 | 0 | 95.9 | 70 | 130 | | | |
| 1,1-Dichloroethene | 4200 | 200 | 4000 | 0 | 105 | 70 | 130 | | | |
| Trichloroethene (TCE) | 3900 | 200 | 4000 | 0 | 96.9 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 1900 | | 2000 | | 96.3 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 2100 | | 2000 | | 106 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 2000 | | 2000 | | 99.4 | 70 | 130 | | | |
| Surr: Toluene-d8 | 2000 | | 2000 | | 99.1 | 70 | 130 | | | |

Sample ID **1607128-001a msd** SampType: **MSD** TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Rupture #6** Batch ID: **A35447** RunNo: **35447**
Prep Date: Analysis Date: **7/7/2016** SeqNo: **1097719** Units: **µg/L**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 4000 | 200 | 4000 | 0 | 101 | 70 | 130 | 0.863 | 20 | |
| Toluene | 4000 | 200 | 4000 | 0 | 101 | 70 | 130 | 0.101 | 20 | |
| Chlorobenzene | 3800 | 200 | 4000 | 0 | 94.7 | 70 | 130 | 1.24 | 20 | |
| 1,1-Dichloroethene | 4200 | 200 | 4000 | 0 | 106 | 70 | 130 | 0.576 | 20 | |
| Trichloroethene (TCE) | 3800 | 200 | 4000 | 0 | 96.0 | 70 | 130 | 0.938 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 2000 | | 2000 | | 101 | 70 | 130 | 0 | 0 | |
| Surr: 4-Bromofluorobenzene | 2000 | | 2000 | | 102 | 70 | 130 | 0 | 0 | |
| Surr: Dibromofluoromethane | 2100 | | 2000 | | 105 | 70 | 130 | 0 | 0 | |
| Surr: Toluene-d8 | 2000 | | 2000 | | 99.9 | 70 | 130 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

*20-Aug-16*

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID | MB-26294 | SampType: | MBLK | TestCode: | EPA Method 7470: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 26294 | RunNo: | 35534 | | | | | |
| Prep Date: | 7/7/2016 | Analysis Date: | 7/8/2016 | SeqNo: | 1100169 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.00013 | 0.00020 | | | | | | | | J |

| Sample ID | LCS-26294 | SampType: | LCS | TestCode: | EPA Method 7470: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 26294 | RunNo: | 35534 | | | | | |
| Prep Date: | 7/7/2016 | Analysis Date: | 7/8/2016 | SeqNo: | 1100170 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0050 | 0.00020 | 0.005000 | 0 | 100 | 80 | 120 | | | |

| Sample ID | 1607128-001CMS | SampType: | MS | TestCode: | EPA Method 7470: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | Rupture #6 | Batch ID: | 26294 | RunNo: | 35534 | | | | | |
| Prep Date: | 7/7/2016 | Analysis Date: | 7/8/2016 | SeqNo: | 1100172 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0064 | 0.00020 | 0.005000 | 0.0001875 | 125 | 75 | 125 | | | |

| Sample ID | 1607128-001CMSD | SampType: | MSD | TestCode: | EPA Method 7470: Mercury | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | Rupture #6 | Batch ID: | 26294 | RunNo: | 35534 | | | | | |
| Prep Date: | 7/7/2016 | Analysis Date: | 7/8/2016 | SeqNo: | 1100173 | Units: | mg/L | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0061 | 0.00020 | 0.005000 | 0.0001875 | 119 | 75 | 125 | 4.68 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

*20-Aug-16*

**Client:** Enterprise Field Services
**Project:** Trunk MD 16 Inch

| Sample ID **MB-26285** | SampType: **MBLK** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **26285** | RunNo: **35523** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1099961** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.020 | | | | | | | | |
| Barium | ND | 0.020 | | | | | | | | |
| Cadmium | ND | 0.0020 | | | | | | | | |
| Calcium | ND | 1.0 | | | | | | | | |
| Chromium | ND | 0.0060 | | | | | | | | |
| I | ND | 0.0050 | | | | | | | | |
| Magnesium | ND | 1.0 | | | | | | | | |
| Potassium | ND | 1.0 | | | | | | | | |
| Selenium | ND | 0.050 | | | | | | | | |
| Silver | ND | 0.0050 | | | | | | | | |
| Sodium | ND | 1.0 | | | | | | | | |

| Sample ID **LCS-26285** | SampType: **LCS** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **26285** | RunNo: **35523** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1099962** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| A c | 0.42 | 0.020 | 0.5000 | 0 | 84.9 | 80 | 120 | | | |
| um | 0.41 | 0.020 | 0.5000 | 0 | 82.6 | 80 | 120 | | | |
| Cadmium | 0.42 | 0.0020 | 0.5000 | 0 | 83.5 | 80 | 120 | | | |
| Calcium | 41 | 1.0 | 50.00 | 0 | 82.3 | 80 | 120 | | | |
| Chromium | 0.41 | 0.0060 | 0.5000 | 0 | 82.9 | 80 | 120 | | | |
| Lead | 0.41 | 0.0050 | 0.5000 | 0 | 82.5 | 80 | 120 | | | |
| Magnesium | 41 | 1.0 | 50.00 | 0 | 81.4 | 80 | 120 | | | |
| Potassium | 40 | 1.0 | 50.00 | 0 | 80.4 | 80 | 120 | | | |
| Selenium | 0.43 | 0.050 | 0.5000 | 0 | 86.2 | 80 | 120 | | | |
| Silver | 0.083 | 0.0050 | 0.1000 | 0 | 83.2 | 80 | 120 | | | |
| Sodium | 38 | 1.0 | 50.00 | 0 | 76.6 | 80 | 120 | | | S |

| Sample ID **1607128-001CMS** | SampType: **MS** | TestCode: **EPA 6010B: Total Recoverable Metals** |
|---|---|---|
| Client ID: **Rupture #6** | Batch ID: **26285** | RunNo: **35523** |
| Prep Date: **7/7/2016** | Analysis Date: **7/8/2016** | SeqNo: **1099983** Units: **mg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 0.46 | 0.020 | 0.5000 | 0.01055 | 90.8 | 75 | 125 | | | |
| Barium | 0.71 | 0.020 | 0.5000 | 0.2516 | 90.8 | 75 | 125 | | | |
| Cadmium | 0.45 | 0.0020 | 0.5000 | 0 | 90.4 | 75 | 125 | | | |
| Calcium | 90 | 1.0 | 50.00 | 44.00 | 91.5 | 75 | 125 | | | |
| Chromium | 0.46 | 0.0060 | 0.5000 | 0.004670 | 90.5 | 75 | 125 | | | |
| I | 0.45 | 0.0050 | 0.5000 | 0 | 90.1 | 75 | 125 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607128**

