SITE INFORMATION

.A. T. D. --

| | | пероп | Type: Cio | sure nep | JOIL |
|--------------------|---------------------------------------|---------------------------------------|---|---|---|
| General Site Info | ormation: | is transf | 加入公司中国行 | | |
| Site: | | White Oak S | tate Tank Batte | ry | 1 1 |
| Company: | | COG Operat | ing LLC | | |
| Section, Townsl | hip and Range | Unit P | Sec 23 | T17S | R28E |
| Lease Number: | | API-30-015-2 | 9749 | | |
| County: | | Eddy County | / | | |
| GPS: | , | | 32.81503° N | | 104.13927° W |
| Surface Owner: | | State | | | |
| Mineral Owner: | | | | | |
| Directions: | | and travel for (| torn the intersection to onto CR 209 and 0.1 miles, turn righ | n of Haggerri I travel for 1.1 I to site. | miles, turn right and travel for 0.5 miles, turn righ |
| Release Data: | | | | 1.45 . 829.4 | |
| Date Released: | | 3/2 | 5/2012 | | HEUEIVLU |
| Type Release: | | Produ | ced Water | | NOV 0 1 2012 |
| Source of Contar | nination: | Wa | ter Tank | | NUVULENE |
| Fluid Released: | | 2 | 0 bbls | | |
| Fluids Recovered | 7: | 2 | U DDIS | 1987 - 20 AV | |
| Official Commu | | | | | |
| Name: | Pat Ellis | | | | Ike Tavarez |
| Company: | COG Operating, LL | .C | | | Tetra Tech |
| Address: | 550 W. Texas Ave. | Ste. 1300 | | | 1910 N. Big Spring |
| P.O. Box | | | | | |
| Citv: | Midland Texas, 797 | '01 | | 1 | Midland, Texas |
| Phone number: | (432) 686-3023 | •ī | | | (432) 682-4559 |
| Fav | (432) 684-7137 | | | <u> </u> | |
| Fmail: | | | ···· ····· | | ike tavarez@tetratech.com |
| | Ipenis e conchoreso | dices.com | an an an tha ann an Anna an Anna an Anna | and the second second second second second | INC. LAVAICE & LETI ALCON.COM |
| Ranking Criteria | | | | | |
| Depth to Groundw | vater: | | Ranking Score | T | Site Data |
| <50 ft | | | 20 | 1 | |
| 50-99 ft | · · · · · · · · · · · · · · · · · · · | | 10 | | |
| >100 ft. | | | 0 | | 0 |
| WollHood Protocti | | · · · · · · · · · · · · · · · · · · · | Panking Cooro | 1 | Cita Data |
| Water Source <1 (| 00. 00 ft Private <200 f | + | Pranking Score | | Sile Data |
| Water Source >1,0 | 000 ft., Private >200 f | t. | 0 | | 0 |
| | | | | 1 | |
| Surface Body of V | Vater: | | Ranking Score | | Site Data |
| <200 ft. | | - | 20 | | |
| 200 ft - 1,000 ft. | | | 10 | | 0 |
| ~1,000 II. | | | LU | | U |
| Tot | al Ranking Score | ho fa Zakiji | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | |
| | | Accenta | ble Soil BRAIN | ma/ka) | |
| | | Benzene | Total BTFX | TPH | |
| | | 10 | 50 | 5.000 | |
| | | B | | | u da |



October 19, 2012

Mr. Mike Bratcher Environmental Engineer Specialist Oil Conservation Division, District 2 811 S. First Street Artesia, New Mexico 88210

Re: Closure Report for the COG Operating LLC., White Oak State Tank Battery, Unit P, Section 23, Township 17 South, Range 28 East, Eddy County, New Mexico.

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating LLC. (COG) to assess a spill from the White Oak State Tank Battery located in Unit P, Section 23, Township 17 South, Range 28 East, Eddy County, New Mexico (Site). The spill site coordinates are N 32.81503°, W 104.13927°. The site location is shown on Figures 1 and 2.

Background

According to the State of New Mexico C-141 Initial Report, the leak was discovered on March 25, 2012, and released approximately twenty (20) barrels of produced water from the water tank. To alleviate the problem, COG personnel returned power to the CVE. Eighteen (18) barrels of standing fluids were recovered from the release. The spill remained inside the firewalls of the facility and measured approximately 5' X 30'. The initial C-141 form is enclosed in Appendix A.

Groundwater

No water wells were listed within Section 23. According to the USGS, a well located in Section 22 reported a depth to groundwater at 79' below surface. In addition, the NMOCD groundwater map showed the groundwater depth in this area of approximately at 100' below surface. The groundwater data is shown on Figure B.





Regulatory

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the depth to groundwater, the proposed RRAL for TPH is 5,000 mg/kg.

Soil Assessment and Analytical Results

On April 18, 2012, Tetra Tech personnel inspected and sampled the second release. One (1) auger hole (AH-1) was installed using a stainless steel hand auger to assess the impacted soils. Selected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory reports and chain-of-custody documentation are included in Appendix C. The sampling results are summarized in Table 1. The auger hole location is shown on Figure 3.

The area of AH-1 showed TPH and BTEX concentrations above the RRAL, but declined at a depth of 5.5' below surface. Elevated chloride concentrations were present and were not vertically defined.

Remediation and Conclusions

On May 17, 2012, Tetra Tech personnel supervised the excavation of the site. The excavation depths are highlighted in Table 1 and shown on Figure 4. Approximately 20 yards of impacted material was removed and disposed of properly at the R360 facility. The excavated area measured approximately 5' x 30' and a depth 5.0' below surface. Tetra Tech collected a bottom hole samples (5.0') and installed a backhoe trench to define the chloride extents. Referring to Table 1, the bottom hole samples did not show TPH or BTEX concentrations exceeding the RRAL. The trench (T-1) samples did not show a significant impact to the soils.



Once excavated, a clay material was installed in the excavation bottom and backfilled with clean material to surface grade.

Based on the remediation activities performed at this location, COG request closure for site. The C-141 (Final) is included in Appendix A. If you have any questions or comments concerning the assessment or the remediation activities performed at the site, please call me at (432) 682-4559.

Respectfully submitted, TETRA/DECH

Îke Tavaréz, PG Senior Project Manager

l

cc: Pat Ellis - COG

Figures

| - Stadmill | | Windmill | Maindmille 3000 | |
|--|-----------------------|---|--|------------|
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| wantile | Ranch | SCALE: 1 In = 16,667 fee | Date : 2/10/2012 | R |
| LANG A TOMAS TOTALS | 自己的复数建筑和设备 | | 1 HE . FI. 131310401140 | |

Drawn By: faabel Marmolejo



Drewn By: Isabel Marmolejo







Tables

Table 1 COG Operating LLC. White Oak State #1 Eddy County, New Mexico

| 0 | Comple Date | Sample | Soil | Status | 1 | [PH (mg/l | <g)< th=""><th>Benzene</th><th>Toluene</th><th>Ethlybenzene</th><th>Xylene</th><th>Total</th><th>Chloride</th></g)<> | Benzene | Toluene | Ethlybenzene | Xylene | Total | Chloride |
|-------------|-------------|------------|---------|---------|-------|-----------|--|---------|---------|--------------|---------|----------|----------|
| Sample ID | Sample Date | Depth (ft) | In-Situ | Removed | GRO | DRO | Total | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) |
| AH-1 | 4/18/2012 | 3-3.5 | | X | 5,490 | 1,110 | 6,600 | 3.92 | 45.9 | 50.3 | 93:2(| 193 | 7,780 |
| | | 4-4.5 | | X | 5,920 | 2,050 | 7,970 | 6.43 | 65.2 | 71.2 | 127 | 270 | 2,690 |
| | | 5-5.5 | | X | <2.00 | <50.0 | <50.0 | <0.200 | <0.200 | <0.200 | <0.200 | - <0:200 | 4,870 |
| | 11 | 6-6.5 | Х | | <2.00 | <50.0 | <50.0 | <0.200 | <0.200 | <0.200 | <0.200 | <0.200 | 3,250 |
| | F/17/0010 | | | | | | | | | | [| | |
| Trench-1 | 5/1//2012 | 6 | X | | - | - | - | - | - | - | - | - | 24.9 |
| | 0 | 8 | X | | - | - | - | - | - | - | - | - | <20.0 |
| | R. | 10 | X | | - | - | - | - | - | - | - | - | <20.0 |
| Bottom Hole | 5/17/2012 | 5 | X | | <2.00 | <50.0 | <50.0 | <0.0200 | <0.0200 | <0.0200 | <0.0200 | <0.0200 | - |
| | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | |



Not Analyzed

Excavated Depths

Clay Liner

Photos







View of T-1

COG Operating LLC White Oak State Tank Battery Eddy County, New Mexico



Installation of clay material



View West - Backfill

Appendix A

State of New Mexico Energy Minerals and Natural Resources

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

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

| | | | Rele | ase Notific | ation | and Co | orrective A | ction | | |
|---|--|--|--|--|--|--|--|--|---|--|
| | | | | | | OPERA | ror | 🔲 Initi | al Report 🛛 Fii | nal Report |
| Name of Co | mpany | CO0 | G Operat | ting LLC | (| Contact | P | at Ellis | | |
| Address | 550 W. Te | exas, Suite 1 | 300 Mid | land, Texas 79' | 701 1 | Felephone N | No. (432) | 230-0077 | | |
| Facility Nan | ne | Wh | ite Oak | State #1 | | Facility Typ | e Tanl | k Battery | | |
| Surface Own | ner: State | | | Mineral C |)wner | | | Lease N | No. (API#) 30-015-29 | 9749 |
| | | | | LOCA | TION | N OF REI | LEASE | | | |
| Unit Letter P | Section 23 | Township 17S | Range 28E | Feet from the | North/ | South Line | Feet from the | East/West Line | County Eddy | |
| | | | 1 | Latitude N 32.8 NAT | 31503° <u>'URE (</u> | Longitud <u>OF RELI</u> | e W 104.13927 E ASE | 70 | | |
| Type of Relea | ase: Produce | ed Water | | | | Volume of | Release 20 bbls | Volume I | Recovered 18 bbls | |
| Source of Rel | ease: Water | r Tank | | | | Date and H 03/25/2012 | our of Occurrence | e Date and 03/25/20 | Hour of Discovery 12 4:00 a.m. | |
| Was Immedia | te Notice C | iiven? | Yes 🛛 | No 🛛 Not Re | equired | If YES, To | Whom? | | | |
| By Whom? | | | | | | Date and H | our | | ····· | |
| Was a Watero | course Reac | hed? | Yes 🛛 | No | | lf YES, Vo N/A | lume Impacting th | he Watercourse. | | |
| If a Watercou | rse was Imj | pacted, Descri | be Fully.* | | | 1 | | RE | CEIVED | |
| Describe Cau | se of Proble | m and Reme | tial Action | 1 Taken * | | | | | | |
| Water tank ra | n over due | to loss of pow | er at the fa | acility. CVE retu | rned pow | ver. | | NO NMOC | V 0 1 2012 | |
| Describe Area | Affected a | Ind Cleanup A | ction Tak | en.* | | | | | | |
| Tetra Tech pe proper dispos NMOCD for | ersonnel ins al. The site review. | pected the site was then brou | and colle ight up to | cted samples to d surface grade wit | efine the h clean b | spills extent backfill mater | . Soil that exceede ial. Tetra Tech pr | ed RRAL was rem epared a closure re | oved and hauled to R3 eport and submitted it t | 60 for o |
| I hereby certi- regulations al public health should their o or the environ federal, state, | fy that the in l operators a or the envir perations ha iment. In a or local law | nformation gi are required to onment. The ave failed to a ddition, NMO vs and/or regu | ven above o report an acceptanc dequately CD accep lations. | is true and compl d/or file certain re e of a C-141 repo investigate and re tance of a C-141 r | lete to th elease no ort by the emediate report do | e best of my otifications ar NMOCD ma contaminationes not relieve | knowledge and un ad perform correct arked as "Final Re on that pose a thre e the operator of r | nderstand that purs tive actions for rel port" does not rel eat to ground wate esponsibility for c | suant to NMOCD rules eases which may endar ieve the operator of lial r, surface water, human ompliance with any oth | and nger bility n health ner |
| Signature: Z | JV. | 1 q | \supset | t our | | | OIL CONS | SERVATION | DIVISION | |
| Printed Name | : Ike Tavar | z AZ | UT O | h COp | | Approved by | District Superviso | or: | | |
| Title: Project | Manager | | | | | Approval Date | e: | Expiration | Date: | |
| E-mail Addre | ss: Ike.Tava | uez@TetraTe | ch.com | · · · · · · · · · · · · · · · · · · · | 0 | Conditions of | Approval: | | Attached | |
| Date: /0- | -18_1 | 2 | Phone: | (432) 682-4559 | | | | | | |
| Attach Addit | ional Shee | ts If Necess | ary | | | | | | | |

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 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 October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 1 16 on back side of form

Release Notification and Corrective Action

| | | | | | | OPERA | FOR | | 🛛 Initi | ial Report | | Final Repor |
|--|---|---|---|--|---|--|---|---|---|--|--|---|
| Name of Co | ompany | COG OP | ERATIN | IG LLC | | Contact | Pi | at Ellis | | | | |
| Address | 550 W. | Texas, Suite | : 100, Mi | dland, TX 79701 | 1 | Telephone 1 | No. 432- | 230-00 | 77 | | | |
| Facility Na | me | White (| Dak State | #] | | Facility Typ | e Tan | k Batte | ry | | | |
| Surface Ow | ner State | B | | Mineral O | wner | | | | Lease 1 | No. (API# | 30-01 | 5-29749 |
| | | | | LOCA | TIO | N OF REI | LEASE | | | | | |
| Unit Letter P | Section 23 | Township 17S | Range 28E | Feet from the | North | South Line | Feet from the | East/ | West Line | County | Eddy | |
| | • | . | | Latitude 32. | .8150 | Longit | ude 104.1392 | | | | | |
| | | | | NAT | URE | OF REL | EASE | | | | | |
| Type of Rele | ase Produc | ed water | | | | Volume of | Release 20bbls | | Volume | Recovered | 8bbls | |
| Source of Re | icase wau | EL IBINY | | | | 03/25/2012 | tour of Occurrenc | ę | 03/25/20 | 12 4:00 a.m | covery | |
| Was Immedi | ate Notice (| Given? | Yes 🛛 | No 🛛 Not Re | quired | If YES, To | Whom? | | | | | |
| By Whom? | | | | | | Date and H | lour | | | | | |
| Was a Water | course Read | ched? | Yes 🛛 | No | | If YES, Vo | olume Impacting t | he Wat | ercourse. | | | |
| If a Watercou | irse was Im | pacted, Descri | ibe Fully." | y | | | <u></u> | <u></u> | | | | ****** |
| Describe Cau | ise of Proble | em and Reme | tial Action | n Taken.* | | | | <u></u> | | | | |
| Water tank ra | n over due | to loss of pow | er at the f | acility. CVE retur | med pov | wer. | | | | | | ~ |
| Describe Are | a Affected a | and Cleanup A | ction Tak | en.* | | | | | | | • | |
| Initially 20bb measured and submit a work | is were rele l area of rou k plan for aj | ased from the ighly 5° x 30°. pproval prior t | water tan Tetra Te to any sign | k and we were able ch will sample the lificant remediation | e to rece spill si n work. | over 18bbls w te area to deli | vith a vacuum true neate any possibl | ck. The e contai | fluids rele nination fr | ased inside t om the relea | he dike se and v | erea and we will |
| I hereby certi regulations al public health should their o or the environ federal, state, | fy that the in l operators a or the envir perations ha ment. In a or local law | nformation given are required to comment. The ave failed to a ddition, NMO vs and/or regu | ven above o report an acceptanc dequately CD accept lations. | is true and completed of the certain re- e of a C-141 report investigate and re- tance of a C-141 re- | ete to th lease no rt by the mediate eport do | te best of my otifications and NMOCD ma contaminationes not relieve | knowledge and un ad perform correct arked as "Final Re on that pose a three the operator of n | nderstar live acti port" d at to gr esponsi | ed that purs ons for rele oes not reli ound water bility for co | want to NM eases which eve the open r, surface wa compliance w | DCD ru may en ator of ter, hun ilh any | les and danger liability nan health other |
| Signature: | / | 2 | $\overline{7}$ | 2 | | | OIL CONS | SERV | ATION | DIVISIC | N | |
| Printed Name | : 6 | Josh | Russo | \geq | | Approved by I | District Superviso | τ: | · · · · · · · · · · · · · · · · · · · | | | |
| Title: | | HSE Co | ordinator | | A | Approval Date | D: | | Expiration | Date: | | |
| E-mail Addre | SS: | jrusso@concl | ioresource | 25.0010 | | Conditions of | Approval: | | | Attached | | |
| Date: 04/ | 05/2012 | Pl | ione: | 432-212-2399 | | | | | | | | |