*20-Aug-16*

**Client:** Enterprise Field Services

**Project:** Trunk MD 16 Inch

| Sample ID | **1607128-001CMS** | SampType: **MS** | | | TestCode: **EPA 6010B: Total Recoverable Metals** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **Rupture #6** | Batch ID: **26285** | | | RunNo: **35523** | | | | |
| Prep Date: | **7/7/2016** | Analysis Date: **7/8/2016** | | | SeqNo: **1099983** | Units: **mg/L** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Magnesium | 53 | 1.0 | 50.00 | 7.794 | 90.2 | 75 | 125 | | | |
| Potassium | 64 | 1.0 | 50.00 | 19.09 | 89.4 | 75 | 125 | | | |
| Selenium | 0.44 | 0.050 | 0.5000 | 0 | 88.6 | 75 | 125 | | | |
| Silver | 0.090 | 0.0050 | 0.1000 | 0 | 90.3 | 75 | 125 | | | |
| Sodium | 61 | 1.0 | 50.00 | 18.00 | 86.0 | 75 | 125 | | | |

| Sample ID | **1607128-001CMSD** | SampType: **MSD** | | | TestCode: **EPA 6010B: Total Recoverable Metals** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **Rupture #6** | Batch ID: **26285** | | | RunNo: **35523** | | | | |
| Prep Date: | **7/7/2016** | Analysis Date: **7/8/2016** | | | SeqNo: **1099984** | Units: **mg/L** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Arsenic | 0.48 | 0.020 | 0.5000 | 0.01055 | 94.3 | 75 | 125 | 3.69 | 20 | |
| Barium | 0.73 | 0.020 | 0.5000 | 0.2516 | 95.1 | 75 | 125 | 3.06 | 20 | |
| Cadmium | 0.46 | 0.0020 | 0.5000 | 0 | 92.5 | 75 | 125 | 2.27 | 20 | |
| Calcium | 92 | 1.0 | 50.00 | 44.00 | 95.7 | 75 | 125 | 2.32 | 20 | |
| Chromium | 0.47 | 0.0060 | 0.5000 | 0.004670 | 92.4 | 75 | 125 | 2.13 | 20 | |
| I | 0.46 | 0.0050 | 0.5000 | 0 | 92.1 | 75 | 125 | 2.17 | 20 | |
| Magnesium | 54 | 1.0 | 50.00 | 7.794 | 91.5 | 75 | 125 | 1.29 | 20 | |
| Potassium | 65 | 1.0 | 50.00 | 19.09 | 92.3 | 75 | 125 | 2.29 | 20 | |
| Selenium | 0.45 | 0.050 | 0.5000 | 0 | 89.7 | 75 | 125 | 1.26 | 20 | |
| Silver | 0.092 | 0.0050 | 0.1000 | 0 | 92.4 | 75 | 125 | 2.29 | 20 | |
| Sodium | 61 | 1.0 | 50.00 | 18.00 | 86.7 | 75 | 125 | 0.582 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: Enterprise | Work Order Number: 1607128 | RcptNo: 1

Received by/date: AT 07/06/16

Logged By: Lindsay Mangin 7/6/2016 7:35:00 AM

Completed By: Lindsay Mangin 7/6/2016 8:53:18 AM

Reviewed By: JA 07/06/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA Vials ☐ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: 1 (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? NO |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: aJ |

## Special Handling (if applicable)

| | | | |
|---|---|---|---|
| 16. Was client notified of all discrepancies with this order? | Yes ☐ | No ☐ | NA ☑ |

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# Chain-of-Custody Record

ent: Enterprise Products

iling Address: 614 Reilly Ave.

armington, NM 87401

one #: 505-599-2286

ail or Fax#: tjlong@epprod.com

/QC Package
Standard ☐ Level 4 (Full Validation)

creditation
NELAP ☐ Other _____

EDD (Type) _____

Turn-Around Time: 3 day
☐ Standard ☒ Rush

Project Name: Trunk MD 16 Inch

Project #:

Project Manager: Thomas Long

Sampler: TJL

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.0

## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

| ate | Time | Matrix | Sample Request ID | Container Type and # | Preservative Type | HEAL No. | BTEX + MTBE + TMB's (8021) | BTEX + MTBE + TPH (Gas only) | TPH 80°5B (GRO / DRO / MRO) | TPH (Method 418.1) | EDB (Method 504.1) | PAH's (8310 or 8270 SIMS) | RCRA 8 Metals | Anions ($F,Cl,NO_3,NO_2,PO_4,SO_4$) | 8081 Pesticides / 8082 PCB's | 8260B (VOA) | 8270 (Semi-VOA) | Cations / Anions | | | | Air Bubbles (Y or N) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -16 | 1130 | Water | Rupture #6 | 3 VOA's 2 HDEP | HCl/HNO3 | 1607128 -001 | | | | | | | X | | | X | | X | | | | |

| te | Time | Relinquished by | Received by | Date | Time |
|---|---|---|---|---|---|
| -16 | 1230 | Thomas Long | | 7/5/16 | 1230 |
| te | Time: | Relinquished by: | Received by: | Date | Time |
| 16 | 1841 | | | 07/06/16 | 0735 |

Remarks: TCLP Limits

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 25, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1607412

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 3 sample(s) on 7/9/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 18, 2016.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1607412**
Date Reported: **7/25/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** Trunk MD 16" Hydro
**Lab ID:** 1607412-001 **Matrix:** SOIL

**Client Sample ID:** HP-1
**Collection Date:** 7/8/2016 3:15:00 PM
**Received Date:** 7/9/2016 11:08:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/21/2016 9:57:57 AM | 26529 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 7/12/2016 4:44:16 PM | 26331 |
| Surr: DNOP | 97.3 | 70-130 | | %Rec | 1 | 7/12/2016 4:44:16 PM | 26331 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 5.0 | | mg/Kg | 1 | 7/12/2016 4:39:50 PM | 26325 |
| Surr: BFB | 100 | 80-120 | | %Rec | 1 | 7/12/2016 4:39:50 PM | 26325 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.025 | | mg/Kg | 1 | 7/12/2016 4:39:50 PM | 26325 |
| Toluene | ND | 0.050 | | mg/Kg | 1 | 7/12/2016 4:39:50 PM | 26325 |
| Ethylbenzene | ND | 0.050 | | mg/Kg | 1 | 7/12/2016 4:39:50 PM | 26325 |
| Xylenes, Total | ND | 0.10 | | mg/Kg | 1 | 7/12/2016 4:39:50 PM | 26325 |
| Surr: 4-Bromofluorobenzene | 96.3 | 80-120 | | %Rec | 1 | 7/12/2016 4:39:50 PM | 26325 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** HP-2
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/8/2016 3:25:00 PM
**Lab ID:** 1607412-002
**Matrix:** SOIL
**Received Date:** 7/9/2016 11:08:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/21/2016 10:35:11 AM | 26529 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 7/12/2016 5:06:10 PM | 26331 |
| Surr: DNOP | 102 | 70-130 | | %Rec | 1 | 7/12/2016 5:06:10 PM | 26331 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/12/2016 5:03:21 PM | 26325 |
| Surr: BFB | 99.2 | 80-120 | | %Rec | 1 | 7/12/2016 5:03:21 PM | 26325 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/12/2016 5:03:21 PM | 26325 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/12/2016 5:03:21 PM | 26325 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/12/2016 5:03:21 PM | 26325 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/12/2016 5:03:21 PM | 26325 |
| Surr: 4-Bromofluorobenzene | 94.4 | 80-120 | | %Rec | 1 | 7/12/2016 5:03:21 PM | 26325 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** HP-3
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/8/2016 3:35:00 PM
**Lab ID:** 1607412-003
**Matrix:** SOIL
**Received Date:** 7/9/2016 11:08:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **MRA** | |
| Chloride | ND | 30 | | mg/Kg | 20 | 7/21/2016 10:47:36 AM | 26529 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 7/12/2016 5:27:51 PM | 26331 |
| Surr: DNOP | 100 | 70-130 | | %Rec | 1 | 7/12/2016 5:27:51 PM | 26331 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.6 | | mg/Kg | 1 | 7/12/2016 5:27:04 PM | 26325 |
| Surr: BFB | 95.6 | 80-120 | | %Rec | 1 | 7/12/2016 5:27:04 PM | 26325 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/12/2016 5:27:04 PM | 26325 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 7/12/2016 5:27:04 PM | 26325 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 7/12/2016 5:27:04 PM | 26325 |
| Xylenes, Total | ND | 0.092 | | mg/Kg | 1 | 7/12/2016 5:27:04 PM | 26325 |
| Surr: 4-Bromofluorobenzene | 94.1 | 80-120 | | %Rec | 1 | 7/12/2016 5:27:04 PM | 26325 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607412**