* Attach Additional Sheets If Necessary

Appendix B

Water Weil Data Average Depth to Groundwater (ft) COG - White Oal State Tank Battery Eddy County, New Mexico

| | 16 9 | South | | 27 East | | | 16 | South | : | 28 East | | | 16 Se | outh | : | 29 Ea |
|----------|------|-------|----------|----------|-----|----|----|-------|----------|------------|----|-----|--------|----------------|----|----------|
| 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 5 |
| 7 | B | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 |
| 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 |
| 19 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 |
| | _ | _ | _ | | | | | 61 | | | | 110 | | I | | |
| 30 | 29 | 28 | 27 70 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 |
| 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 |
| | 17 : | South | | 27 East | | | 17 | South | | 28 East | | L | 17 S | outh | | 29 E |
| 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 |
| 7 318 | 8 | 9 | 10 | 11 54 | 12 | 7 | 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | -11 |
| 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | -14 |
| 86 | 283 | 194 | | | | | | | | | | | | | | |
| 19 | 20 | 21 | 22 | 23 40 | 24 | 19 | 20 | 21 | 22 79 | 23 SITE | 24 | 19 | 20 | 21 | 22 | 80 2 |
| 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 210 | 28 | 27 | 26 |
| 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 3 |
| | 120 | | | | | | | | 53 | | | | | | | 15 |
| | 18 : | South | | 27 East | | | 18 | South | 2 | 28 East | | | 18 Se | outh | | 29 E |
| 6 | 5 | 4 | 3 | 2 | 1 | 6 | 5 | 4 | 3 | 2 | | 6 | 5 | 4 | 3 | 2 |
| 7 | 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 | 12 | 7 | 8 | 9 | 10 | 11 |
| 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 | 13 | 18 | 17 | 16 | 15 | 14 |
| 9 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 2 |
| 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 | 25 | 30 | 29 | 28 | 27 | 26 |
| 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | 35 | 36 | 31 | 32 | 33 | 34 | -3 |
| | 1 | 1 | 1 | 1 | 1 1 | | 1 | | 1 | 177 | | | 1 | 1 [*] | 1 | Ľ |

New Mexico State Engineers Well Reports

USGS Well Reports

Field water level

New Mexico Water and Infrastructure Data System

SITE

Appendix C

.

Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

Project Location:Eddy Co., NMProject Name:COG/White Oak State #1Project Number:114-6401363

| | | | Date | Time | Date |
|--------|-------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 295157 | AH-1 3-3.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |
| 295158 | AH-1 4-4.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |
| 295159 | AH-1 5-5.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |
| 295160 | AH-1 6-6.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |

| | | | BTEX | TPH DRO - NEW | TPH GRO | |
|----------------------|----------|----------|--------------|---------------|---------|-------------|
| | Benzene | Toluene | Ethylbenzene | Xylene | DRO | GRO |
| Sample - Field Code | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) |
| 295157 - AH-1 3-3.5' | 3.92 | 45.9 | 50.3 | 93.2 | 1110 Q8 | 5490 Qr,Qs |
| 295158 - AH-1 4-4.5' | 6.43 | 65.2 | 71.2 | 127 | 2050 | 5920 Qr,Qs |
| 295159 - AH-1 5-5.5' | < 0.0200 | < 0.0200 | < 0.0200 | < 0.0200 | <50.0 | <2.00 Qr.Qs |
| 295160 - AH-1 6-6.5' | < 0.0200 | < 0.0200 | < 0.0200 | < 0.0200 | <50.0 | <2.00 qr,qs |

Sample: 295157 - AH-1 3-3.5'

| Param | Flag | Result | Units | RL |
|----------|------|--------|-------|----|
| Chloride | | 7780 | mg/Kg | 4 |

Sample: 295158 - AH-1 4-4.5'

| Param | Flag | Result | Units | RL |
|----------|------|--------|-------|---------------------|
| Chloride | | 2690 | mg/Kg | 4 |

Sample: 295159 - AH-1 5-5.5'

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: May 4, 2012

Work Order: 12042422

| Report Date: May | 4, 2012 | Work Order: 12042422 | Pa | ge Number: 2 of 2 |
|------------------|---------------|----------------------|-------|-------------------|
| Param | Flag | \mathbf{Result} | Units | RL |
| Chloride | | 4870 | mg/Kg | 4 |
| Sample: 295160 · | · AH-1 6-6.5' | | | |
| Param | Flag | Result | Units | RL |
| Chloride | | 3250 | mg/Kg | 4 |

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.



5002 Basin Street, Suite A1 (BioAquatic) 2501 Mayes Rd., Suite 100

Midland. Texas 79703 Carroliton. Texas 75006

972-242-7750 E-Mail: lab@traceanalysis.com WEB: www.traceanalysis.com

Certifications

WBE HUB NCTRCA DBE NELAP DOD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: May 4, 2012

Work Order: 12042422

Project Location: Eddy Co., NM COG/White Oak State #1 **Project Name:** Project Number: 114-6401363

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

| | | | Date | Time | Date |
|--------|-------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 295157 | AH-1 3-3.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |
| 295158 | AH-1 4-4.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |
| 295159 | AH-1 5-5.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |
| 295160 | AH-1 6-6.5' | soil | 2012-04-18 | 00:00 | 2012-04-24 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 27 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Alla

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

Report Contents

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| Analytical Report Sample 295157 (AH-1 3-3.5') Sample 295158 (AH-1 4-4.5') Sample 295159 (AH-1 5-5.5') Sample 295160 (AH-1 6-6.5') | 5 6 7 9 |
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| QC Batch 90687 - CCV (| 2) . | | | | | | | | • | | | • | | | | | | | | | | | • | | | | |
|---------------------------|-------|----|-------|-----|---|-------|---|--|---|-----|---|-----|-----|--|---|-----|---|-------|-------|-----|--|-----|-------|---|---|-----|---|
| QC Batch 90689 - CCV (| (1) . | | | | | | | | | | | | | | | | | | | | | | • | | | | |
| QC Batch 90689 - CCV (| (2) . | | | | | | | | | | | | | | | | | | | | | • • | • | | | | |
| QC Batch 90712 - CCV (| (2) . | | | | | | | | | | | | | | | | | | | | | | | | | . , | |
| QC Batch 90712 - CCV (| (3) . | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QC Batch 90866 - CCV (| 1). | | | | | | | | • | | | • • | | | | | | | | | | | | | | | |
| QC Batch 90866 - CCV (| (2) . | •• | • | • • | • | • | • | | • | ••• | • | • • | • • | | • | • • | • | • | • | • • | | | | • | • | | • |
| ppendix | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Report Definitions | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Laboratory Certifications | | | | | | | | | • | | | | | | | | | | • | | | | | | | | |
| Standard Flags | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Attachments | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Case Narrative

Samples for project COG/White Oak State #1 were received by TraceAnalysis, Inc. on 2012-04-24 and assigned to work order 12042422. Samples for work order 12042422 were received intact at a temperature of 1.4 C.

Samples were analyzed for the following tests using their respective methods.

| | | Prep | Prep | \mathbf{QC} | Analysis |
|----------------------|--------------|-------|---------------------|---------------|---------------------|
| Test | Method | Batch | Date | Batch | Date |
| BTEX | S 8021B | 76879 | 2012-04-25 at 10:55 | 90611 | 2012-04-25 at 11:11 |
| BTEX | S 8021B | 76942 | 2012-04-27 at 09:13 | 90687 | 2012-04-27 at 09:28 |
| Chloride (Titration) | SM 4500-Cl B | 77061 | 2012-05-01 at 08:50 | 90866 | 2012-05-03 at 15:13 |
| TPH DRO - NEW | S 8015 D | 76815 | 2012-04-24 at 13:11 | 90553 | 2012-04-24 at 14:58 |
| TPH DRO - NEW | S 8015 D | 76854 | 2012-04-25 at 13:34 | 90586 | 2012-04-25 at 13:36 |
| TPH DRO - NEW | S 8015 D | 76960 | 2012-04-30 at 14:38 | 90712 | 2012-04-30 at 14:40 |
| TPH GRO | S 8015 D | 76879 | 2012-04-25 at 10:55 | 90612 | 2012-04-25 at 11:39 |
| TPH GRO | S 8015 D | 76942 | 2012-04-27 at 09:13 | 90689 | 2012-04-30 at 09:56 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 12042422 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 295157 - AH-1 3-3.5'

| Laboratory: | Midland BTEX | | Analytic | al Methor | 1. 5.80 | 91R | | Pren Met | thod | S 5035 |
|--|---|-------|---------------------------|--|---|--|---------|--|-----------------------------|-----------------------|
| Analysis. | 00611 | | Data An | al memor | 2012 | -04-25 | | Δ nalvzed | Bw | te |
| Pren Batch | 76870 | | Sample I | aryzeu. Prenaratic | 2012 | -04-25 | | Prepared | By. | te |
| i tep Daten. | 10015 | | Dampie | reparation | | 01 20 | | rioparea | . 29. | 00 |
| | | | | | \mathbf{RL} | | | | | |
| Parameter | Fl | ag | Cert | t | Result | U | nits | Dilution | | \mathbf{RL} |
| Benzene | | | 1 | | 3.92 | mg/ | /Kg | 50 | | 0.0200 |
| Toluene | | | 1 | | 45.9 | mg/ | ′Kg | 50 | | 0.0200 |
| Ethylbenzene | 9 | | 1 | | 50.3 | mg/ | /Kg | 50 | | 0.0200 |
| Xylene | | | 1 | | 93.2 | mg/ | /Kg | 50 | | 0.0200 |
| | | | | | | | Spike | Percent | Rec | covery |
| Surrogate | | Flag | Cert | Result | \mathbf{Units} | Dilution | Amount | Recovery | Li | mits |
| Trifluorotolue | ene (TFT) | | | 44.1 | mg/Kg | 50 | 50.0 | 88 | 75 - | 135.4 |
| 4-Bromofluor | obenzene (4-BFB) | | | 58.8 | mg/Kg | 50 | 50.0 | 118 | 63.6 | - 158.9 |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland Chloride (Titration) 90866 77061 | Ŧ | Ana Dat San Cart | alytical M se Analyzo nple Prep | ethod: ed: aration: RL Begult | SM 4500-Cl 2012-05-03 2012-05-01 | B | Prep M Analyz Prepar Dilution | fethod: ed By: ed By: | N/A AR AR BL |
| Chlorido | r laį | 3 | Cert | | 7780 | | | 10 | | <u></u> |
| Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: | 5157 - AH-1 3-3.5' Midland TPH DRO - NEW 90553 76815 | | Ar Da Sa | nalytical M ate Analy: mple Prej | Method: zed: paration: RL | S 8015 D 2012-04-24 2012-04-24 | | Prep M Analyz Prepar | fethod: ed By: ed By: | N/A DA DA |
| Parameter | Fla | g | Cert | | Result | τ | Jnits . | Dilution | | \mathbf{RL} |
| DRO | Qs | • | 1 | | 1110 | mg | /Kg | 5 | | 50.0 |
| | | | | | | | | | | |

| Report Date: 114-6401363 | May 4, | 2012 | | CO | Vork Order: G/White Oa | Page N | umber: 6 of 27 Eddy Co., NM | | |
|-----------------------------|--------|------|------|--------|---------------------------|----------|-------------------------------------|---------------------|--------------------|
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | Qar | Qar | | 186 | mg/Kg | 5 | 100 | 186 | 49.3 - 157.5 |

Sample: 295157 - AH-1 3-3.5'

| Laboratory: | Midland | | | | | | | | | |
|----------------|------------------|-------|------|---------|-----------|---------------|-----------|--------|----------|---------------|
| Analysis: | TPH GRO | | | Analyti | cal Metho | od: S8 | 8015 D | | Prep Met | thod: S 5035 |
| QC Batch: | 90612 | | | Date A | nalyzed: | 201 | 12-04-25 | | Analyzed | By: tc |
| Prep Batch: | 76879 | | | Sample | Preparat | ion: 201 | 12-04-25 | | Prepared | By: tc |
| | | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | | Cert | | Result | | Units | Dilution | \mathbf{RL} |
| GRO | | Qr,Qs | | 1 | | 5490 | m | g/Kg | 50 | 2.00 |
| | | | | | | | | Spike | Percent | Recovery |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolue | ene (TFT) | | | | 47.1 | mg/Kg | <u>50</u> | 50.0 | 94 | 58.5 - 155.1 |
| 4-Bromofluor | obenzene (4-BFB) | | | | 61.9 | mg/Kg | <u>50</u> | 50.0 | 124 | 45.1 - 162.2 |

Sample: 295158 - AH-1 4-4.5'