***25-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID | **MB-26529** | SampType: | **mblk** | TestCode: | **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBS** | Batch ID: | **26529** | RunNo: | **35903** | | | | | |
| Prep Date: | **7/21/2016** | Analysis Date: | **7/21/2016** | SeqNo: | **1111501** | Units: | **mg/Kg** | | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 1.5 | | | | | | | | |

| Sample ID | **LCS-26529** | SampType: | **lcs** | TestCode: | **EPA Method 300.0: Anions** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSS** | Batch ID: | **26529** | RunNo: | **35903** | | | | | |
| Prep Date: | **7/21/2016** | Analysis Date: | **7/21/2016** | SeqNo: | **1111502** | Units: | **mg/Kg** | | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 15 | 1.5 | 15.00 | 0 | 97.2 | 90 | 110 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607412**

***25-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **LCS-26331** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26331** | RunNo: **35611** |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | SeqNo: **1102563** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | 50 | 10 | 50.00 | 0 | 100 | 62.6 | 124 | | | |
| Surr: DNOP | 4.7 | | 5.000 | | 93.8 | 70 | 130 | | | |

| Sample ID **MB-26331** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26331** | RunNo: **35611** |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | SeqNo: **1102564** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.0 | | 10.00 | | 90.2 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607412**

***25-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26325** | SampType: **MBLK** | | | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBS** | Batch ID: **26325** | | | RunNo: **35619** | | | | | |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | | | SeqNo: **1102390** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 950 | | 1000 | | 94.7 | 80 | 120 | | | |

| Sample ID **LCS-26325** | SampType: **LCS** | | | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSS** | Batch ID: **26325** | | | RunNo: **35619** | | | | | |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | | | SeqNo: **1102391** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 103 | 80 | 120 | | | |
| Surr: BFB | 1000 | | 1000 | | 105 | 80 | 120 | | | |

| Sample ID **1607412-002AMS** | SampType: **MS** | | | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **HP-2** | Batch ID: **26325** | | | RunNo: **35619** | | | | | |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | | | SeqNo: **1102394** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27 | 4.8 | 23.83 | 0 | 115 | 59.3 | 143 | | | |
| Surr: BFB | 1100 | | 953.3 | | 111 | 80 | 120 | | | |

| Sample ID **1607412-002AMSD** | SampType: **MSD** | | | TestCode: **EPA Method 8015D: Gasoline Range** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client ID: **HP-2** | Batch ID: **26325** | | | RunNo: **35619** | | | | | |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | | | SeqNo: **1102395** | | Units: **mg/Kg** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27 | 4.9 | 24.32 | 0 | 109 | 59.3 | 143 | 2.93 | 20 | |
| Surr: BFB | 1100 | | 972.8 | | 109 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607412**

***25-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26325** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26325** | RunNo: **35619** |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | SeqNo: **1102416** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.91 | | 1.000 | | 91.2 | 80 | 120 | | | |

| Sample ID **LCS-26325** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26325** | RunNo: **35619** |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | SeqNo: **1102417** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.97 | 0.025 | 1.000 | 0 | 96.6 | 75.3 | 123 | | | |
| Toluene | 0.95 | 0.050 | 1.000 | 0 | 95.5 | 80 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.3 | 82.8 | 121 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 99.1 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 0.97 | | 1.000 | | 97.0 | 80 | 120 | | | |

| Sample ID **1607412-001AMS** | SampType: **MS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **HP-1** | Batch ID: **26325** | RunNo: **35619** |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | SeqNo: **1102419** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.98 | 0.023 | 0.9302 | 0 | 105 | 71.5 | 122 | | | |
| Toluene | 1.0 | 0.047 | 0.9302 | 0 | 109 | 71.2 | 123 | | | |
| Ethylbenzene | 1.1 | 0.047 | 0.9302 | 0 | 115 | 75.2 | 130 | | | |
| Xylenes, Total | 3.2 | 0.093 | 2.791 | 0 | 115 | 72.4 | 131 | | | |
| Surr: 4-Bromofluorobenzene | 0.92 | | 0.9302 | | 98.8 | 80 | 120 | | | |

| Sample ID **1607412-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **HP-1** | Batch ID: **26325** | RunNo: **35619** |
| Prep Date: **7/11/2016** | Analysis Date: **7/12/2016** | SeqNo: **1102421** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.99 | 0.024 | 0.9690 | 0 | 102 | 71.5 | 122 | 1.52 | 20 | |
| Toluene | 0.98 | 0.048 | 0.9690 | 0 | 101 | 71.2 | 123 | 3.72 | 20 | |
| Ethylbenzene | 1.0 | 0.048 | 0.9690 | 0 | 108 | 75.2 | 130 | 2.07 | 20 | |
| Xylenes, Total | 3.1 | 0.097 | 2.907 | 0 | 107 | 72.4 | 131 | 3.25 | 20 | |
| Surr: 4-Bromofluorobenzene | 0.95 | | 0.9690 | | 97.9 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1607412 | RcptNo: 1

Received by/date: 07/08/16

Logged By: Lindsay Mangin 7/9/2016 11:08:00 AM

Completed By: Lindsay Mangin 7/9/2016 12:50:37 PM

Reviewed By: 07/09/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | # of preserved bottles checked for pH: (<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | Checked by: |

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 3.3 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Project Manager: K. Summers

Laboratory: Hall

Address: ABQ; NM

Contact: A. Freeman

Phone:

PO/SO #:

Lab use only
Due Date:

Temp. of coolers when received (C°): 3.3

1 | 2 | 3 | 4 | 5

Page ____ of ____

Sampler's Name: Ranee Deechilly

Sampler's Signature: Ri Deechilly

Proj. No.

Project Name: Pink MD 16" Hydro

No/Type of Containers

ANALYSIS REQUESTED: 8021 BTEX; 8015 TPH GRO/DRO; Chlorides

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 7/8/16 | 1515 | X | | HP-1 | | | | | | 1 | | 1607412-001 |
| S | ↓ | 1525 | X | | HP-2 | | | | | | 1 | | -002 |
| S | ↓ | 1535 | X | | HP-3 | | | | | | 1 | | -003 |

NFS

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| Ri Deechilly | 7/8/16 | 1615 | | 7/8/16 | 1615 |
| | 7/8/16 | 1857 | | 07/09/16 | 1108 |
| | | | | | |
| | | | | | |

NOTES: Bill to Tom Long EPROD

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil

Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other ____

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 28, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" Hydro OrderNo.: 1607562