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland BTEX 90611 76879 | | Analytics Date Ans Sample F | al Method: alyzed: Preparation | S 8021 2012-0 n: 2012-0 | 1B 14-25 14-25 | | Prep Meth Analyzed I Prepared I | od: S 5035 By: tc By: tc |
|--|-----------------------------------|------|-----------------------------------|--------------------------------------|-------------------------------|----------------------|-----------------|---------------------------------------|--------------------------------|
| | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | Cert | ; | Result | Un | its | Dilution | \mathbf{RL} |
| Benzene | | | 1 | | 6.43 | mg/ | Kg | 50 | 0.0200 |
| Toluene | | | 1 | | 65.2 | mg/l | Kg | 50 | 0.0200 |
| Ethylbenzene | 9 | | 1 | | 71.2 | mg/l | Kg | 50 | 0.0200 |
| Xylene | | | 1 | | 127 | mg/ | Kg | 50 | 0.0200 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolue | ene (TFT) | | | 51.0 | mg/Kg | 50 | 50.0 | 102 | 75 - 135.4 |
| 4-Bromofluor | obenzene (4-BFB) | | | 61.7 | mg/Kg | 50 | 50.0 | 123 | 63.6 - 158.9 |

| 114-6401363 | : May 4, 2012 | | | ork Order: 1204 G/White Oak St | 2422 ate #1 | | Page N | umber: Eddy C | 7 of 2' 0., NM |
|---|---|---------------------|----------------------------|---|--|---|--|--|--|
| Sample: 29 | 5158 - AH-1 4 | -4.5' | | | | | | | |
| Laboratory: | Midland | | | | | | | | |
| Analysis: | Chloride (Titr | ation) | Anal | ytical Method: | SM 4500 | D-Cl B | Prep N | Method: | N/A |
| QC Batch: | 90866 | | Date | Analyzed: | 2012-05- | -03 | Analyz | zed By: | AR |
| Prep Batch: | 77061 | | Sam | ble Preparation: | 2012-05- | .01 | Prepar | rea By: | AR |
| | | | | RL | | | | | |
| Parameter | | Flag | Cort | Result | | Units | Dilution | | RL |
| | | 1.100 | Oer t | 1000 010 | | | Dilution | | |
| Chloride Sample: 29 Laboratory: | 5158 - AH-1 4 Midland | -4.5' | | 2690 | S 8015 | mg/Kg | | (othod) | 4.00 |
| Chloride Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: | 5158 - AH-1 4 Midland TPH DRO - N 90586 76854 | -4.5' EW | Ana Dat Sarr | lytical Method: e Analyzed: ple Preparation | S 8015 2012-04 : 2012-04 | mg/Kg D I-25 I-25 | Prep M Analyz Prepar | Method: zed By: red By: | 4.00 N/A DA DA |
| Chloride Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: | 5158 - AH-1 4 Midland TPH DRO - N 90586 76854 | -4.5' EW | Ana Dat Sarr | lytical Method: e Analyzed: ple Preparation RL | S 8015 2012-04 : 2012-04 | mg/Kg D I-25 I-25 | Prep M Analyz Prepar | Method: zed By: red By: | 4.00 N/A DA DA |
| Chloride Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: Parameter | 5158 - AH-1 4 Midland TPH DRO - N 90586 76854 | -4.5' EW Flag | Ana Dat Sarr Cert | lytical Method: e Analyzed: ple Preparation RL Result | S 8015 2012-04 : 2012-04 | mg/Kg D I-25 I-25 Units | Prep M Analyz Prepar Dilution | Method: zed By: red By: | 4.00 N/A DA DA RL |
| Chloride Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: Parameter DRO | 5158 - AH-1 4 Midland TPH DRO - N 90586 76854 | -4.5' EW Flag | Ana Dat Sarr Cert | lytical Method: e Analyzed: ple Preparation RL Result 2050 | S 8015 2012-04 : 2012-04 | mg/Kg D L-25 L-25 Units mg/Kg | Dilution 5 | Method: zed By: red By: | 4.00 N/A DA DA RL 50.0 |
| Chloride Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: Parameter DRO | 5158 - AH-1 4 Midland TPH DRO - N 90586 76854 | -4.5' EW Flag | Ana Dat Sarr Cert | lytical Method: e Analyzed: ple Preparation RL Result 2050 | S 8015 2012-04 : 2012-04 | mg/Kg D I-25 I-25 Units mg/Kg Spike | Dilution Dilution | Method: zed By: red By: Reco | 4.00 N/A DA DA RL 50.0 |
| Chloride Sample: 29 Laboratory: Analysis: QC Batch: Prep Batch: Parameter DRO Surrogate | 5158 - AH-1 4 Midland TPH DRO - N 90586 76854 Flag | -4.5' EW Flag | Ana Dat Sam Cert | 2690 lytical Method: e Analyzed: .ple Preparation RL Result 2050 Units I | S 8015 2012-04 : 2012-04 Pilution | mg/Kg D I-25 I-25 Units mg/Kg Spike Amount | Dilution Dilution Recovery | Method: zed By: red By: Reco Lin | 4.00 N/A DA DA RL 50.0 overy nits |

| Analysis: QC Batch: Prep Batch: | TPH GRO 90612 76879 | | | Analytic Date Ar Sample | cal Metho nalyzed: Preparat | od: S 8 201 ion: 201 | 015 D 2-04-25 2-04-25 | | Prep Met Analyzed Prepared | thod: S 5035 By: tc By: tc |
|---------------------------------------|---------------------------|-------|------|-------------------------------|-----------------------------------|----------------------------|-----------------------------|-----------------|----------------------------------|----------------------------------|
| | | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | | Cert | | Result | τ | Jnits | Dilution | \mathbf{RL} |
| GRO | | Qr,Qs | | 1 | | 5920 | mį | g/Kg | 50 | 2.00 |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolue | ene (TFT) | | | | 52.3 | mg/Kg | 50 | 50.0 | 105 | 58.5 - 155.1 |
| 4-Bromofluor | obenzene (4-BFB) | | | | 68.7 | mg/Kg | 50 | 50.0 | 137 | 45.1 - 162.2 |

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|--------------------------|------------------------|----------------------|
| 114-6401363 | COG/White Oak State #1 | Eddy Co., NM |
| | | |

Sample: 295159 - AH-1 5-5.5'

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland BTEX 90687 76942 | | | Analytica Date Ana Sample P | al Method alyzed: reparatio | l: S 8021 2012-0 n: 2012-0 | lB)4-27)4-27 | | Prep Met Analyzed Prepared | hod: By: By: | S 5035 tc tc |
|--|-----------------------------------|------|------|-----------------------------------|-----------------------------------|----------------------------------|----------------------|--------|----------------------------------|--------------------|--------------------|
| | | | | | | \mathbf{RL} | | | | | |
| Parameter | | Flag | | Cert | | Result | U | nits | Dilution | | \mathbf{RL} |
| Benzene | | U | | 1 | | < 0.0200 | mg | /Kg | 1 | | 0.0200 |
| Toluene | | υ | | 1 | | < 0.0200 | mg | /Kg | 1 | | 0.0200 |
| Ethylbenzene | • | U | | 1 | | < 0.0200 | mg | /Kg | 1 | | 0.0200 |
| Xylene | | υ | | 1 | | <0.0200 | mg | /Kg | 1 | | 0.0200 |
| | | | | | | | | Spike | Percent | Re | covery |
| Surrogate | |] | Flag | Cert | Result | Units | Dilution | Amount | Recovery | L | imits |
| Trifluorotolue | ene (TFT) | | | | 2.00 | mg/Kg | 1 | 2.00 | 100 | 75 | - 135.4 |
| 4-Bromofluor | obenzene (4-BFB) | | | | 1.93 | mg/Kg | 1 | 2.00 | 96 | 63.6 | - 158.9 |

Sample: 295159 - AH-1 5-5.5'

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland Chloride (Titration) 90866 77061 | Analyt Date A Sample | cical Method: Analyzed: e Preparation: | SM 4500-Cl B 2012-05-03 2012-05-01 | Prep Method: Analyzed By: Prepared By: | N/A AR AR |
|--|---|----------------------------|--|--|--|-----------------|
| | | | \mathbf{RL} | | | |
| Parameter | Flag | Cert | Result | Units | Dilution | \mathbf{RL} |
| Chloride | | | 4870 | mg/Kg | 10 | 4.00 |

Sample: 295159 - AH-1 5-5.5'

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO - NI 90712 76960 | EW | An Da Sar | Analytical Method: Date Analyzed: Sample Preparation: | | | D 4-30 4-30 | Prep M Analyz Prepar | Prep Method: Analyzed By: Prepared By: | |
|--|---|------|-----------------|---|--------|------|-------------------|----------------------------|--|---------------|
| | | | | | RL | | | | | |
| Parameter | | Flag | Cert | | Result | | Units | Dilution | | \mathbf{RL} |
| DRO | ······································ | υ | 1 | | <50.0 | | mg/Kg | 1 | | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilu | tion | Spike Amount | Percent Recovery | Reco Lin | overy nits |
| n-Tricosane | | | 131 | mg/Kg | 1 | | 100 | 131 | 49.3 - | 157.5 |

| Report Date: May 4, 2012 114-6401363 | | | Work COG/W | Order: 1 hite Oak | 2042422 State #1 | | Page Number: 9 of 27 Eddy Co., NM | | |
|--|--------------------------------------|-------|--|---------------------------|--------------------------------------|-------|--|--------------------|--|
| Sample: 29 | 5159 - AH-1 5 | -5.5' | | | | | | | |
| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 90689 76942 | | Analytical M Date Analyze Sample Prepa | ethod: ed: eration: | S 8015 D 2012-04-30 2012-04-27 | | Prep Method: Analyzed By: Prepared By: | S 5035 tc tc | |
| Parameter | | Flag | Cert | Res | RL | Units | Dilution | \mathbf{RL} | |

| GRO | Qr,Qs,U | 1 | | <2.00 | mg/Kg | | 1 | 2.00 | |
|------------------------------|---------|------|--------|-------|----------|-----------------|---------------------|--------------------|--|
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits | |
| Trifluorotoluene (TFT) | | | 2.10 | mg/Kg | 1 | 2.00 | 105 | 58.5 - 155.1 | |
| 4-Bromofluorobenzene (4-BFB) | | | 1.86 | mg/Kg | 1 | 2.00 | 93 | 45.1 - 162.2 | |

Sample: 295160 - AH-1 6-6.5'

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland BTEX 90687 76942 | | Analytica Date Ana Sample P | al Method alyzed: reparatio | l: S 8021 2012-0 m: 2012-0 | B)4-27)4-27 | | Prep Met Analyzed Prepared | hod: S 5035 By: tc By: tc |
|--|-----------------------------------|------|-----------------------------------|-----------------------------------|----------------------------------|---------------------|-----------------|----------------------------------|---------------------------------|
| | | | | | RL | | | | |
| Parameter | | Flag | Cert | | Result | U | nits | Dilution | \mathbf{RL} |
| Benzene | | U | 1 | | < 0.0200 | mg/ | ′Kg | 1 | 0.0200 |
| Toluene | | U | 1 | | < 0.0200 | mg/ | ′Kg | 1 | 0.0200 |
| Ethylbenzene | • | U | 1 | | < 0.0200 | mg/ | ′Kg | 1 | 0.0200 |
| Xylene | | υ | 1 | | <0.0200 | mg/ | ′Kg | 1 | 0.0200 |
| Surrogate | | Fla | g Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolue | ene (TFT) | | | 2.17 | mg/Kg | 1 | 2.00 | 108 | 75 - 135.4 |
| 4-Bromofluor | obenzene (4-BFB) | | | 2.11 | mg/Kg | 1 | 2.00 | 106 | 63.6 - 158.9 |

Sample: 295160 - AH-1 6-6.5'

| Laboratory: Analysis: | Midland Chloride (Titration) | Analytical Method: | SM 4500-Cl B | Prep Method: | N/A |
|--------------------------|---------------------------------|---------------------|--------------|--------------|-----|
| QC Batch: | 90866 | Date Analyzed: | 2012-05-03 | Analyzed By: | ÁR |
| Prep Batch: | 77061 | Sample Preparation: | 2012-05-01 | Prepared By: | AR |
| | | | | | |

continued ...

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|---------------------------------------|--------------------------------|------|----------------|---|--|-----------------------------|--------------------------|--|-------------------------|
| sample 29510 | 60 continued | | | | | | | | |
| | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | Cert | F | lesult | Units | Dilution | R | ۲۲ ۲ |
| D | | | a . | | RL | | | | |
| Parameter | | Flag | Cert | HH | lesult | Units | Dilution | R | $\frac{\alpha}{\alpha}$ |
| Chloride | | | | | 3250 | mg/Kg | 10 | 4.(| 00 |
| Analysis: QC Batch: Prep Batch: | TPH DRO - NE 90712 76960 | EW | Ar Da Sa | alytical Me te Analyzec mple Prepar | thod: S 8(l: 2011) ration: 2011 RL | 015 D 2-04-30 2-04-30 | Prep 1 Analy Prepa | Method: N/ zed By: DA red By: DA | 'A 4 4 |
| Parameter | | Flag | Cert | R | lesult | Units | Dilution | R | ۱۶ |
| DRO | | | 1 | < | <50.0 | mg/Kg | 1 | 50 |).0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits | y |
| n-Tricosane | | | 134 | mg/Kg | 1 | 100 | 134 | 49.3 - 157 | '.5 |
| Sample: 29 | 5160 - AH-1 6- | 6.5' | | | | | | | |

Sample: 295160 - AH-1 6-6.57 Laboratory: Midland

| Laboratory: | Midiand | | | | | | | | | | |
|-------------------|------------------|-------|------|---------|-----------|-----------|----------|--------|----------|------|---------------|
| Analysis: | TPH GRO | | | Analyti | cal Metho | od: S 80 | 15 D | | Prep Met | hod: | S 5035 |
| QC Batch: | 90689 | | | Date A | nalyzed: | 2012 | 2-04-30 | | Analyzed | By: | tc |
| Prep Batch: 76942 | | | | Sample | Preparat | ion: 2012 | 2-04-27 | | Prepared | By: | tc |
| | | | | | | RL | | | | | |
| Parameter | | Flag | | Cert | | Result | U | nits | Dilution | | \mathbf{RL} |
| GRO | | Qr,Qs | | 1 | | <2.00 | mg | /Kg | 1 | | 2.00 |
| | | | | | | | | Spike | Percent | Rec | overy |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Li | mits |
| Trifluorotolue | ene (TFT) | | | | 2.30 | mg/Kg | 1 | 2.00 | 115 | 58.5 | - 155.1 |
| 4-Bromofluor | obenzene (4-BFB) | | | | 2.07 | mg/Kg | 1 | 2.00 | 104 | 45.1 | - 162.2 |

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Method Blanks

| Method Blank (1 |) QC B | atch: 90553 | | | | | | |
|--------------------------------------|----------|-------------|------------|----------------|------------|----------|----------|------------|
| QC Batch: 90553 | | | Date | Analyzed: | 2012-04-24 | | Analyz | ed By: DA |
| Prep Batch: 76815 | | | QC P | reparation: | 2012-04-24 | | Prepare | ed By: DA |
| | | | | | | MDL | | |
| Parameter | | Flag | | Cert | | Result | Units | RL |
| DRO | | | | 1 | | <14.5 | mg/Kg | 50 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilutior | n Amount | Recovery | Limits |
| n-Tricosane | | | 118 | mg/Kg | 1 | 100 | 118 | 52 - 140.8 |
| | | | | | | | | |
| Method Blank (1 |) QC B | atch: 90586 | | | | | | |
| | - | | D . | | | | | 10 04 |
| QC Batch: 90586 Prop Botch: 76854 | | | Date | Analyzed: | 2012-04-25 | | Analyze | d By: DA |
| Tiep Daten. 70004 | | | QU I | | 2012-04-20 | | riepare | u by. DA |
| | | | | | | MDL | | |
| Parameter | | Flag | · ·· | Cert | <u></u> | Result | Units | RL |
| DRO | | | | 1 | | <14.5 | mg/Kg | 50 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilutior | Amount | Recovery | Limits |
| n-Tricosane | | | 110 | mg/Kg | 1 | 100 | 110 | 52 - 140.8 |
| Method Blank (1 |) QC B | atch: 90611 | | | | | | |
| OC Pataby 00611 | | | Data | Anolwood | 2012 04 25 | | Anoly | and Day to |
| Prep Batch: 76879 | | | OC F | reparation: | 2012-04-25 | | Prepa | red By: tc |
| Trop Dates in Poorto | | | 40. | 10p 01 0010111 | 2022 01 20 | | 110pt | iou Dy. io |
| | | | | | | MDL | | |
| Parameter | | Fla | g | Cert | | Result | Units | RL |
| Benzene | | | | 1 | < | 0.00470 | mg/Kg | 0.02 |
| Ethylhenzene | | | | 1 | | 0.00980 | mg/Kg | 0.02 |
| Xvlene | | | | 1 | ~ | < 0.0170 | mg/Kg | 0.02 |
| | <u> </u> | | | | | | 0/ ~ 0 | |

| Report Date: May 4, 2012 114-6401363 | CO | Work Orden OG/White (| Page Number: 12 of 27 Eddy Co., NM | | | | | | |
|--|------------|--------------------------|---------------------------------------|--------------------|-----------------|---------------------|--------------------|----------------------|----------|
| Surrogate | g Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits | | |
| Trifluorotoluene (TFT) | | 1.61 | mg/Kg | 1 | 2.00 | 80 | 78 - 12 | 23.6 | |
| 4-Bromofluorobenzene (4-BFB) | | | 1.58 | mg/Kg | 1 | 2.00 | 79 | 55.9 - 1 | 12.4 |
| Method Blank (1) QC Ba QC Batch: 90612 Prep Batch: 76879 | tch: 90612 | Date QC P | Analyzed: reparation: | 2012-04 2012-04 | 1-25 1-25 | | Anal Prep | yzed By: ared By: | tc tc |
| | | | - | | MDL | | | | |
| Parameter | Flag | | Cert | | Result | | Units | | RL |
| GRO | | | 1 | | <1.22 | | mg/Kg | | 2 |
| S | D 1 | 0 | Descript | TT::4a | Dilution | Spike | Percent | Reco | very |

| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
|------------------------------|------|------|--------|-------|----------|--------|----------|------------|
| Trifluorotoluene (TFT) | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 78.6 - 121 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.52 | mg/Kg | 1 | 2.00 | 76 | 55 - 120 |

Method Blank (1) QC Batch: 90687

| QC Batch: 90687 | | Date | Analyzed: | 2012-04 | 1-27 | | Anal | yzed By: tc |
|------------------------------|-------|------|-------------|---------|-----------|--------|----------|---------------|
| Prep Batch: 76942 | | QC P | reparation: | 2012-04 | 1-27 | | Prep | ared By: tc |
| | | | | | MDL | | | |
| Parameter | Flag | | Cert | | Result | | Units | \mathbf{RL} |
| Benzene | ····· | | 1 | | < 0.00470 | | mg/Kg | 0.02 |
| Toluene | | | 1 | | <0.00980 | | mg/Kg | 0.02 |
| Ethylbenzene | | | 1 | | < 0.00500 | | mg/Kg | 0.02 |
| Xylene | | | 1 | | < 0.0170 | | mg/Kg | 0.02 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | 1.83 | mg/Kg | 1 | 2.00 | 92 | 78 - 123.6 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.81 | mg/Kg | 1 | 2.00 | 90 | 55.9 - 112.4 |

| Report Date: May 4, 2012 114-6401363 | Work Order: 12042422 COG/White Oak State #1 | | | | Page Number: 13 of 27 Eddy Co., NM | | | | |
|---|--|--------|-------------|------------|---------------------------------------|--------|-----------------|---------------|--|
| Method Blank (1) QC Ba | tch: 90689 | | | | | | | | |
| QC Batch: 90689 | | Date A | Analyzed: | 2012-04-30 | | | Analyzed By: tc | | |
| Prep Batch: 76942 | | QC Pr | reparation: | 2012-04-27 | | | Prepar | ed By: tc | |
| | | | | | MDL | | | | |
| Parameter | Flag | | Cert | | Result | | Units | \mathbf{RL} | |
| GRO | | , | 1 | | <1.22 | | mg/Kg | 2 | |
| | | | | | | Spike | Percent | Recovery | |
| Surrogate | Flag | Cert | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotoluene (TFT) | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 78.6 - 121 | | |
| 4-Bromofluorobenzene (4-BFB) | | 1.77 | mg/Kg | 1 | 2.00 | 88 | 55 - 120 | | |

| Method Blank (1) | | QC E | Batch: 907 | 12 | | | | | |
|--------------------------|----------------|------|------------|-----------------|--------------------------|--------------------------|-------------------|---------------------|--------------------------|
| QC Batch: Prep Batch: | 90712 76960 | | | Date A QC Pi | Analyzed: reparation: | 2012-04-30 2012-04-30 | | Analy: Prepa | zed By: DA red By: DA |
| Parameter | | | Fla | Ag | Cert | MDL Result | | Units | RL |
| DRO | | | | | 1 | | <14.5 | | 50 |
| Surrogate | | Flag | Cert | Result | Units | Dilution | Spike n Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | | 109 | mg/Kg | 1 | 100 | 109 | 52 - 140.8 |

| Method Blank (1) | | QC Batch: 90866 | | | | | |
|--------------------------|----------------|-----------------|-----------------------------------|--------------------------|--------|------------------------------|---------------|
| QC Batch: Prep Batch: | 90866 77061 | | Date Analyzed: QC Preparation: | 2012-05-03 2012-05-01 | | Analyzed By: Prepared By: | AR AR |
| | | | | | MDL | | |
| Parameter | | Flag | Cert | | Result | Units | \mathbf{RL} |
| Chloride | | | | | <3.85 | mg/Kg | 4 |
Report Date: May 4, 2012 114-6401363

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

| QC Batch: 90553 | | | Date | Analyzed | d: 20 | 12-04-24 | | | Analy | zed By | : DA |
|--|---|-------------------------------------|---|---|---|---|--|--|--|---|--|
| Prep Batch: 76815 | | | QC | Preparatio | on: 20 | 12-04-24 | | | Prepa | ared By: | DA |
| | | | | | | | | | | | |
| | | | | LCS | | | Spike | Ma | atrix | | Rec. |
| Param | | F | C H | Result | Units | Dil. | Amount | Re | sult Rec | . I | Limit |
| DRÓ | | | 1 | 242 | mg/Kg | <u>; 1</u> | 250 | < | 14.5 97 | 62 | - 128.3 |
| Percent recovery is based on the | spike | resu | lt. RPD | is based | on the | spike and | spike dupli | cate re | sult. | | |
| | | | LCSD | | | Spike | Motrix | | Rec | | RDD |
| Param | F | С | Result | Units | Dil | Amount | Result | Rec | Limit | RPD | Limit |
| DRO | | 1 | 262 | mg/Kg | 1 | 250 | <14.5 | 105 | 62 - 128.3 | 8 | 20 |
| Percent recovery is based on the | spike | resu | lt. RPD | is based of | on the s | spike and | spike dupli | cate re | sult. | | |
| U U | л т ст | - | T COD | | | r - | | T CO | T COD | - | |
| Second mate | LCS | 5 | LCSL | , TT_3 | | נית | Spike | LCS | LCSD | н Т. | lec. |
| Surrogate | | , | 195 | 5 Uni | | <u></u> | Amount | 117 | | L/ | |
| n-Tricosane | | | | | 0 | | | | | | |
| n-Tricosane | | | | | | | | | | | |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 | CS-1) |) | Date | Analyzed | ł: 20 | 12-04-25 | | | Analy | zed By | : DA |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 | CS-1) |) | Date QC 1 | Analyzed | l: 20 on: 20 | 12-04-25 12-04-25 | | | Analy Prepa | vzed By | : DA DA |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 | .CS-1) |) | Date QC 1 | Analyzed Preparatic | l: 20 on: 20 | 12-04-25 12-04-25 | | | Analy Prepa | vzed By ared By: | : DA DA |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 | .CS-1 |) | Date QC 1 | Analyzed Preparatio | l: 20 on: 20 | 12-04-25 12-04-25 | Snike | M٤ | Analy Prepa | vzed By ared By: | : DA DA Rec. |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param | . CS-1] |) | Date QC I C F | Analyzed Preparatic LCS Result | l: 20 on: 20 Units | 12-04-25 12-04-25 Dil. | Spike Amount | Ma Re | Analy Prepa atrix sult Rec | vzed By: ared By: | : DA DA Rec. .imit |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO | . CS-1) |) F | Date QC I C F | Analyzed Preparatic LCS Result 261 | l: 20 on: 20 Units mg/Kg | 12-04-25 12-04-25 Dil. 1 | Spike Amount 250 | Ma Re | Analy Prepa atrix sult Rec 14.5 104 | vzed By: sred By: I 62 | DA DA Rec. Jimit - 128.3 |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the | CS-1 |) F resul | Date QC I C = F $\frac{1}{1}$ | Analyzed Preparatio LCS tesult 261 is based o | l: 20 on: 20 Units mg/Kg on the s | 12-04-25 12-04-25 Dil. 1 spike and | Spike Amount 250 spike duplic | Ma Re <1 cate res | Analy Prepa sult Rec 14.5 104 sult. | vzed By sred By: I 62 | DA DA Rec. Jimit - 128.3 |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the | CS-1 |) F resul | Date QC I <u>C</u> F I It. RPD | Analyzed Preparatio LCS Result 261 is based o | l: 20 on: 20 Units mg/Kg on the s | 12-04-25 12-04-25 Dil. 1 spike and | Spike Amount 250 spike duplic | Ma Re <2 cate res | Analy Prepa sult Rec 14.5 104 sult. | vzed By: ared By: I 62 | : DA DA Rec. Jimit - 128.3 |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the Param | ,CS-1) spike |) F resul | Date QC I <u>C</u> F It. RPD LCSD Result | Analyzed Preparatic LCS Result 261 is based of Units | l: 20 on: 20 Units mg/Kg on the s | 12-04-25 12-04-25 Dil. 1 spike and Spike | Spike Amount 250 spike duplic Matrix Besult | Ma Re cate res | Analy Prepa sult Rec 14.5 104 sult. Rec. Limit | rzed By: ared By: 1 62 BPD | E DA DA Rec. Jimit - 128.3 RPD Limit |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the Param DRO | ,CS-1) spike F |) F resul | Date QC 1 C F 1 It. RPD LCSD Result 271 | Analyzed Preparatio LCS Result 261 is based o Units mg/Kg | l: 20 on: 20 <u>Units</u> mg/Kg on the s Dil. 1 | 12-04-25 12-04-25 Dil. 1 spike and Spike Amount 250 | Spike Amount 250 spike duplic Matrix Result <14.5 | Ma Re cate res Rec. 108 | Analy Prepa atrix sult Rec 14.5 104 sult. Rec. Limit 62 - 128.3 | rzed By rred By: I 62 RPD 4 | DA DA Rec. Jimit - 128.3 RPD Limit 20 |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the | ,CS-1 j spike F |) F resul | Date QC I LCSD Result 271 | Analyzed Preparatio LCS tesult 261 is based o Units mg/Kg | l: 20 on: 20 Units mg/Kg on the s Dil. 1 | 12-04-25 12-04-25 Dil. 1 spike and Spike Amount 250 | Spike Amount 250 spike duplic Matrix Result <14.5 spike duplic | Ma Re cate res Rec. 108 | Analy Prepa sult Rec 14.5 104 sult. Rec. Limit 62 - 128.3 sult. | rzed By: II 62 RPD 4 | DA DA Rec. Jimit 128.3 RPD Limit 20 |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the | ,CS-1) spike F spike |) F resul | Date QC I t. RPD LCSD Result 271 t. RPD | Analyzed Preparatic LCS Result 261 is based o Units mg/Kg is based o | l: 20 on: 20 <u>Units</u> <u>mg/Kg</u> on the s <u>Dil.</u> 1 on the s | 12-04-25 12-04-25 Dil. 1 spike and Spike Amount 250 spike and | Spike Amount 250 spike duplic Matrix Result <14.5 spike duplic | Ma Re cate res <u>Rec.</u> 108 cate res | Analy Prepa sult Rec. 14.5 104 sult. Rec. Limit 62 - 128.3 sult. | rzed By: ared By: <u>1</u> 62 <u>RPD</u> 4 | E DA DA Rec. Jimit - 128.3 RPD Limit 20 |
| n-Tricosane Laboratory Control Spike (L QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the | CS-1 |) F resul | Date QC I 1 t. RPD LCSD Result 271 t. RPD LCSD | Analyzed Preparatio LCS Result 261 is based o Units mg/Kg is based o | $\frac{1}{20}$ on: 20 Units mg/Kg on the s Dil. 1 on the s | 12-04-25 12-04-25 Dil. 1 spike and Spike Amount 250 spike and | Spike Amount 250 spike duplic Matrix Result <14.5 spike duplic Spike | Ma Re cate res Rec. 108 cate res LCS | Analy Prepa sult Rec. 14.5 104 sult. Rec. Limit 62 - 128.3 sult. LCSD | rzed By: red By: <u>1</u> 62 <u>RPD</u> 4 | E DA DA Rec. Jimit - 128.3 RPD Limit 20 Rec. |
| n-Tricosane Laboratory Control Spike (I. QC Batch: 90586 Prep Batch: 76854 Param DRO Percent recovery is based on the Param DRO Percent recovery is based on the Surrogate | ,CS-1) spike F spike LCS Resul |) F resul resul S It | Date QC 1 C F 1 LCSD Result 271 t. RPD LCSD Result | Analyzed Preparatio LCS Result 261 is based o Units mg/Kg is based o Units | l: 20 on: 20 Units mg/Kg on the s Dil. 1 on the s | 12-04-25 12-04-25 Dil. 1 spike and Spike Amount 250 spike and Dil. | Spike Amount 250 spike duplic Matrix Result <14.5 spike duplic Spike Amount | Ma Re cate res 108 cate res LCS Rec. | Analy Prepa atrix sult Rec 14.5 104 sult. Rec. Limit 62 - 128.3 sult. LCSD Rec. | rzed By: II 62 RPD 4 FF Li | DA DA Rec. Jimit - 128.3 RPD Limit 20 Rec. |