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/12/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1607562**
Date Reported: **7/28/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** CP-1
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/11/2016 12:30:00 PM
**Lab ID:** 1607562-001
**Matrix:** SOIL
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Fluoride | 0.71 | 0.30 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| Chloride | 3.4 | 1.5 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| Nitrogen, Nitrite (As N) | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| Bromide | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| Nitrogen, Nitrate (As N) | 0.84 | 0.30 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| Phosphorus, Orthophosphate (As P) | ND | 1.5 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| Sulfate | 17 | 1.5 | | mg/Kg | 1 | 7/15/2016 2:48:45 PM | 26445 |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: **MED** | |
| Calcium | 1900 | 50 | | mg/Kg | 2 | 7/14/2016 10:33:33 AM | 26385 |
| Magnesium | 1100 | 50 | | mg/Kg | 2 | 7/14/2016 10:33:33 AM | 26385 |
| Potassium | 730 | 100 | | mg/Kg | 2 | 7/14/2016 10:33:33 AM | 26385 |
| Sodium | ND | 50 | | mg/Kg | 2 | 7/14/2016 10:33:33 AM | 26385 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 7/14/2016 3:45:14 PM | 26377 |
| Surr: DNOP | 95.5 | 70-130 | | %Rec | 1 | 7/14/2016 3:45:14 PM | 26377 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/15/2016 6:13:41 PM | 26374 |
| Surr: BFB | 98.3 | 80-120 | | %Rec | 1 | 7/15/2016 6:13:41 PM | 26374 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/15/2016 6:13:41 PM | 26374 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 6:13:41 PM | 26374 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 6:13:41 PM | 26374 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 7/15/2016 6:13:41 PM | 26374 |
| Surr: 4-Bromofluorobenzene | 94.6 | 80-120 | | %Rec | 1 | 7/15/2016 6:13:41 PM | 26374 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

**Analytical Report**
Lab Order **1607562**
Date Reported: **7/28/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** CP-2
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/11/2016 12:40:00 PM
**Lab ID:** 1607562-002
**Matrix:** SOIL
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Fluoride | 0.74 | 0.30 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| Chloride | 3.6 | 1.5 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| Nitrogen, Nitrite (As N) | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| Bromide | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| Nitrogen, Nitrate (As N) | 1.4 | 0.30 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| Phosphorus, Orthophosphate (As P) | ND | 1.5 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| Sulfate | 11 | 1.5 | | mg/Kg | 1 | 7/15/2016 12:44:38 PM | 26445 |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: **MED** | |
| Calcium | 790 | 25 | | mg/Kg | 1 | 7/14/2016 10:37:44 AM | 26385 |
| Magnesium | 590 | 25 | | mg/Kg | 1 | 7/14/2016 10:37:44 AM | 26385 |
| Potassium | 550 | 49 | | mg/Kg | 1 | 7/14/2016 10:37:44 AM | 26385 |
| Sodium | 29 | 25 | | mg/Kg | 1 | 7/14/2016 10:37:44 AM | 26385 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 7/14/2016 4:13:35 PM | 26377 |
| Surr: DNOP | 98.4 | 70-130 | | %Rec | 1 | 7/14/2016 4:13:35 PM | 26377 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/15/2016 7:24:24 PM | 26374 |
| Surr: BFB | 99.5 | 80-120 | | %Rec | 1 | 7/15/2016 7:24:24 PM | 26374 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/15/2016 7:24:24 PM | 26374 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 7:24:24 PM | 26374 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 7:24:24 PM | 26374 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 7/15/2016 7:24:24 PM | 26374 |
| Surr: 4-Bromofluorobenzene | 95.5 | 80-120 | | %Rec | 1 | 7/15/2016 7:24:24 PM | 26374 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** CP-3
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/11/2016 12:50:00 PM
**Lab ID:** 1607562-003
**Matrix:** SOIL
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Fluoride | 1.2 | 0.30 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| Chloride | 4.6 | 1.5 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| Nitrogen, Nitrite (As N) | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| Bromide | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| Nitrogen, Nitrate (As N) | 1.0 | 0.30 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| Phosphorus, Orthophosphate (As P) | ND | 1.5 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| Sulfate | 10 | 1.5 | | mg/Kg | 1 | 7/15/2016 1:34:17 PM | 26445 |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: **MED** | |
| Calcium | 1400 | 25 | | mg/Kg | 1 | 7/14/2016 10:46:30 AM | 26385 |
| Magnesium | 1300 | 25 | | mg/Kg | 1 | 7/14/2016 10:46:30 AM | 26385 |
| Potassium | 870 | 50 | | mg/Kg | 1 | 7/14/2016 10:46:30 AM | 26385 |
| Sodium | 32 | 25 | | mg/Kg | 1 | 7/14/2016 10:46:30 AM | 26385 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.7 | | mg/Kg | 1 | 7/14/2016 4:41:51 PM | 26377 |
| Surr: DNOP | 95.5 | 70-130 | | %Rec | 1 | 7/14/2016 4:41:51 PM | 26377 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/15/2016 7:47:53 PM | 26374 |
| Surr: BFB | 96.4 | 80-120 | | %Rec | 1 | 7/15/2016 7:47:53 PM | 26374 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 7/15/2016 7:47:53 PM | 26374 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 7:47:53 PM | 26374 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 7:47:53 PM | 26374 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 7/15/2016 7:47:53 PM | 26374 |
| Surr: 4-Bromofluorobenzene | 92.2 | 80-120 | | %Rec | 1 | 7/15/2016 7:47:53 PM | 26374 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** CP-4
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/11/2016 1:00:00 PM
**Lab ID:** 1607562-004
**Matrix:** SOIL
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Fluoride | 0.45 | 0.30 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| Chloride | 2.5 | 1.5 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| Nitrogen, Nitrite (As N) | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| Bromide | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| Nitrogen, Nitrate (As N) | 0.55 | 0.30 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| Phosphorus, Orthophosphate (As P) | ND | 1.5 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| Sulfate | 5.7 | 1.5 | | mg/Kg | 1 | 7/15/2016 1:59:07 PM | 26445 |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: **MED** | |
| Calcium | 660 | 25 | | mg/Kg | 1 | 7/14/2016 10:49:13 AM | 26385 |
| Magnesium | 380 | 25 | | mg/Kg | 1 | 7/14/2016 10:49:13 AM | 26385 |
| Potassium | 370 | 49 | | mg/Kg | 1 | 7/14/2016 10:49:13 AM | 26385 |
| Sodium | ND | 25 | | mg/Kg | 1 | 7/14/2016 10:49:13 AM | 26385 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.6 | | mg/Kg | 1 | 7/14/2016 5:10:07 PM | 26377 |
| Surr: DNOP | 98.2 | 70-130 | | %Rec | 1 | 7/14/2016 5:10:07 PM | 26377 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 7/15/2016 8:11:16 PM | 26374 |
| Surr: BFB | 98.1 | 80-120 | | %Rec | 1 | 7/15/2016 8:11:16 PM | 26374 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/15/2016 8:11:16 PM | 26374 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 8:11:16 PM | 26374 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 7/15/2016 8:11:16 PM | 26374 |
| Xylenes, Total | ND | 0.094 | | mg/Kg | 1 | 7/15/2016 8:11:16 PM | 26374 |
| Surr: 4-Bromofluorobenzene | 93.9 | 80-120 | | %Rec | 1 | 7/15/2016 8:11:16 PM | 26374 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Client Sample ID:** CP-5
**Project:** Trunk MD 16" Hydro
**Collection Date:** 7/11/2016 1:10:00 PM
**Lab ID:** 1607562-005
**Matrix:** SOIL
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 300.0: ANIONS** | | | | | | Analyst: **LGT** | |
| Fluoride | 2.3 | 0.30 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| Chloride | 6.1 | 1.5 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| Nitrogen, Nitrite (As N) | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| Bromide | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| Nitrogen, Nitrate (As N) | ND | 0.30 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| Phosphorus, Orthophosphate (As P) | ND | 1.5 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| Sulfate | 15 | 1.5 | | mg/Kg | 1 | 7/15/2016 2:23:55 PM | 26445 |
| **EPA METHOD 6010B: SOIL METALS** | | | | | | Analyst: **MED** | |
| Calcium | 1100 | 25 | | mg/Kg | 1 | 7/14/2016 10:51:58 AM | 26385 |
| Magnesium | 570 | 25 | | mg/Kg | 1 | 7/14/2016 10:51:58 AM | 26385 |
| Potassium | 440 | 50 | | mg/Kg | 1 | 7/14/2016 10:51:58 AM | 26385 |
| Sodium | 35 | 25 | | mg/Kg | 1 | 7/14/2016 10:51:58 AM | 26385 |
| **EPA METHOD 8015M/D: DIESEL RANGE ORGANICS** | | | | | | Analyst: **TOM** | |
| Diesel Range Organics (DRO) | ND | 9.9 | | mg/Kg | 1 | 7/14/2016 5:38:43 PM | 26377 |
| Surr: DNOP | 99.9 | 70-130 | | %Rec | 1 | 7/14/2016 5:38:43 PM | 26377 |
| **EPA METHOD 8015D: GASOLINE RANGE** | | | | | | Analyst: **NSB** | |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 7/15/2016 8:34:41 PM | 26374 |
| Surr: BFB | 96.8 | 80-120 | | %Rec | 1 | 7/15/2016 8:34:41 PM | 26374 |
| **EPA METHOD 8021B: VOLATILES** | | | | | | Analyst: **NSB** | |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 7/15/2016 8:34:41 PM | 26374 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 7/15/2016 8:34:41 PM | 26374 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 7/15/2016 8:34:41 PM | 26374 |
| Xylenes, Total | ND | 0.096 | | mg/Kg | 1 | 7/15/2016 8:34:41 PM | 26374 |
| Surr: 4-Bromofluorobenzene | 91.7 | 80-120 | | %Rec | 1 | 7/15/2016 8:34:41 PM | 26374 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607562**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26445** | SampType: **MBLK** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26445** | RunNo: **35763** |
| Prep Date: **7/15/2016** | Analysis Date: **7/15/2016** | SeqNo: **1106514** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.30 | | | | | | | | |
| Chloride | ND | 1.5 | | | | | | | | |
| Nitrogen, Nitrite (As N) | ND | 0.30 | | | | | | | | |
| Bromide | ND | 0.30 | | | | | | | | |
| Nitrogen, Nitrate (As N) | ND | 0.30 | | | | | | | | |
| Phosphorus, Orthophosphate (As P | ND | 1.5 | | | | | | | | |
| Sulfate | ND | 1.5 | | | | | | | | |

| Sample ID **LCS-26445** | SampType: **LCS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26445** | RunNo: **35763** |
| Prep Date: **7/15/2016** | Analysis Date: **7/15/2016** | SeqNo: **1106515** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.5 | 0.30 | 1.500 | 0 | 102 | 90 | 110 | | | |
| Chloride | 14 | 1.5 | 15.00 | 0 | 92.5 | 90 | 110 | | | |
| Nitrogen, Nitrite (As N) | 2.8 | 0.30 | 3.000 | 0 | 93.8 | 90 | 110 | | | |
| Bromide | 6.8 | 0.30 | 7.500 | 0 | 90.7 | 90 | 110 | | | |
| Nitrogen, Nitrate (As N) | 7.3 | 0.30 | 7.500 | 0 | 97.0 | 90 | 110 | | | |
| Phosphorus, Orthophosphate (As P | 14 | 1.5 | 15.00 | 0 | 92.6 | 90 | 110 | | | |
| Sulfate | 29 | 1.5 | 30.00 | 0 | 95.5 | 90 | 110 | | | |

| Sample ID **1607562-001AMS** | SampType: **MS** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26445** | RunNo: **35763** |
| Prep Date: **7/15/2016** | Analysis Date: **7/15/2016** | SeqNo: **1106533** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.6 | 0.30 | 1.500 | 0.7127 | 60.9 | 15 | 110 | | | |
| Chloride | 18 | 1.5 | 15.00 | 3.380 | 94.7 | 70.8 | 119 | | | |
| Nitrogen, Nitrite (As N) | 2.8 | 0.30 | 3.000 | 0 | 92.8 | 71.5 | 113 | | | |
| Bromide | 7.0 | 0.30 | 7.500 | 0 | 93.3 | 81.1 | 111 | | | |
| Nitrogen, Nitrate (As N) | 8.2 | 0.30 | 7.500 | 0.8363 | 98.2 | 83.8 | 113 | | | |
| Phosphorus, Orthophosphate (As P | 8.4 | 1.5 | 15.00 | 0 | 55.9 | 15 | 105 | | | |
| Sulfate | 47 | 1.5 | 30.00 | 16.78 | 100 | 25.1 | 158 | | | |

| Sample ID **1607562-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26445** | RunNo: **35763** |
| Prep Date: **7/15/2016** | Analysis Date: **7/15/2016** | SeqNo: **1106534** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.6 | 0.30 | 1.500 | 0.7127 | 56.0 | 15 | 110 | 4.62 | 20 | |

**Qualifiers:**

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607562**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **1607562-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 300.0: Anions** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26445** | RunNo: **35763** |
| Prep Date: **7/15/2016** | Analysis Date: **7/15/2016** | SeqNo: **1106534** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 18 | 1.5 | 15.00 | 3.380 | 94.6 | 70.8 | 119 | 0.130 | 20 | |
| Nitrogen, Nitrite (As N) | 2.8 | 0.30 | 3.000 | 0 | 94.9 | 71.5 | 113 | 2.16 | 20 | |
| Bromide | 7.1 | 0.30 | 7.500 | 0 | 95.1 | 81.1 | 111 | 1.88 | 20 | |
| Nitrogen, Nitrate (As N) | 8.3 | 0.30 | 7.500 | 0.8363 | 99.8 | 83.8 | 113 | 1.37 | 20 | |
| Phosphorus, Orthophosphate (As P | 9.2 | 1.5 | 15.00 | 0 | 61.5 | 15 | 105 | 9.57 | 20 | |
| Sulfate | 44 | 1.5 | 30.00 | 16.78 | 91.7 | 25.1 | 158 | 5.62 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607562**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **LCS-26377** | SampType: **LCS** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26377** | RunNo: **35683** |
| Prep Date: **7/13/2016** | Analysis Date: **7/14/2016** | SeqNo: **1105643** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | 51 | 10 | 50.00 | 0 | 101 | 62.6 | 124 | | | |
| Surr: DNOP | 4.7 | | 5.000 | | 94.1 | 70 | 130 | | | |

| Sample ID **MB-26377** | SampType: **MBLK** | TestCode: **EPA Method 8015M/D: Diesel Range Organics** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26377** | RunNo: **35683** |
| Prep Date: **7/13/2016** | Analysis Date: **7/14/2016** | SeqNo: **1105644** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Range Organics (DRO) | ND | 10 | | | | | | | | |
| Surr: DNOP | 9.1 | | 10.00 | | 91.1 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607562**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26374** | SampType: **MBLK** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26374** | RunNo: **35744** |
| Prep Date: **7/13/2016** | Analysis Date: **7/15/2016** | SeqNo: **1105954** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | ND | 5.0 | | | | | | | | |
| Surr: BFB | 970 | | 1000 | | 96.9 | 80 | 120 | | | |