| 114-6401363 | | - <u>.</u> | | Work COG/W | Order: /hite Oa | 12042422 uk State ≢ | -1 | | | Page Nu | mber: Eddy (| 15 of 27 Co., NM |
|---|-------------------------|---------------------------|---|--|---|--|--|---|--|---|--|--|
| Laboratory Control Spike | (LCS-1 | L) | | | | | | | | | | |
| QC Batch: 90611 | | | D | ate Anal | vzed: | 2012-04-2 | 25 | | | Ana | lvzed E | v: tc |
| Prep Batch: 76879 | | | Q | C Prepa | ration: | 2012-04-2 | 25 | | | Prep | pared B | y: tc |
| - | | | | | | | | | | | | |
| | | | | LCS | | | Snike | Ms | triv | | Ŧ | 2ec |
| Param | 1 | F | C | Result | Units | Dil. | Amount | Re | sult | Rec. | L | imit |
| Benzene | ······· | | 1 | 2.06 | mg/Ke | 1 | 2.00 | <0.0 | 0470 | 103 | 86.5 | - 124.9 |
| Toluene | | | 1 . | 2.04 | mg/Kg | g 1 | 2.00 | <0.0 | 00980 | 102 | 84.7 | - 122.5 |
| Ethylbenzene | | | 1 | 1.99 | mg/Ka | , 1 | 2.00 | <0.0 | 00500 | 100 | 79.4 | - 118.9 |
| Xylene | | | 1 | 5.95 | mg/Kg | , , 1 | 6.00 | <0. | 0170 | 99 | 79.5 | - 118.9 |
| Percent recovery is based on t | he spike | rest | ult. RP | D is bas | ed on th | e spike ar | d spike dup | licate | result. | | | |
| | | | LCSD | | | Spike | Matrix | | F | lec. | | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | \mathbf{L} | imit | RPD | Limit |
| Benzene | | 1 | 2.14 | mg/K | g 1 | 2.00 | < 0.00470 | 107 | 86.5 | - 124.9 | 4 | 20 |
| Foluene | | 2 | 2.10 | mg/Kg | g 1 | 2.00 | <0.00980 | 105 | 84.7 | - 122.5 | 3 | 20 |
| Ethylbenzene | | 1 | 2.03 | mg/Kg | g 1 | 2.00 | < 0.00500 | 102 | 79.4 | - 118.9 | 2 | 20 |
| | | | | - • | | | | | | | ~ | 00 |
| Kylene Percent recovery is based on th | he spike | res | 6.06 ult. RP | mg/Kg D is base | g 1 ed on th | 6.00 e spike ar | <0.0170 d spike dup | 101 licate | 79.5 result. | - 118.9 | 2 | 20 |
| Xylene Percent recovery is based on t Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB | he spike | ı resi | 6.06 ult. RP L' Re 1. 1. | mg/Ki D is base CS L sult R 61 65 | g 1 ed on th CSD esult 1.88 1.89 | 6.00 e spike ar Units mg/Kg mg/Kg | <0.0170 ad spike dup Dil. Amo 1 2.0 1 2.0 | 101 licate ke ount 00 00 | 79.5 result. LCS Rec. 80 82 | - 118.9 LCSD Rec. 94 94 | 2 F L 73.9 70.4 | 20 Rec. imit - 127 - 119.9 |
| Xylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 | he spike | 1 rest | 6.06 ult. RP Re 1. 1. 2. Q | mg/Ki D is base CS L sult R 61 65 65 C Prepar | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: | 6.00 e spike ar Units mg/Kg mg/Kg 2012-04-2 2012-04-2 | <0.0170 d spike dup Dil. Amo 1 2.0 1 2.0 55 | 101 licate ke bunt 00 00 | 79.5 result. LCS Rec. 80 82 | - 118.9 LCSD Rec. 94 94 94 Prep | F L 73.9 70.4 byzed B bared B | 20 Rec. imit - 127 - 119.9 y: tc y: tc |
| Xylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 | he spike | 1 rest | 6.06 ult. RP L Re 1. 1. 2 Q | mg/Ki D is base CS L sult R 61 65 C Prepar LCS | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: | 6.00 e spike ar Units mg/Kg mg/Kg 2012-04-2 2012-04-2 | <0.0170 d spike dup Dil. Amo 1 2.0 1 2.0 55 55 | 101 licate ke bunt 00 00 00 | 79.5 result. LCS Rec. 80 82 | - 118.9 LCSD Rec. 94 94 94 | 2 F L 73.9 70.4 | 20 Rec. imit - 127 - 119.9 y: tc y: tc y: tc |
| Xylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 | he spike | Trest | 6.06 ult. RP L. Re 1. 1. 2. Q | mg/Ki D is base CS L sult R 61 65 C Prepar LCS Result | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: | 6.00 e spike ar Units mg/Kg mg/Kg 2012-04-2 2012-04-2 2012-04-2 | <0.0170 d spike dup Dil. Amo 1 2.0 1 2.0 5 5 5 5 | 101 licate ke bunt 00 00 00 Ma Ra | 79.5 result. LCS Rec. 80 82 | - 118.9 LCSD Rec. 94 94 94 Rec. | 2 F L 73.9 70.4 Byzed B bared B | 20 Rec. imit - 127 - 119.9 y: tc y: tc tec. imit |
| Kylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) HBromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 Param GRO | he spike | Tress (L) | 6.06 ult. RP L. Re 1. 1. Q | mg/Ki D is base CS L sult R 61 65 C Prepar LCS Result 17.1 | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: | 6.00 e spike ar Units mg/Kg mg/Kg 2012-04-2 2012-04-2 s Dil. g 1 | <0.0170 Id spike dup Spi Dil. Amo 1 2.0 1 2.0 5 5 5 Spike Amount 20.0 | 101 licate ke bunt 00 00 00 M. Ra | 79.5 result. LCS Rec. 80 82 82 82 82 82 82 82 82 82 82 82 82 82 | - 118.9 LCSD Rec. 94 94 94 Rec. 86 | P L 73.0 70.4 byzed B bared B F L 68.3 | 20 Rec. imit - 127 - 119.9 y: tc y: tc y: tc kec. imit - 105.7 |
| Xylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 Param SRO Percent recovery is based on th | he spike) (LCS-1 | Tress (1) F ress | 6.06 ult. RP L ⁱ Re 1. 1. 2. 2. 2. 1. 1. 2. 2. 1. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. | mg/Ki D is base CS L sult R 61 65 4 C Prepar LCS Result 17.1 D is base | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: Unit mg/K ed on th | 6.00 e spike ar Units mg/Kg mg/Kg 2012-04-2 2012-04-2 s Dil. g 1 e spike an | <0.0170 d spike dup Spi Dil. Amo 1 2.0 1 2.0 5 5 5 5 5 5 5 5 5 5 5 5 5 | 101 licate ke punt 00 00 00 Mi Ra Licate | 79.5 result. LCS Rec. 80 82 82 82 82 82 82 82 82 82 82 82 82 82 | - 118.9 LCSD Rec. 94 94 94 Rec. 86 | 2 F L 73.9 70.4 byzed B bared B F L 68.3 | 20 Rec. imit - 127 - 119.9 y: tc y: tc y: tc kec. imit - 105.7 |
| Xylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 Param SRO Percent recovery is based on th | he spike | Tress | 6.06 ult. RP L ⁱ Re 1. 1. 1. D ⁱ Q C 1 ult. RP LCSD | mg/Ki D is base CS L sult R 61 65 C Prepar LCS Result 17.1 D is base | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: Unit. mg/K ed on th | 6.00 e spike an Units mg/Kg mg/Kg 2012-04-2 2012-04-2 s Dil. g 1 e spike an Spike | <0.0170 d spike dup Spi Dil. Amo 1 2.0 1 2.0 5 5 5 5 5 5 5 5 5 5 5 5 5 | 101 licate ke sunt 00 00 M. Ra Licate | 79.5 result. LCS Rec. 80 82 82 82 82 82 82 82 82 82 82 82 82 82 | - 118.9 LCSD Rec. 94 94 Anal Prep Rec. 86 ec. | 2 F L 73.9 70.4 byzed B bared B F L 68.3 | 20 Rec. imit) - 127 - 119.9 y: tc y: tc y: tc Rec. imit - 105.7 |
| Xylene Percent recovery is based on t. Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB Laboratory Control Spike QC Batch: 90612 Prep Batch: 76879 Param SRO Percent recovery is based on th Param | he spike | Tress F ress C | 6.06 ult. RP L ⁱ Re 1. 1. 1. D. Q C 1 ult. RP LCSD Result | mg/Ki D is base CS L sult R 61 65 C Prepar LCS Result 17.1 D is base Unit | g 1 ed on th CSD esult 1.88 1.89 yzed: ration: Unit mg/K ed on th s Dil. | 6.00 e spike an Units mg/Kg mg/Kg 2012-04-2 2012-04-2 s Dil. g 1 e spike an Spike Amoun | <0.0170 d spike dup Spi Dil. Amo 1 2.0 1 2.0 5 5 5 5 5 5 5 5 5 5 5 5 5 | 101 licate ke punt 00 00 M Ra c licate n Rec. | 79.5 result. LCS Rec. 80 82 82 82 82 82 82 82 82 82 82 82 82 82 | - 118.9 LCSD Rec. 94 94 Anal Prep Rec. 86 ec. mit | 2 F L 73.9 70.4 eyzed B bared B bared B F Li 68.3 RPD | 20 Rec. imit - 127 - 119.9 y: tc y: tc y: tc tec. imit - 105.7 RPD Limit |

| Report Date: May 4, 2012 114-6401363 | | | COG | ork O VWhi | rder: te Oa | 12042422 ak State # | ¥1 | | | | Page Nu | mber: Eddy (| 16 o Co., 1 |
|---|----------|-------------|------------------------|------------------|----------------|------------------------|----------|-----------------|-------|------------|-------------|--------------------|----------------|
| control spikes continued | | | | | | | | | | | | | |
| | | I | LCS | LCS | SD | | | \mathbf{Spik} | æ | LCS | LCSD | I | Rec. |
| Surrogate | | R | \mathbf{esult} | Res | ult | Units | Dil. | Amou | int | Rec. | Rec. | L | imit |
| | | I | CS | LCS | SD | | | Spik | æ | LCS | LCSD | 1 | Rec. |
| Surrogate | | R | esult | Rest | ılt | Units | Dil. | Amou | int | Rec. | Rec. | L | imit |
| Trifluorotoluene (TFT) | | 1 | L.91 | 1.9 | 7 | mg/Kg | 1 | 2.00 |) | 96 | 98 | 80 - | - 111 |
| 4-Bromofluorobenzene (4-BFB) | |] | 1.78 | 1.8 | 3 | mg/Kg | 1 | 2.00 | 0 | 89 | 92 | 66.4 | - 10 |
| Laboratory Control Spike (I QC Batch: 90687 Prep Batch: 76942 | .CS-1) | E G | Date A QC Pre | nalyze eparat | ed: ion: | 2012-04-2 2012-04-2 | 27 27 | | | | Ana Prep | lyzed E bared B | By: Sy: |
| _ | | - | LCS | | | | Sp | oike | Ma | atrix | | I | Rec. |
| Param | F | <u> </u> | Result | ; 1 | Units | Dil | Am | ount | Re | esult | Rec. | L | imit |
| Benzene | | 1 | 2.09 | n | ig/Ki | g l | 2 | .00 | <0.0 | 00470 | 104 | 86.5 | - 12 |
| Toluene | | 1 | 2.04 | n | ig/Kį | g 1 | 2 | .00 | <0. | 00980 | 102 | 84.7 | - 12 |
| Ethylbenzene Valene | | 1 | 2.00 | n | 1g/K | g 1 | 2. | .00 | <0.0 | 00500 | 100 | 70.5 | - 11 |
| Percent recovery is based on the | spike re | sult. RI | 2D is 1 | n Dased | on th | ne spike ar | nd spil | ke dupli | icate | result. | | 19.0 | - 11 |
| | | LCSD | · ··· | | | Snike | M | atriv | | Ţ | ?ec | | RI |
| Param | FC | Result | tur | uts | Dil. | Amount | Re | esult | Rec. | Ĺ | imit | RPD | Li |
| Benzene | 1 | 2.11 | mg | /Kg | 1 | 2.00 | <0. | 00470 | 106 | 86.5 | - 124.9 | 1 | 2 |
| Toluene | 1 | 2.06 | mg | /Kg | 1 | 2.00 | <0. | 00980 | 103 | 84.7 | - 122.5 | 1 | 2 |
| Ethylbenzene | 1 | 2.02 | mg | /Kg | 1 | 2.00 | <0. | 00500 | 101 | 79.4 | - 118.9 | 1 | 2 |
| Xylene | 1 | 6.02 | mg | /Kg | 1 | 6.00 | <0 | .0170 | 100 | 79.5 | - 118.9 | 1 | 2 |
| Descent recovery is based on the | spike re | sult. RH | PD is l | based | on tł | ne spike ar | nd spil | ke dupli | icate | result. | | | |
| recent recovery is based on the | | | ac | LCS | D | | | Spik | e | LCS | LCSD | F | Rec. |
| r ercent recovery is based on the | | I | | n | 1. | TT ** | TD 11 | | | | | | |
| Surrogate | | I Re | esult | Resi | ilt | Units | Dil. | Amou | int | Rec. | Rec. | L | imit |
| Surrogate Trifluorotoluene (TFT) | | I R 1 | | Rest | ılt 6 | Units mg/Kg | Dil. | Amou 2.00 | int | Rec. 87 | | L 73.9 | imit) - 12 |

Laboratory Control Spike (LCS-1)

| QC Batch: | 90689 | Date Analyzed: | 2012-04-30 | Analyzed By: | \mathbf{tc} |
|-------------|-------|-----------------|------------|--------------|---------------|
| Prep Batch: | 76942 | QC Preparation: | 2012-04-27 | Prepared By: | tc |

| Report Date: May 4, 2012 114-6401363 | | | (| Work O COG/Wh | rder: 1 ite Oal | 2042422 c State #1 | 1 | | | Page Nu | imber: 1 Eddy (| 17 of 27 Co., NM |
|---|--------------|--------------|---------------|------------------|-------------------------|-----------------------|-------------|----------|----------|---------|--------------------|-----------------------|
| | | | | | | | | | | | | |
| _ | | - | a | LCS | T T •, | 12.11 | Spike | M | atrix | | F | lec. |
| Param | | F, | <u> </u> | tesult | Units | | Amount | | esult | Rec. | L | imit |
| GRO | | · | 1 | 17.4 | mg/Kg | <u>g 1</u> | 20.0 | < | 1.22 | 87 | 68.3 | - 105.7 |
| Percent recovery is based on the | spike | e res | ult. RPD |) is based | on the | e spike and | d spike dup | licate | result. | | | |
| | | | LCSD | | | Spike | Matrix | | R | lec. | | RPD |
| Param | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Li | mit | RPD | Limit |
| GRO | | 1 | 15.2 | mg/Kg | 1 | 20.0 | <1.22 | 76 | 68.3 | - 105.7 | 14 | 20 |
| Percent recovery is based on the | spike | e res | ult. RPD | is based | on the | spike and | d spike dup | licate | result. | | | |
| | | | \mathbf{LC} | S LC | SD | | Sp | ike | LCS | LCSD | F | Rec. |
| Surrogate | | | Resi | ilt Res | ult | Units I | Dil. Amo | ount | Rec. | Rec. | L | imit |
| Trifluorotoluene (TFT) | | | 1.8 | 0 1.7 | 75 n | ng/Kg | 1 2.0 |)0 | 90 | 88 | 80 - | 111.2 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.6 | 9 1.6 | 64 n | ng/Kg | 1 2.0 |)0 | 84 | 82 | 66.4 | - 106.6 |
| Prep Batch: 76960 | | | | Preparati | ion: 2 | 012-04-30 | Spike | N | /atrix | Prepa | red By: | DA DA Rec. |
| Param | | F | CI | Result | Units | s Dil. | Amour | nt I | Result | Rec. | 1 | imit |
| DRO | | | 1 | 278 | mg/K | g 1 | 250 | | <14.5 | 111 | 62 | - 128.3 |
| Percent recovery is based on the | spike | res | ult. RPD | is based | on the | spike and | ł spike dup | licate 1 | esult. | _ | | |
| Demons | Ţ. | n | LCSD | Tinita | D:I | Spike | Matrix | Dee | t r | lec. | חחח | RPD Limit |
| DRO | r | <u> </u> | 280 | mg/Kg | <u>DII.</u> | 250 | <115 | 112 | 62 62 | 128.3 | 1 | 20 |
| Percent recovery is based on the | enike | | ult BPD | is based | $\frac{1}{0}$ on the | spike and | t spike dun | licate | - 02 - | 120.0 | | |
| Tercent recovery is based on the | - apire | . 103 | | 13 04304 | on me | spike and | | | court. | | _ | |
| G | LC | S | LCSI |) • 11- | . : 4 | Dil | Spike | LC | S 1 | LCSD | F | lec. |
| n Tricosone | 12 | <u>111</u> | 119 119 | | $\frac{111S}{/K\sigma}$ | <u></u> | Amount | | :. | 118 | 58.6 | $\frac{140.6}{140.6}$ |
| | | <u> </u> | | | /118 | | 100 | | <u> </u> | 110 | 00.0 | - 140.0 |
| Laboratory Control Spike (I | -CS-1 | L) | | | | | | | | | | |
| QC Batch: 90866 | | | Date | e Analyze | d: 20 | 012-05-03 | | | | Analy | zed By: | AR |
| Prep Batch: 77061 | | | QC | Preparati | on: 20 | 012-05-01 | | | | Prepa | red By: | AR |

continued ...