| Sample ID **LCS-26374** | SampType: **LCS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26374** | RunNo: **35744** |
| Prep Date: **7/13/2016** | Analysis Date: **7/15/2016** | SeqNo: **1105955** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 26 | 5.0 | 25.00 | 0 | 104 | 80 | 120 | | | |
| Surr: BFB | 1100 | | 1000 | | 108 | 80 | 120 | | | |

| Sample ID **1607562-001AMS** | SampType: **MS** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26374** | RunNo: **35744** |
| Prep Date: **7/13/2016** | Analysis Date: **7/15/2016** | SeqNo: **1105970** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 24 | 4.7 | 23.34 | 0 | 104 | 59.3 | 143 | | | |
| Surr: BFB | 1000 | | 933.7 | | 110 | 80 | 120 | | | |

| Sample ID **1607562-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 8015D: Gasoline Range** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26374** | RunNo: **35744** |
| Prep Date: **7/13/2016** | Analysis Date: **7/15/2016** | SeqNo: **1105971** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics (GRO) | 25 | 5.0 | 25.00 | 0 | 100 | 59.3 | 143 | 3.07 | 20 | |
| Surr: BFB | 1100 | | 1000 | | 109 | 80 | 120 | 0 | 0 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607562**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26374** | SampType: **MBLK** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26374** | RunNo: **35744** |
| Prep Date: **7/13/2016** | Analysis Date: **7/15/2016** | SeqNo: **1105992** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 0.94 | | 1.000 | | 93.6 | 80 | 120 | | | |

| Sample ID **LCS-26374** | SampType: **LCS** | TestCode: **EPA Method 8021B: Volatiles** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26374** | RunNo: **35744** |
| Prep Date: **7/13/2016** | Analysis Date: **7/15/2016** | SeqNo: **1105993** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 0.99 | 0.025 | 1.000 | 0 | 99.0 | 75.3 | 123 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 97.1 | 80 | 124 | | | |
| Ethylbenzene | 0.99 | 0.050 | 1.000 | 0 | 99.4 | 82.8 | 121 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 98.5 | 83.9 | 122 | | | |
| Surr: 4-Bromofluorobenzene | 0.98 | | 1.000 | | 97.9 | 80 | 120 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607562**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16" Hydro

| Sample ID **MB-26385** | SampType: **MBLK** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **PBS** | Batch ID: **26385** | RunNo: **35691** |
| Prep Date: **7/13/2016** | Analysis Date: **7/14/2016** | SeqNo: **1104223** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 25 | | | | | | | | |
| Magnesium | ND | 25 | | | | | | | | |
| Potassium | ND | 50 | | | | | | | | |
| Sodium | ND | 25 | | | | | | | | |

| Sample ID **LCS-26385** | SampType: **LCS** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **LCSS** | Batch ID: **26385** | RunNo: **35691** |
| Prep Date: **7/13/2016** | Analysis Date: **7/14/2016** | SeqNo: **1104224** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 2400 | 25 | 2500 | 0 | 95.7 | 80 | 120 | | | |
| Magnesium | 2300 | 25 | 2500 | 0 | 94.0 | 80 | 120 | | | |
| Potassium | 2300 | 50 | 2500 | 0 | 90.6 | 80 | 120 | | | |
| Sodium | 2400 | 25 | 2500 | 0 | 94.3 | 80 | 120 | | | |

| Sample ID **1607562-001AMS** | SampType: **MS** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26385** | RunNo: **35691** |
| Prep Date: **7/13/2016** | Analysis Date: **7/14/2016** | SeqNo: **1104238** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 4100 | 50 | 2493 | 1928 | 85.7 | 75 | 125 | | | |
| Magnesium | 3300 | 50 | 2493 | 1052 | 90.0 | 75 | 125 | | | |
| Potassium | 2800 | 100 | 2493 | 730.2 | 83.9 | 75 | 125 | | | |
| Sodium | 2200 | 50 | 2493 | 40.04 | 87.7 | 75 | 125 | | | |

| Sample ID **1607562-001AMSD** | SampType: **MSD** | TestCode: **EPA Method 6010B: Soil Metals** |
|---|---|---|
| Client ID: **CP-1** | Batch ID: **26385** | RunNo: **35691** |
| Prep Date: **7/13/2016** | Analysis Date: **7/14/2016** | SeqNo: **1104239** Units: **mg/Kg** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 4100 | 50 | 2476 | 1928 | 87.5 | 75 | 125 | 0.773 | 20 | |
| Magnesium | 3300 | 50 | 2476 | 1052 | 91.6 | 75 | 125 | 0.740 | 20 | |
| Potassium | 2900 | 99 | 2476 | 730.2 | 87.0 | 75 | 125 | 2.20 | 20 | |
| Sodium | 2100 | 50 | 2476 | 40.04 | 84.3 | 75 | 125 | 4.56 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1607562 | RcptNo: 1

Received by/date: AT 07/12/16

Logged By: Lindsay Mangin 7/12/2016 7:50:00 AM

Completed By: Lindsay Mangin 7/13/2016 8:36:24 AM

Reviewed By: 07/13/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☐ | No ☐ | No VOA Vials ☑ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | |

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location: Aztec, NM

Project Manager: K. Summers

Laboratory: Hall Environmental

Address: Albuquerque, NM

Contact: A. Freeman

Phone:

PO/SO #:

Lab use only
Due Date: 2.0

Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5

Page 1 of 1

Sampler's Name: Ranee Deechilly Chad Hamilton

Sampler's Signature:

Proj. No.

Project Name: Trunk MD 16H Hydro

No/Type of Containers

ANALYSIS REQUESTED: 8021 BTEX; 8015 TPH GRO/DRO; Chlorides; Cations / Anions

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 Lt. | 250 ml | Glass Jar | P/O | 8021 BTEX | 8015 TPH GRO/DRO | Chlorides | Cations / Anions | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S | 7/11/16 | 1230 | | | CP-1 | | | | | | 1 | | X | X | X | X | 1607562-001 |
| S | | 1240 | | | CP-2 | | | | | | 1 | | X | X | X | X | -002 |
| S | | 1250 | | | CP-3 | | | | | | 1 | | X | X | X | X | -003 |
| S | | 1300 | | | CP-4 | | | | | | 1 | | X | X | X | X | -004 |
| S | | 1310 | | | CP-5 | | | | | | 1 | | X | X | X | X | -005 |

NFS

Turn around time: ☒ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| Ranee Deechilly | 7/11/16 | 1615 | | 07/12/16 | 0750 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |

NOTES:
Bill to Tom Long
N 25789

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other

HALL ENVIRONMENTAL ANALYSIS LABORATORY

*Hall Environmental Analysis Laboratory*
*4901 Hawkins NE*
*Albuquerque, NM 87109*
*TEL: 505-345-3975 FAX: 505-345-4107*
*Website: www.hallenvironmental.com*

July 28, 2016

Kyle Summers
APEX TITAN
606 S. Rio Grande Unit A
Aztec, NM 87410
TEL: (903) 821-5603
FAX

RE: Trunk MD 16" OrderNo.: 1607561

Dear Kyle Summers:

Hall Environmental Analysis Laboratory received 1 sample(s) on 7/12/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