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| | | | C | OG/White | oak S | tate #1 | | | | Eddy | Co., N |
|--|---|------------------------------------|---|--|---|---|---|--|---|--|---|
| | | | | | | | | | | | |
| control spikes continued | | | | LCS | | | Spike | М | atrix | | Rec |
| Param | | \mathbf{F} | С | Result | Units | Dil. | Amount | c Re | esult l | Rec. | Limit |
| | | _ | | | | <u>.</u> | | | | | |
| D | | - | 0 | LCS | TT | Dil | Spike | M | atrix | D | Rec. |
| Chlorido | | F | <u> </u> | 2200 | $\frac{\text{Units}}{ma/ka}$ | <u></u> | Amount | | esuit 1 | <u>16</u> | $\frac{\text{Limit}}{95 11}$ |
| Demont recovery is based on t | | | | 2390 | ng/ng | ilio and a | 2000 | <u>`</u> | J.00 | 90 | 00 - 11 |
| rercent recovery is based on t | ne spike | resu | II. KPD | is based of | n the s | Jike and s | ріке апріс | ate rest | uit. | | |
| | | | LCSD | | | Spike | Matrix | | Rec. | | RPI |
| Param | F | C | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limi |
| Chloride | | | 2490 | mg/Kg | 1 | 2500 | <3.85 | 100 | 85 - 115 | 4 | 20 |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 | viked Sar | nple: | Date OC I | Analyzed: Preparation | 201: 1: 201 | 2-04-24 2-04-24 | | | Ana Pre | lyzed By pared By | y: DA |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 | viked Sar | nple: | Date QC I | Analyzed: Preparation MS | 2013 n: 2013 | 2-04-24 2-04-24 | Spike | Mat | Ana Prej rix | llyzed By pared By | y: DA 7: DA Rec. |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param | viked Sar | nple: F | Date QC H | Analyzed: Preparation MS esult | 2011 n: 2011 Units | 2-04-24 2-04-24 Dil. | Spike Amount | Mat Res | Ana Prej crix ult Re | lyzed By pared By c. | y: DA 7: DA Rec. Limit |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO | iked Sar | nple: F | $\frac{\text{Date}}{\text{QC I}}$ | Analyzed: Preparation MS esult 2340 n | 2011 n: 2011 Units ng/Kg | 2-04-24 2-04-24 Dil. 5 | Spike Amount 250 | Mat Res 221 | Ana Pre arix ult Re 10 5 | lyzed By pared By ec. 2 45 | y: DA y: DA Rec. Limit .5 - 12 |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t | he spike | resul | $\frac{C}{1}$ | Analyzed: Preparation MS esult 2340 n is based on | 201: n: 201: Units ng/Kg n the sp | 2-04-24 2-04-24 Dil. 5 Dike and s | Spike Amount 250 pike duplic | Mat Res 221 ate resi | Ana Pre ult Re 10 5 ult. | lyzed By pared By ec. 2 45 | y: DA 7: DA Rec. Limit 5.5 - 12 |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t | he spike | F resul | Date QC H <u>C</u> R <u>1</u> t. RPD MSD | Analyzed: Preparation MS esult 2340 n is based on | 201: n: 201: Units ng/Kg n the sp | 2-04-24 2-04-24 Dil. 5 Dike and s Spike | Spike Amount 250 pike duplic Matrix | Mat Res 221 ate rest | Ana Prej orix <u>ult Re</u> 10 5 ult. Rec. | lyzed By pared By ec. 2 45 | y: DA r: DA Rec. Limit .5 - 12 RPI |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t Param | he spike | F resul | Date QC H <u>C R</u> <u>1</u> It. RPD MSD Result | Analyzed: Preparation MS esult 2340 m is based on Units | 2011 n: 2011 Units ng/Kg n the sp Dil. | 2-04-24 2-04-24 Dil. 5 Dike and s Spike Amount | Spike Amount 250 pike duplic Matrix Result | Mat Res 221 ate resu Rec. | Ana Prej ult Re 10 5 ult. Rec. Limit | lyzed By pared By cc. 2 45 RPD | y: DA r: DA Rec. Limit .5 - 12 RPI Limi |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t Param DRO | he spike | F resul | Date QC I 1 2 It. RPD Result 2700 | Analyzed: Preparation MS esult 2340 n is based on Units mg/Kg | 2011 n: 2011 ng/Kg n the sp Dil. 5 | 2-04-24 2-04-24 Dil. 5 Dike and s Spike Amount 250 | Spike Amount 250 pike duplic Matrix Result 2210 | Mat Res 221 ate resu Rec. 196 | Ana Pre ult Re 10 5 ult. Rec. Limit 45.5 - 127 | lyzed By pared By cc. 2 45 RPD 7 14 | y: DA r: DA Rec. Limit .5 - 12 RPI Limi 20 |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t Param DRO Param DRO Param DRO Param DRO Percent recovery is based on t | he spike F 90 90 he spike | resul | Date QC H 1 t. RPD MSD Result 2700 t. RPD | Analyzed: Preparation MS esult 2340 m is based on Units mg/Kg is based on | $\begin{array}{c} 201\\ \text{m} & 201\\ \text{m} & 201\\ \text{m} & 1\\ \frac{\text{m}}{\text{s}} \\ \frac{\text{m}}{\text{s}} \\ \text{m} & 1\\ \frac{\text{m}}{\text{s}} \\ \frac{1}{\text{s}} \\ \frac{1}{$ | 2-04-24 2-04-24 Dil. 5 Dike and s Spike Amount 250 Dike and s | Spike Amount 250 pike duplic Matrix Result 2210 pike duplic | Mat Res 221 ate resu Rec. 196 ate resu | Ana Prej ult Re 10 5 ult. Rec. Limit 45.5 - 127 ult. | lyzed By pared By 2 45 <u>RPD</u> 7 14 | y: DA r: DA Rec. Limit .5 - 12 RPI Limi 20 |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t Param DRO Percent recovery is based on t | he spike F 90 90 he spike | F resul resul MS | Date QC I QC I 1 2 It. RPD MSD Result 2700 It. RPD MS | Analyzed: Preparation MS esult 2340 n is based on Units mg/Kg is based on D | 2011 n: 2011 ng/Kg n the sp Dil. 5 n the sp | 2-04-24 2-04-24 Dil. 5 Dike and s Amount 250 Dike and s | Spike Amount 250 pike duplic Matrix Result 2210 pike duplic Spike | Mat Res 221 ate resu Rec. 196 ate resu MS | Ana Pre ult Re 10 5 ult. <u>Rec.</u> Limit 45.5 - 127 ult. MSD | lyzed By pared By cc. 2 45 RPD 7 14 | y: DA r: DA Rec. Limit .5 - 12 RPI Limi 20 Rec. |
| Matrix Spike (MS-1) Sp QC Batch: 90553 Prep Batch: 76815 Param DRO Percent recovery is based on t Param DRO Percent recovery is based on t Surrogate | he spike F Q= Q= he spike I Re | F resul resul MS ssult | Date QC F QC F 1 1 t. RPD MSD Result 2700 t. RPD MS Resu | Analyzed: Preparation MS esult 2340 n is based on Units mg/Kg is based on D Ilt Un | 2011 n: 2011 ng/Kg n the sp Dil. 5 n the sp n the sp | 2-04-24 2-04-24 Dil. 5 Dike and s Amount 250 Dike and s Dil. | Spike Amount 250 pike duplic Matrix Result 2210 pike duplic Spike Amount | Mat Res 221 ate resu Rec. 196 ate resu MS Rec. | Ana Pre ult Re 10 5 ult. Limit 45.5 - 127 ult. MSD Rec. | lyzed By pared By 2 45 <u>RPD</u> 7 14 | r: DA r: DA Rec. Limit .5 - 12 RPI Limi 20 Rec. |

| 114-6401363 | | | (| COG/Wh | ite Oa | ak State #1 | <u> </u> | | | | Eddy (| Co., NM |
|--|----------|------|------------------------|-------------------------|--------------------|---------------------|-------------------|------------------|-----------|---------------|--------------|--------------------|
| Percent recovery is based on th | ie spike | rest | ult. RPC | is based | l on th | e spike and | l spike dı | plicate | result. | | | |
| Param | F | С | MSD Result | Units | Dil | Spike Amoun | Matr t Resu | x t Rec. | . 1 | Rec. Limit | RPD | RPD Limit |
| DRO | | 1 | 288 | mg/Kg | g 1 | 250 | 120 | 67 | 45. | .5 - 127 | 5 | 20 |
| Percent recovery is based on th | ie spike | rest | ult. RPD | is based | l on th | e spike and | l spike du | plicate 1 | result. | | | |
| | MS | 3 | MSI |) | | | Spike | М | S | MSD | I | Rec. |
| Surrogate | Resu | ılt | Resu | lt U | nits | Dil. | Amoun | t Re | ec. | Rec. | L | imit |
| n-Tricosane | 126 | 6 | 121 | mį | g/Kg | 1 | 100 | 12 | 26 | 121 | 45.4 | - 145.8 |
| rep Batch: 76879 | | | QC | Prepara MS | tion: | 2012-04-25 | Spike | Ma | atrix | Pre | pared B | y: tc Rec. |
| Param | I | F | C R | esult | Units | Dil. | Amour | t Re | sult | Rec. | \mathbf{L} | imit |
| Benzene | | | 1 | 56.8 | mg/K | g 50 | 50.0 | 3. | 918 | 106 | 69.3 | - 159.2 |
| Foluene | | | 1 | 108 | mg/K | g 50 | 50.0 | 45 | .884 | 124 | 68.7 | 7 - 157 |
| Sthylbenzene | | | 1 | 110 | mg/K_{i} | g 50 | 50.0 | 50. | 3205 | 119 | 71.6 | - 158.2 |
| Aylene Percent recovery is based on th | ne spike | res | ult. RPD | is based | $\frac{mg}{R}$ | g ou e spike and | 150 I spike du | 93. plicate r | 1734 | 113 | 70.8 | - 159.8 |
| · · · · · · · · · · · · · · · · · · · | | | MSD | | | Snike | Matrix | 1 | 1 | Rec | | RPD |
| Param | F | С | Result | Units | Dil. | Amount | Result | Rec. | L | imit | RPD | Limit |
| Benzene | | 1 | 56.9 | mg/Kg | 50 | 50.0 | 3.918 | 106 | 69.3 | - 159.2 | 0 | 20 |
| Foluene | | 1 | 101 | mg/Kg | 50 | 50.0 | 45.884 | 110 | 68.7 | 7 - 157 | 7 | 20 |
| Ethylbenzene | | 1 | 102 | mg/Kg | 50 | 50.0 | 50.3205 | 103 | 71.6 | - 158.2 | 8 | 20 |
| | | 1 | 247 | mg/Kg | 50 | 150 | 93.1734 | 102 | 70.8 | - 159.8 | 6 | 20 |
| Xylene | | rest | ult. RPD | is based | on th | e spike and | l spike du | plicate 1 | esult. | | | |
| Xylene Percent recovery is based on th | ie spike | | | S MS | SD | TT 14 | | pike | MS | MSD | F | lec. |
| Xylene Percent recovery is based on th | ie spike | | Mi Der | 14 D | 14 | | /1 1 | HOURT | nec. | nec. | L | umu |
| Xylene Percent recovery is based on th Surrogate Drifluorotoluene (TET) | ie spike | | | ult Res | sult | Units mg/Kg | 50 A | 50 | 82 | 80 | 71 / | . 122.0 |
| Xylene Percent recovery is based on th Surrogate Trifluorotoluene (TFT) 4 Bromefluerebengene (4 BED) | e spike | | M Res 40. | ult Res 9 44 | sult 1.3 | mg/Kg | 50 50 | 50 | 82 | 89 | 71.4 | - 133.9 |
| Xylene Percent recovery is based on th Surrogate Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) | e spike | | M Res 40. 53. | ult Res 9 44 2 55 | sult 1.3 5.3 | mg/Kg mg/Kg | 50 50 | 50 50 | 82 106 | 89 111 | 71.4 72.6 | - 133.9 - 144.1 |

| QC Batch: | 90612 | Date Analyzed: | 2012-04-25 | Analyzed By: | \mathbf{tc} |
|-------------|-------|-----------------|------------|--------------|---------------|
| Prep Batch: | 76879 | QC Preparation: | 2012-04-25 | Prepared By: | \mathbf{tc} |

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| Report Date: May 4, 2012 114-6401363 | | | | Wo COG | ork Orde /White | r: 120 Oak S | 042422 State #1 | | . <u>-</u> | | | Page Nui | mber: 5 Eddy C | 20 of 27 Co., NM |
|---|--------|--------------|------|-------------|--------------------|-----------------|--------------------|-----------|-------------|------------|--------|----------|-------------------|---------------------|
| Param | | F | С | MS Resul | t Ur | nits | Dil. | Sp Ame | ike ount | Mat Res | trix | Rec. | F L | lec. imit |
| GRO | | | 1 | 6340 | mg | /Kg | 50 | 50 | 00 | 5923 | 5.95 | 83 | 28.2 | - 157.2 |
| Percent recovery is based on th | ne spi | ke res | ult. | RPD is t | based on | the s | pike and | spike | e dupli | cate re | esult. | | | |
| | | | | MSD | | | Spike | Μ | a trix | |] | Rec. | | RPD |
| Param | | \mathbf{F} | С | Result | Units | Dil. | Amoun | t R | esult | Rec. | L | imit | RPD | Limit |
| GRO | Qr,Qs | Qr,Qs | 1 | 7790 | mg/Kg | 50 | 500 | 59 | 25.95 | 373 | 28.2 | - 157.2 | 20 | 20 |
| Percent recovery is based on th | ne spi | ke res | ult. | RPD is t | based on | the s | pike and | spike | dupli | cate re | sult. | | | |
| | | | | MS | MSI | 0 | | | Spi | ike | MS | MSD | F | lec. |
| Surrogate | | | | Result | t Resu | lt | Units | Dil. | Amo | ount | Rec. | Rec. | \mathbf{L} | imit |
| Trifluorotoluene (TFT) | | | | 51.2 | 51.0 |) 1 | ng/Kg | 50 | 5 | 0 | 102 | 102 | 75.5 | - 122.3 |
| 4-Bromofluorobenzene (4-BFB |) Q# | r Qs | r | 66.2 | 65.4 | 4 r | ng/Kg | 50 | 5 | D | 132 | 131 | 77.9 | - 122.4 |

Matrix Spike (MS-1) Spiked Sample: 295646

| QC Batch: | 90687 | Date Analyzed: | 2012-04-27 | Analyzed By: | tc |
|-------------|-------|-----------------|------------|--------------|---------------|
| Prep Batch: | 76942 | QC Preparation: | 2012-04-27 | Prepared By: | \mathbf{tc} |

| | | | MS | | | Spike | Matrix | | Rec. |
|--------------|--------------|---|--------|-------|------|--------|-----------|------|--------------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| Benzene | | 1 | 2.04 | mg/Kg | 1 | 2.00 | < 0.00470 | 102 | 69.3 - 159.2 |
| Toluene | | 1 | 2.05 | mg/Kg | 1 | 2.00 | < 0.00980 | 102 | 68.7 - 157 |
| Ethylbenzene | | 1 | 2.05 | mg/Kg | 1 | 2.00 | < 0.00500 | 102 | 71.6 - 158.2 |
| Xylene | | ı | 6.17 | mg/Kg | 1 | 6.00 | < 0.0170 | 103 | 70.8 - 159.8 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| | | | MSD | | | Spike | Matrix | | Rec. | | RPD |
|--------------|--------------|---|--------|-------|------|--------|-----------|------|--------------|-----|-------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Benzene | | 1 | 1.95 | mg/Kg | 1 | 2.00 | < 0.00470 | 98 | 69.3 - 159.2 | 4 | 20 |
| Toluene | | 1 | 1.96 | mg/Kg | 1 | 2.00 | <0.00980 | 98 | 68.7 - 157 | 4 | 20 |
| Ethylbenzene | | 1 | 2.01 | mg/Kg | 1 | 2.00 | < 0.00500 | 100 | 71.6 - 158.2 | 2 | 20 |
| Xylene | | 1 | 6.03 | mg/Kg | 1 | 6.00 | < 0.0170 | 100 | 70.8 - 159.8 | 2 | 20 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| | | | MS | MSD | | | Spike | MS | MSD | Rec. |
|------------------------------|-----|-----|--------|-------------------|-------|------|--------|------|------|--------------|
| Surrogate | | | Result | \mathbf{Result} | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | Qsr | Qsr | 1.30 | 1.95 | mg/Kg | 1 | 2 | 65 | 98 | 71.4 - 133.9 |
| 4-Bromofluorobenzene (4-BFB) | Qar | Qar | 1.27 | 1.86 | mg/Kg | 1 | 2 | 64 | 93 | 72.6 - 144.1 |

| Report Date: May 4, 2012 114-6401363 | | | | | | ork Orc 3/White | e Oak | 042422 State # | 1 | | | ł | age Nu | mber: 2 Eddy C | o., NM |
|---|---|---|---|--|---|--|---|--|--|---|---|--|--|---|---|
| Matrix Spil | ke (MS-1) | Spiked S | ample | e: 298 | 5426 | | | | | | | | | | |
| QC Batch: Prep Batch: | 90689 76942 | | | | Date A QC Pre | nalyzed | l: 20 on: 20 | 012-04-3 012-04-2 | 0 7 | | | | Ana Prep | lyzed B bared B | y: tc y: tc |
| Param | | | F | С | MS Resu | lt (| Units | Dil. | A | Spike mount | Ma Res | trix sult | Rec. | R Li | .ec. mit |
| GRO | | | | 1 | 16.5 | 6 m | ıg/Kg | 1 | | 20.0 | <1 | .22 | 82 | 28.2 | - 157.2 |
| Percent recov | verv is based o | on the spil | ce rest | ılt. I | RPD is | based o | n the s | spike an | d spi | ke dupli | cate re | esult. | | | |
| | | | 10 100 | | MSD | outou o | | Snik | e opr | Matrix | | Juin | Rec | | RPD |
| Param | | | F | С | Result | Units | i Dil | . Amoi | int | Result | Rec. | L | imit | RPD | Limit |
| GRO | | Qr,Qs | Qr,Qs | 1 | 2.24 | mg/K | g 1 | 20.0 |) | <1.22 | 11 | 28.2 | - 157.2 | 152 | 20 |
| Percent recor | very is based o | n the spil | ce resi | ılt. I | RPD is l | hased o | n the s | spike an | d sni | ke dunlie | nate re | sult | | | |
| l elcent lecov | very is based (| m une apri | te reat | 110. 1 | | Dascu U | n one a | spike an | u spr | ke uupin | .a.c 10 | suit. | | | |
| | | | | | MS | MSI |) | | | Spik | æ | MS | MSD | R | .ec. |
| - · | | | | | Result | Resu | lt U | Jnits | Dil. | Αποι | int | Rec. | Rec. | Li | mit |
| Surrogate | | | | | | | | | | | | | | | |
| Surrogate Trifluorotolu | ene (TFT) | | | | 2.21 | 2.00 | m | g/Kg | 1 | 2 | | 110 | 100 | 75.5 | - 122.3 |
| Surrogate Frifluorotolu 4-Bromofluor | ene (TFT) robenzene (4-I | 3FB) | | | 2.21 1.95 | 2.00 1.79 | m m | g/Kg g/Kg | 1 | 2 2 | | 110 98 | 100 90 | 75.5 77.9 | - 122.3 - 122.4 |
| Surrogate Trifluorotoluo 4-Bromofluor Matrix Spil QC Batch: Prep Batch: | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 | 3FB) Spiked S | ample | : 295 | 2.21 1.95 5160 Date Ar QC Prej | 2.00 1.79 nalyzed: paration |) m) m : 201 n: 201 | g/Kg g/Kg 12-04-30 12-04-30 | 1 | 2 2 | | 110 98 | 100 90 Analy Prepa | 75.5 77.9 zed By: red By: | - 122.3 - 122.4 DA DA |
| Surrogate Trifluorotolud 4-Bromofluor Matrix Spil QC Batch: Prep Batch: | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 | 3FB) Spiked S | ample | : 295 | 2.21 1.95 5160 Date Ar QC Prej MS | 2.00 1.79 nalyzed: paration |) m) m : 201 n: 201 | g/Kg g/Kg 12-04-30 12-04-30 | 1 | 2 2 Spike | М | 110 98 atrix | 100 90 Analy Prepa | 75.5 77.9 zed By: red By: | - 122.3 - 122.4 DA DA Rec. |
| Surrogate Trifluorotoluo 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 | 3FB) Spiked S | ample F | :: 29t | 2.21 1.95 5160 Date Ar QC Prej MS Resu | 2.00 1.79 nalyzed: paration | 0 m m : 201 n: 201 Units | g/Kg g/Kg 12-04-30 12-04-30 Dil. | 1 | 2 2 Spike Amount | MR | 110 98 atrix esult | 100 90 Analy Prepa Rec. | 75.5 77.9 zed By: red By: l | - 122.3 - 122.4 DA DA Rec. .imit |
| Surrogate Trifluorotoluo 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 | 3FB) Spiked S | ample F | :: 295 | 2.21 1.95 5160 Date Ar QC Prej MS Resu 32: | 2.00 1.79 nalyzed: paration S ilt 3 r | m m 201 n: 201 Units ng/Kg | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 | | 2 2 Spike Amount 250 | M R | 110 98 atrix esult 8.2 | 100 90 Analy Prepa Rec. 118 | 75.5 77.9 zed By: red By: l L 45. | DA DA DA DA Eec. imit 5 - 127 |
| Matrix Spil QC Batch: Prep Batch: Param DRO Percent recov | ene (TFT) robenzene (4-F ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S | ample F | :: 295 | 2.21 1.95 5160 Date Ar QC Prej MS Resu 323 RPD is 1 | 2.00 1.79 halyzed: paration 3 hlt 3 r based o | m m 201 n: 201 Units ng/Kg n the s | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and | 1 1 d spii | 2 2 Spike Amount 250 ke duplio | M R 2 cate re | 110 98 atrix esult 28.2 esult. | 100 90 Analy Prepa Rec. 118 | 75.5 77.9 zed By: red By: l L 45. | DA DA DA DA Rec. imit 5 - 127 |
| Surrogate Trifluorotolue 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO Percent recov | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S | ample F ce rest | :: 295 | 2.21 1.95 5160 Date Ar QC Prej MS Resu 32: RPD is I | 2.00 1.79 nalyzed: paration 3 1lt 3 r based o | m m m m 201 n: 201 n: 201 n: 201 n: 201 n: 201 n: 201 n: 201 n: 201 | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and Spike | 1 1 1 spil | 2 2 Spike Amount 250 ke duplic Matrix | M R 2 cate re | 110 98 atrix esult 8.2 sult. | 100 90 Analy Prepa Rec. 118 | 75.5 77.9 zed By: red By: l L 45. | DA DA DA DA Rec. imit 5 - 127 RPD |
| Surrogate Trifluorotolud 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO Percent recov | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S on the spik | ample F ce rest | C 1 Mi Res | 2.21 1.95 5160 Date Ar QC Prej MS Rest 323 RPD is I SD sult U | 2.00 1.79 nalyzed: paration 3 1lt 3 r based o Juits | m m m m m m m m m m m m m m m m m m m | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and Spike Amoun | 1 1 1 spil | 2 2 Amount 250 ke duplic Matrix Result | M R cate re Rec. | 110 98 atrix esult 8.2 sult. R Li | 100 90 Analy Prepa Rec. 118 Rec. imit | 75.5 77.9 zed By: red By: l 45. RPD | DA DA DA DA Rec. iimit 5 - 127 RPD Limit |
| Surrogate Trifluorotolue 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO Percent recov Param DRO | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S on the spik | ample F ce rest | :: 295 C 1 11t. H M: Res 32 | 2.21 1.95 5160 Date Ar QC Prej MS Resu 32: 32: 32: 32: 32: 32: 32: 32: 32: 32: | 2.00 1.79 nalyzed: paration 3 llt 3 r based o Units g/Kg | 0 m m : 201 n: 201 ns: 201 ng/Kg n the s Dil. 1 | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and Spike Amoun 250 | 1 1 d spil | 2 2 Spike Amount 250 ke duplic Matrix Result 28.2 | M R cate re Rec. 118 | 110 98 atrix esult 8.2 esult. R Li 45.5 | 100 90 Analy Prepa Rec. 118 cec. imit - 127 | 75.5 77.9 zed By: red By: I L 45., <u>RPD</u> 0 | DA DA DA DA Rec. imit 5 - 127 RPD Limit 20 |
| Surrogate Trifluorotolue 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO Percent recov Param DRO Percent recov | ene (TFT) robenzene (4-F ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S on the spik | ample F ce rest | C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 2.21 1.95 5160 Date Ar QC Prej MS Resu 325 RPD is I SD sult U 24 m RPD is I | 2.00 1.79 halyzed: paration 3 hat based o Juits g/Kg based o | 0 m m 201 n: 201 <u>Units</u> ng/Kg n the s <u>Dil.</u> 1 n the s | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and Spike and 250 spike and | 1 1 1 spil 1 spil | 2 2 Spike Amount 250 ke duplic Matrix Result 28.2 ke duplic | M R 2 cate re Rec. 118 cate re | 110 98 atrix esult 28.2 sult. R Li 45.5 sult. | 100 90 Analy Prepa <u>Rec.</u> 118 tec. imit - 127 | 75.5 77.9 zed By: red By: l L 45. RPD 0 | DA DA DA DA Sec. imit 5 - 127 RPD Limit 20 |
| Surrogate Trifluorotolud 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO Percent recov Param DRO Percent recov | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S on the spik F on the spik | ample F C C 1 te rest | :: 295 C 1 11t. H M: Res 32 11t. H | 2.21 1.95 5160 Date Ar QC Prej MS Resu 32: RPD is I SD Sult U 24 m RPD is I MSD | 2.00 1.79 halyzed: paration S ilt 3 r based o Units g/Kg based o | 0 m m 201 n: 201 n: 201 ns: 20 | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and Spike Amoun 250 spike and | 1 1 1 spil t spil d spil S | 2 2 Spike Amount 250 ke duplic Matrix Result 28.2 ke duplic pike | M R cate re Rec. 118 cate re MS | 110 98 atrix esult 8.2 sult. R Li 45.5 sult. | 100 90 Analy Prepa Rec. 118 cec. imit - 127 MSD | 75.5 77.9 zed By: red By: l L 45., RPD 0 R | DA DA DA DA Eec. iimit 5 - 127 RPD Limit 20 ec. |
| Surrogate Trifluorotolue 4-Bromofluor Matrix Spil QC Batch: Prep Batch: Prep Batch: Param DRO Percent recov Param DRO Percent recov | ene (TFT) robenzene (4-1 ke (MS-1) 90712 76960 very is based o | 3FB) Spiked S on the spik on the spik | ample F ce resu ce resu AS esult | 295 C 1 11t. H MS Res 32 11t. H I R | 2.21 1.95 5160 Date Ar QC Prej MS Resu Resu RPD is 1 SD Sult U 24 m RPD is 1 MSD tesult | 2.00 1.79 1.79 halyzed: paration 3 ilt 3 r based o Units <u>g/Kg</u> based o Uni | m m m m m m m m m m m m m m m m m m m | g/Kg g/Kg 12-04-30 12-04-30 Dil. 1 spike and 250 spike and Dil. | 1 1 1 spil 1 spil 1 spil S An | 2 2 Spike Amount 250 ke duplic Matrix Result 28.2 ke duplic pike nount | M R 2 cate re 118 cate re MS Rec | 110 98 atrix esult 8.2 sult. R Li 45.5 sult. | 100 90 Analy Prepa Rec. imit - 127 MSD Rec. | 75.5 77.9 zed By: red By: I L 45., RPD 0 R Li | DA DA DA DA Eec. <u>iimit</u> 20 ec. mit |

J

| Report Date: May 4, 2012 114-6401363 | Work Order: 12042422 COG/White Oak State #1 | | | | | | | Page Number: 22 of 27 Eddy Co., NM | | | 22 of 27 Co., NM | |
|---|--|--------------|----------|-----------------------|--------------------|------------------------|-----------|---------------------------------------|-----------------------|----------------|---------------------|----------|
| Matrix Spike (MS-1) Spi | ked Sa | mple | e: 29516 | 57 | | | | | | | | |
| QC Batch: 90866 Prep Batch: 77061 | | | Da QC | te Analyz Preparat | ed: 20 tion: 20 |)12-05-03)12-05-01 | | | | Analy Prepa | zed By red By: | AR AR |
| • | | | • | • | | | | | | - | | |
| | | | | MS | | | Spike | Ma | atrix | | F | lec. |
| Param | | \mathbf{F} | С | \mathbf{Result} | Units | Dil. | Amount | \mathbf{Re} | sult | Rec. | \mathbf{L} | imit |
| Chloride | | | | 2730 | mg/Kg | 5 | 2500 | 2 | 80 | 98 | 79.4 | - 120.6 |
| Percent recovery is based on th | e spik | e res | ult. RP | D is based | l on the | spike and | spike dup | licate r | esult. | | | |
| | | | MSD | | | Spike | Matrix | | Re | c. | | RPD |
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Lin | nit | RPD | Limit |
| Chloride | | | 2810 | mg/Kg | 5 | 2500 | 280 | 101 | 79.4 - | 120.6 | 3 | 20 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Calibration Standards

Standard (CCV-3)

| QC Batch: | 90553 | | | Date | Analyzed: | 2012-04-24 | | Analy | zed By: DA |
|-----------|-------|----|------|------------------|-----------|------------|----------|----------|------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | Fla | ıg | Cert | \mathbf{Units} | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | | 1 | mg/Kg | 250 | 253 | 101 | 80 - 120 | 2012-04-24 |

Standard (CCV-4)

| QC Batch: | 90553 | | | Date | Analyzed: | 2012-04-24 | | Analy | zed By: DA |
|-----------|-------|---|------|-------|-----------|------------|----------|----------|------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | Fla | g | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | | 1 | mg/Kg | 250 | 257 | 103 | 80 - 120 | 2012-04-24 |