**Analytical Report**
Lab Order **1607561**
Date Reported: **7/28/2016**

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** Trunk MD 16"
**Lab ID:** 1607561-001
**Matrix:** AQUEOUS
**Client Sample ID:** Rupture #8
**Collection Date:** 7/9/2016 12:00:00 PM
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 7470: MERCURY** | | | | | | Analyst: **pmf** | |
| Mercury | ND | 0.00020 | | mg/L | 1 | 7/15/2016 10:27:28 AM | 26407 |
| **EPA 6010B: TOTAL RECOVERABLE METALS** | | | | | | Analyst: **MED** | |
| Arsenic | ND | 0.020 | | mg/L | 1 | 7/15/2016 10:28:02 AM | 26413 |
| Barium | 0.25 | 0.020 | | mg/L | 1 | 7/21/2016 11:47:16 AM | 26413 |
| Cadmium | ND | 0.0020 | | mg/L | 1 | 7/15/2016 10:28:02 AM | 26413 |
| Chromium | ND | 0.0060 | | mg/L | 1 | 7/15/2016 10:28:02 AM | 26413 |
| Lead | 0.0066 | 0.0050 | | mg/L | 1 | 7/19/2016 8:10:40 AM | 26413 |
| Selenium | ND | 0.050 | | mg/L | 1 | 7/15/2016 10:28:02 AM | 26413 |
| Silver | ND | 0.0050 | | mg/L | 1 | 7/15/2016 10:28:02 AM | 26413 |
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Benzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Toluene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Ethylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Naphthalene | ND | 2.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 2-Methylnaphthalene | ND | 4.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Acetone | ND | 10 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Bromobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Bromodichloromethane | 6.6 | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Bromoform | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Bromomethane | ND | 3.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 2-Butanone | ND | 10 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Carbon disulfide | ND | 10 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Carbon Tetrachloride | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Chlorobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Chloroethane | ND | 2.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Chloroform | 47 | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Chloromethane | ND | 3.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 2-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 4-Chlorotoluene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| cis-1,2-DCE | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| cis-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** Trunk MD 16"
**Lab ID:** 1607561-001 **Matrix:** AQUEOUS

**Client Sample ID:** Rupture #8
**Collection Date:** 7/9/2016 12:00:00 PM
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **DJF** | |
| Dibromochloromethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Dibromomethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,3-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,4-Dichlorobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Dichlorodifluoromethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1-Dichloroethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1-Dichloroethene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2-Dichloropropane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,3-Dichloropropane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 2,2-Dichloropropane | ND | 2.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1-Dichloropropene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Hexachlorobutadiene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 2-Hexanone | ND | 10 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Isopropylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 4-Isopropyltoluene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 4-Methyl-2-pentanone | ND | 10 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Methylene Chloride | ND | 3.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| n-Butylbenzene | ND | 3.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| n-Propylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| sec-Butylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Styrene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| tert-Butylbenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Tetrachloroethene (PCE) | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| trans-1,2-DCE | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| trans-1,3-Dichloropropene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1,1-Trichloroethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,1,2-Trichloroethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Trichloroethene (TCE) | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Trichlorofluoromethane | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| 1,2,3-Trichloropropane | ND | 2.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Vinyl chloride | ND | 1.0 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Xylenes, Total | ND | 1.5 | | µg/L | 1 | 7/15/2016 12:12:00 AM | A35696 |
| IS: 1,4-Dichlorobenzene-d4 | 10 | 0 | | | 1 | 7/15/2016 12:12:00 AM | A35696 |
| IS: Chlorobenzene-d5 | 10 | 0 | | | 1 | 7/15/2016 12:12:00 AM | A35696 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
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# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** APEX TITAN
**Project:** Trunk MD 16"
**Lab ID:** 1607561-001
**Matrix:** AQUEOUS
**Client Sample ID:** Rupture #8
**Collection Date:** 7/9/2016 12:00:00 PM
**Received Date:** 7/12/2016 7:50:00 AM

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch |
|---|---|---|---|---|---|---|---|
| **EPA METHOD 8260B: VOLATILES** | | | | | | Analyst: **DJF** | |
| IS: Pentafluorobenzene | 10 | 0 | | | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Surr: 1,2-Dichloroethane-d4 | 96.8 | 70-130 | | %Rec | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Surr: 4-Bromofluorobenzene | 101 | 70-130 | | %Rec | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Surr: Dibromofluoromethane | 99.9 | 70-130 | | %Rec | 1 | 7/15/2016 12:12:00 AM | A35696 |
| Surr: Toluene-d8 | 99.1 | 70-130 | | %Rec | 1 | 7/15/2016 12:12:00 AM | A35696 |

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
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| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607561**

***28-Jul-16***

**Client:** APEX TITAN
**Project:** Trunk MD 16"

| Sample ID **100ng lcs2** | SampType: **LCS** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **LCSW** | Batch ID: **A35696** | RunNo: **35696** |
| Prep Date: | Analysis Date: **7/14/2016** | SeqNo: **1105190** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 48 | 1.0 | 47.00 | 0 | 102 | 70 | 130 | | | |
| Toluene | 48 | 1.0 | 47.00 | 0 | 101 | 70 | 130 | | | |
| Chlorobenzene | 47 | 1.0 | 47.00 | 0 | 100 | 70 | 130 | | | |
| 1,1-Dichloroethene | 49 | 1.0 | 47.00 | 0 | 104 | 70 | 130 | | | |
| Trichloroethene (TCE) | 45 | 1.0 | 47.00 | 0 | 96.7 | 70 | 130 | | | |
| IS: 1,4-Dichlorobenzene-d4 | 10 | 0 | | | | | | | | |
| IS: Chlorobenzene-d5 | 10 | 0 | | | | | | | | |
| IS: Pentafluorobenzene | 10 | 0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 9.9 | | 10.00 | | 98.9 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 9.7 | | 10.00 | | 96.9 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.6 | | 10.00 | | 96.1 | 70 | 130 | | | |

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35696** | RunNo: **35696** |
| Prep Date: | Analysis Date: **7/14/2016** | SeqNo: **1105199** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | ND | 1.0 | | | | | | | | |
| Toluene | ND | 1.0 | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | |
| Methyl tert-butyl ether (MTBE) | ND | 1.0 | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloroethane (EDC) | ND | 1.0 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | 1.0 | | | | | | | | |
| Naphthalene | ND | 2.0 | | | | | | | | |
| 1-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| 2-Methylnaphthalene | ND | 4.0 | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | |
| Bromodichloromethane | ND | 1.0 | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | |
| Bromomethane | ND | 3.0 | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | |
| Carbon disulfide | ND | 10 | | | | | | | | |
| Carbon Tetrachloride | ND | 1.0 | | | | | | | | |
| Chlorobenzene | ND | 1.0 | | | | | | | | |
| Chloroethane | ND | 2.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607561**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16"

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35696** | RunNo: **35696** |
| Prep Date: | Analysis Date: **7/14/2016** | SeqNo: **1105199** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloroform | ND | 1.0 | | | | | | | | |
| Chloromethane | ND | 3.0 | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | |
| cis-1,2-DCE | ND | 1.0 | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | |
| Dibromochloromethane | ND | 1.0 | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 1.0 | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | |
| 2,2-Dichloropropane | ND | 2.0 | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | |
| Hexachlorobutadiene | ND | 1.0 | | | | | | | | |
| 2-Hexanone | ND | 10 | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | |
| Methylene Chloride | ND | 3.0 | | | | | | | | |
| n-Butylbenzene | ND | 3.0 | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 2.0 | | | | | | | | |
| Tetrachloroethene (PCE) | ND | 1.0 | | | | | | | | |
| 1,2-DCE | ND | 1.0 | | | | | | | | |
| 1,3-Dichloropropene | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |



2W

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607561**

***28-Jul-16***

**Client:** APEX TITAN

**Project:** Trunk MD 16"

| Sample ID **rb** | SampType: **MBLK** | TestCode: **EPA Method 8260B: VOLATILES** |
|---|---|---|
| Client ID: **PBW** | Batch ID: **A35696** | RunNo: **35696** |
| Prep Date: | Analysis Date: **7/14/2016** | SeqNo: **1105199** Units: **µg/L** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Trichloroethene (TCE) | ND | 1.0 | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 2.0 | | | | | | | | |
| Vinyl chloride | ND | 1.0 | | | | | | | | |
| Xylenes, Total | ND | 1.5 | | | | | | | | |
| IS: 1,4-Dichlorobenzene-d4 | 10 | 0 | | | | | | | | |
| IS: Chlorobenzene-d5 | 10 | 0 | | | | | | | | |
| IS: Pentafluorobenzene | 10 | 0 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 10 | | 10.00 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10 | | 10.00 | | 101 | 70 | 130 | | | |
| Surr: Dibromofluoromethane | 10 | | 10.00 | | 99.8 | 70 | 130 | | | |
| Surr: Toluene-d8 | 9.7 | | 10.00 | | 96.6 | 70 | 130 | | | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: **1607561**

***28-Jul-16***

**Client:** APEX TITAN
**Project:** Trunk MD 16"

| Sample ID | MB-26407 | SampType: | MBLK | | TestCode: | EPA Method 7470: Mercury | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 26407 | | RunNo: | 35726 | | | | |
| Prep Date: | 7/14/2016 | Analysis Date: | 7/15/2016 | | SeqNo: | 1105600 | Units: | mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| ry | ND | 0.00020 | | | | | | | | |

| Sample ID | LCS-26407 | SampType: | LCS | | TestCode: | EPA Method 7470: Mercury | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 26407 | | RunNo: | 35726 | | | | |
| Prep Date: | 7/14/2016 | Analysis Date: | 7/15/2016 | | SeqNo: | 1105601 | Units: | mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Mercury | 0.0052 | 0.00020 | 0.005000 | 0 | 103 | 80 | 120 | | | |

| Sample ID | 1607561-001BMS | SampType: | MS | | TestCode: | EPA Method 7470: Mercury | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | Rupture #8 | Batch ID: | 26407 | | RunNo: | 35726 | | | | |
| Prep Date: | 7/14/2016 | Analysis Date: | 7/15/2016 | | SeqNo: | 1105603 | Units: | mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| ury | 0.0056 | 0.00020 | 0.005000 | 0.0001126 | 109 | 75 | 125 | | | |

| Sample ID | 1607561-001BMSD | SampType: | MSD | | TestCode: | EPA Method 7470: Mercury | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | Rupture #8 | Batch ID: | 26407 | | RunNo: | 35726 | | | | |
| Prep Date: | 7/14/2016 | Analysis Date: | 7/15/2016 | | SeqNo: | 1105604 | Units: | mg/L | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| ury | 0.0056 | 0.00020 | 0.005000 | 0.0001126 | 110 | 75 | 125 | 0.599 | 20 | |

**Qualifiers:**

| | | | |
|---|---|---|---|
| * | Value exceeds Maximum Contaminant Level. | B | Analyte detected in the associated Method Blank |
| D | Sample Diluted Due to Matrix | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | J | Analyte detected below quantitation limits |
| ND | Not Detected at the Reporting Limit | P | Sample pH Not In Range |
| R | RPD outside accepted recovery limits | RL | Reporting Detection Limit |
| S | % Recovery outside of range due to dilution or matrix | W | Sample container temperature is out of limit as specified |

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

# Sample Log-In Check List

Client Name: APEX AZTEC | Work Order Number: 1607561 | RcptNo: 1

Received by/date: AT 07/12/16

Logged By: Lindsay Mangin 7/12/2016 7:50:00 AM

Completed By: Lindsay Mangin 7/13/2016 8:33:26 AM

Reviewed By: JA 07/13/16

## Chain of Custody

| | | | |
|---|---|---|---|
| 1. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 2. Is Chain of Custody complete? | Yes ☑ | No ☐ | Not Present ☐ |
| 3. How was the sample delivered? | Courier | | |

## Log In

| | | | |
|---|---|---|---|
| 4. Was an attempt made to cool the samples? | Yes ☑ | No ☐ | NA ☐ |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ☑ | No ☐ | NA ☐ |
| 6. Sample(s) in proper container(s)? | Yes ☑ | No ☐ | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ☑ | No ☐ | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ☑ | No ☐ | |
| 9. Was preservative added to bottles? | Yes ☐ | No ☑ | NA ☐ |
| 10. VOA vials have zero headspace? | Yes ☑ | No ☐ | No VOA Vials ☐ |
| 11. Were any sample containers received broken? | Yes ☐ | No ☑ | |
| 12. Does paperwork match bottle labels? (Note discrepancies on chain of custody) | Yes ☑ | No ☐ | |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ☑ | No ☐ | |
| 14. Is it clear what analyses were requested? | Yes ☑ | No ☐ | |
| 15. Were all holding times able to be met? (If no, notify customer for authorization.) | Yes ☑ | No ☐ | |

# of preserved bottles checked for pH: 1 (<2 or >12 unless noted)

Adjusted? NO

Checked by: AJ

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____

By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: ____

Client Instructions: ____

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp °C | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|---|---|---|---|---|---|---|
| 1 | 1.0 | Good | Yes | | | |

# CHAIN OF CUSTODY RECORD

APEX

Office Location Aztec

Project Manager

Laboratory: Hall

Address: ABQ

Contact: Andy Freeman

Phone:

PO/SO #:

Sampler's Name: Kyle Summers

Sampler's Signature:

Proj. No.

Project Name: Trunk MO 16"

No/Type of Containers

ANALYSIS REQUESTED: 8260, RCRA-8

Lab use only
Due Date: 1.0
Temp. of coolers when received (C°): 1 | 2 | 3 | 4 | 5
Page 1 of 1

| Matrix | Date | Time | Comp | Grab | Identifying Marks of Sample(s) | Start Depth | End Depth | VOA | A/G 1 L | 250 ml | Glass Jar | P/O | Lab Sample ID (Lab Use Only) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W | 7/11/16 | 1200 | | X | Rupture #8 | | | 3 | | | | 1 | 1607561-001 |

NFS
KJ

Turn around time: ☑ Normal ☐ 25% Rush ☐ 50% Rush ☐ 100% Rush

| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| | 7/11/16 | 1545 | Ken Dukes | 7/11/16 | 1445 |
| Ken Dukes | 7/11/16 | 1615 | | 07/12/16 | 0750 |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
| Relinquished by (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |

NOTES: Bill Tom Long.
N25789

Matrix: WW - Wastewater; W - Water; S - Soil; SD - Solid; L - Liquid; A - Air Bag; C - Charcoal tube; SL - sludge; O - Oil
Container: VOA - 40 ml vial; A/G - Amber / Or Glass 1 Liter; 250 ml - Glass wide mouth; P/O - Plastic or other