Standard (CCV-2)

| QC Batch: | 90586 | | | Date . | Analyzed: | 2012-04-25 | | Analy | zed By: DA |
|-----------|-------|------|------|--------|-----------|------------|----------|----------|------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | | 1 | mg/Kg | 250 | 272 | 109 | 80 - 120 | 2012-04-25 |

Standard (CCV-3)

| QC Batch: | 90586 | | | Date . | Analyzed: | 2012-04-25 | | Analyzed By: DA | | |
|-----------|-------|------|------|--------|-----------|------------|----------|-----------------|------------|--|
| | | | | | CCVs | CCVs | CCVs | Percent | Dete | |
| | | | | | Irue | rouna | Percent | Recovery | Date | |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | |
| DRO | | | 1 | mg/Kg | 250 | 250 | 100 | 80 - 120 | 2012-04-25 | |

| Report Date: May 4, 2 114-6401363 | - Weitz | Wo COG | rk Order: 1 /White Oak | Page Number: 24 of 27 Eddy Co., NM | | | | |
|--------------------------------------|---------|-----------|---------------------------|---------------------------------------|----------|----------|----------|-------------|
| Standard (CCV-1) | | | | | | | | |
| QC Batch: 90611 | | | Date An | alyzed: 20 | 12-04-25 | | Anal | yzed By: tc |
| | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | 1 | mg/kg | 0.100 | 0.0925 | 92 | 80 - 120 | 2012-04-25 |
| Toluene | | 1 | mg/kg | 0.100 | 0.0912 | 91 | 80 - 120 | 2012-04-25 |
| Ethylbenzene | | 1 | mg/kg | 0.100 | 0.0883 | 88 | 80 - 120 | 2012-04-25 |
| Xylene | | 11 | mg/kg | 0.300 | 0.266 | 89 | 80 - 120 | 2012-04-25 |

Standard (CCV-2)

| QC Batch: | 90611 | | | Date An | alyzed: 20 | 12-04-25 | | Analyzed By: tc | | | |
|-------------|-------|------|------|---------|------------|----------|----------|-----------------|------------|--|--|
| | | | | | CCVs | CCVs | CCVs | Percent | | | |
| | | | | | True | Found | Percent | Recovery | Date | | |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | | |
| Benzene | | | 1 | mg/kg | 0.100 | 0.104 | 104 | 80 - 120 | 2012-04-25 | | |
| Toluene | | | 1 | mg/kg | 0.100 | 0.105 | 105 | 80 - 120 | 2012-04-25 | | |
| Ethylbenzer | ie | | 1 | mg/kg | 0.100 | 0.0991 | 99 | 80 - 120 | 2012-04-25 | | |
| Xylene | | | 1 | mg/kg | 0.300 | 0.295 | 98 | 80 - 120 | 2012-04-25 | | |

Standard (CCV-1)

| QC Batch: | 90612 | | | Date | Analyzed: | 2012-04-25 | | Ana | lyzed By: tc |
|-----------|-------|------|------|-------|-----------|------------|----------|----------|--------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | | 1 | mg/Kg | 1.00 | 1.07 | 107 | 80 - 120 | 2012-04-25 |

Standard (CCV-2)

| QC Batch: | 90612 | | | Date | Analyzed: | 2012-04-25 | | Ana | lyzed By: tc |
|-----------|-------|------|------|-------|--------------|---------------|-----------------|---------------------|--------------|
| D | | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | | 1 | mg/Kg | 1.00 | 1.18 | 118 | 80 - 120 | 2012-04-25 |

| Report Date: May 4, 114-6401363 | 2012 | | Wor COG/ | rk Order: 1 White Oak | Page Number: 25 of 27 Eddy Co., NM | | | |
|------------------------------------|------|------|-------------|--------------------------|---------------------------------------|----------|----------|-------------|
| Standard (CCV-1) | | | | | | | | |
| QC Batch: 90687 | | | Date An | alyzed: 20 | 12-04-27 | | Anal | yzed By: tc |
| | | | | CCVs | \mathbf{CCVs} | CCVs | Percent | |
| | | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | 1 | mg/kg | 0.100 | 0.108 | 108 | 80 - 120 | 2012-04-27 |
| Toluene | | I | mg/kg | 0.100 | 0.106 | 106 | 80 - 120 | 2012-04-27 |
| Ethylbenzene | | 1 | mg/kg | 0.100 | 0.103 | 103 | 80 - 120 | 2012-04-27 |
| Xylene | | 1 | mg/kg | 0.300 | 0.309 | 103 | 80 - 120 | 2012-04-27 |

Standard (CCV-2)

| QC Batch: | 90687 | | | Anal | Analyzed By: tc | | | | |
|-------------|-------|------|------|-------|-----------------|---------------|-----------------|---------------------|------------|
| | | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | | 1 | mg/kg | 0.100 | 0.110 | 110 | 80 - 120 | 2012-04-27 |
| Toluene | | | 1 | mg/kg | 0.100 | 0.107 | 107 | 80 - 120 | 2012-04-27 |
| Ethylbenzer | e | | 1 | mg/kg | 0.100 | 0.102 | 102 | 80 - 120 | 2012-04-27 |
| Xylene | | | 1 | mg/kg | 0.300 | 0.309 | 103 | 80 - 120 | 2012-04-27 |

Standard (CCV-1)

| QC Batch: | 90689 | | | Date | Analyzed: | 2012-04-30 | | Ana | lyzed By: tc |
|-----------|-------|------|------|-------|-----------|------------|----------|----------|--------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | H | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | | 1 | mg/Kg | 1.00 | 1.05 | 105 | 80 - 120 | 2012-04-30 |

Standard (CCV-2)

| QC Batch: | 90689 | | | Date | Analyzed: | 2012-04-30 | | Ana | lyzed By: tc |
|-----------|-------|------|------|-------|-----------|------------|----------|----------|--------------|
| | | | | | CCVs | CCVs | CCVs | Percent | _ |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | | 1 | mg/Kg | 1.00 | 1.01 | 101 | 80 - 120 | 2012-04-30 |

| Report Date: May 4, 2012 114-6401363 | | | C | Work Orde OG/White | er: 12042422 Oak State #1 | | Page Number: 26 of 27 Eddy Co., NM | | | | |
|---|--------|------|-------|-----------------------|------------------------------|-----------------------------|---------------------------------------|------------------|--|--|--|
| Standard (| CCV-2) | | | | | | | | | | |
| QC Batch: | 90712 | | Date | Analyzed: | 2012-04-30 | | Analy | zed By: DA | | | |
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed | | | |
| DRO | | 1 | mg/Kg | 250 | 271 | 108 | 80 - 120 | 2012-04-30 | | | |
| QC Batch: | 90712 | | Date | Analyzed: | 2012-04-30 | | Analy | zed By: DA | | | |
| | | | | CCVs | CCVs Found | CCVs Percent | Percent | Data | | | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | | | |
| DRO | | 1 | mg/Kg | 250 | 280 | 112 | 80 - 120 | 2012-04-30 | | | |
| Standard (| CCV-1) | | | | | | | | | | |
| QC Batch: | 90866 | | Date | Analyzed: | 2012-05-03 | | Analy | zed By: AR | | | |

| | | | | CCVs | CCVs Faund | CCVs Democrat | Percent | Data |
|----------|------|------|-------|-------|---------------|------------------|----------|------------------|
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Date Analyzed |
| Chloride | | | mg/Kg | 100 | 100 | 100 | 85 - 115 | 2012-05-03 |

Standard (CCV-2)

| QC Batch: | 90866 | | | Date A | nalyzed: | 2012-05-03 | | Analy | zed By: AR |
|-----------|-------|------|------|--------|----------|---------------|-----------------|----------|------------|
| | | | | | CCVs | CCVs Found | CCVs Percent | Percent | Data |
| Daram | | Flor | Cort | Unite | Cone | Conc | Bacovary | Limite | Analyzad |
| | | Tiag | Oert | | 100 | 100 | 10000019 | Diffito | Allayzed |
| Chloride | | | | mg/Kg | 100 | 100 | 100 | 85 - 115 | 2012-05-03 |

Work Order: 12042422 COG/White Oak State #1 Page Number: 27 of 27 Eddy Co., NM

Appendix

Report Definitions

NameDefinitionMDLMethod Detection LimitMQLMinimum Quantitation LimitSDLSample Detection Limit

Laboratory Certifications

| | Certifying | Certification | Laboratory |
|---|------------|---------------------|---------------|
| С | Authority | Number | Location |
| - | NCTRCA | WFWB384444Y0909 | TraceAnalysis |
| - | DBE | VN 20657 | TraceAnalysis |
| - | HUB | 1752439743100-86536 | TraceAnalysis |
| - | WBE | 237019 | TraceAnalysis |
| 1 | NELAP | T104704392-11-3 | Midland |

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

| Ar | nalvs | sis | Re | ea | U | est of C | hain of Cust | odv l | Re | ec | 0 | rd | | | | | ····- | | | <u>۽</u> | PAG | E: | L | | OF: | |
|--------------------|----------------|------------|--------|------|-------------------------|--|--|-----------|------------|-----------|-------------------|--------------|-----------|------------|-----------------|--------------------|---------------|-----------|-------------|--------------------------|------------------|---------------|-----------------------|-------------------------|---------------------------|---------------|
| | | | | | | | | | | | | | | - | | | | (Ci | ۸۱ ircle | IALY or Sp | SIS I pecil | REQI fy Me | JEST athod | I No. |) | |
| | | | | | | TETR 1910 N. B Midland, 7 (432) 682-456 | A TECH ig Spring St. Texas 79705 59 • Fax (432) 682-3946 | | | | | | | | b (Ext. to C35) | d Cr Pb Hg Se | d Vr Pd Hg Se | | | | | | | | SUL | |
| | ME: | | | | | SITE MANA | GER: | NERS | T | P | RES | ERVA | TIVE D | | | Ba C | Ba C | | | 60/624 270/625 | | | | | Ha st | |
| PROJECT N | 10136 | . <i>ک</i> | PI | ROJE | ECT | NAME: | State #1 | CONTAIL | N. | | | T | | | i N | s Ag As | s Ag As | Volatiles | | 8240/82 i Vol 8 | 608 | 8 | | (Air) | tos) s/Catio | |
| LAB I.D. NUMBER | DATE | TIME | MATRIX | COMP | GRAB | E SAN | ALL CONM IPLE IDENTIFICATION | NUMBER OF | FILTERED (| НСГ | HN03 | ICE | NONE | BTEX 8021B | PAH 8270 | RCRA Meta | TCLP Meta | TCLP Semi | RCI | GC.MS Vol. GC.MS Serr | PCB's 8080 | Pest. 808/6 | Chloride Gamma Spe | Alpha Beta | PLM (Asbes Maior Anior | |
| 295157 | 4/18 | | 5 | | × | AH-1 | 3-3.5 | 1 | | | ľ | x | | X | 4 | | | | | | | | \Box | Π | | L |
| 158 | | | | | 1 | · | 4-4.5' | | | | | | | | | | | | | | | | | | | |
| 159 | | | | | | | 5-5.5 | | | | | | | | | | | | | | | | | | | |
| 160 | | | Ŷ | ļ | $\overline{\mathbf{V}}$ | | 6-2.5 | ĺ. | | | | / | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | $\downarrow \downarrow$ | | \downarrow |
| | | | | | _ | <u> </u> | | | | | | \downarrow | | | - | $\left - \right $ | | ļ | | | - | | | $\downarrow \downarrow$ | | ļ |
| | | | | | | ····· | | | | | _ | | | | 1 | | | <u> </u> | | _ | | | _ | \square | - | |
| | | | + | | + | | | | | | | | | ┝╌┠╴ | - | | _ | - | | - | $\left \right $ | | | \square | | ╞ |
| | | | | | + | | | | | | _ | ╞ | + | ┝╌┠╴ | | | + | | \square | | $\left \right $ | | + | $\left \right $ | + | - |
| RELANDISHED | BY: (Signatur | e) | | | | Data ufzeft2 | PRECEIVED BY (Signature) | | | De | | 12 | Ha | | SA | MPLE | DIBY: | (Print | & Init | ial) | | | | Dat | e: | 5 |
| RELINGUISHED | BY: (Signatur | e) | | | | Date: | RECEIVED BY (Signature) | | | Da Tic | ne: te: ne: | <u>[]</u> | _2_ | | SA F | | SHIP | PED E | 3Y: (Ci | rcie) 3US | | | 1 | AIRBII | e: | |
| RELINQUISHED | BY: (Signature | e) | | | | Date: Time: | RECEIVED BY: (Signature) | | | Da Tin | te: | | | | | IRA T | ECH C | ERED | | JPS ERSOI | N: | | | OTHEI | २: Tesuits | by: |
| | and | STATE | x | РНС | ONE: | ZIP: | _ RECEIVED BY: (Signature) | TIN | 1E: | | | | | | | IL | e | Ta | | אהע פ | 2 | | | F | IUSH C luthori: Yes | iharg zed: |
| SAMPLE CONDIT | TION WHEN F | ECEIVED | ; | | | REMARKS: | 1 | 7 | <u> </u> | | 70 | 11 | | | 4 | | | | | | | | | | | |

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Summary Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX 79705

Report Date: May 29, 2012

Work Order: 12052116

Project Location:Eddy Co., NMProject Name:COG/White Oak State #1Project Number:114-6401363

| | | | Date | Time | Date |
|--------|------------------------------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 298016 | Trench-1 6' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298017 | Trench-1 8' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298018 | Trench-1 10' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298019 | Bottom Hole 5' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298020 | Trench-2 4' (AH-4 First Spill) | soil | 2012-05-18 | 00:00 | 2012-05-21 |

| | | E | BTEX | TPH DRO - NEW | TPH GRO | |
|---|----------|----------|--------------|---------------|---------|---------|
| | Benzene | Toluene | Ethylbenzene | Xylene | DRO | GRO |
| Sample - Field Code | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) | (mg/Kg) |
| 298019 - Bottom Hole 5' (AH-1 Second Spill) | < 0.0200 | < 0.0200 | < 0.0200 | < 0.0200 | <50.0 | <2.00 |
| 298020 - Trench-2 4' (AH-4 First Spill) | < 0.0200 | < 0.0200 | < 0.0200 | < 0.0200 | <50.0 | <2.00 |

Sample: 298016 - Trench-1 6' (AH-1 Second Spill)

| Param | Flag | Result | Units | RL |
|----------|------|--------|-------|----|
| Chloride | | 24.9 | mg/Kg | 4 |

Sample: 298017 - Trench-1 8' (AH-1 Second Spill)

| Param | Flag | Result | Units | RL |
|----------|------|--------|-------|----|
| Chloride | | <20.0 | mg/Kg | 4 |

Sample: 298018 - Trench-1 10' (AH-1 Second Spill)

| Report Date: May 2 | 9, 2012 | Work Order: 12052116 | Page I | Number: 2 of 2 |
|--------------------|---------|----------------------|--------|----------------|
| Param | Flag | Result | Units | RL |
| Chloride | | <20.0 | mg/Kg | 4 |

Sample: 298020 - Trench-2 4' (AH-4 First Spill)

| Param | Flag | Result | Units | RL |
|----------|------|--------|-------|----|
| Chloride | | 781 | mg/Kg | 4 |

,



Certifications

WBE HUB NCTRCA DBE NELAP DoD LELAP Kansas Oklahoma ISO 17025

Analytical and Quality Control Report

Ike Tavarez Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: May 29, 2012

Work Order: 12052116

Project Location:Eddy Co., NMProject Name:COG/White Oak State #1Project Number:114-6401363

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

| | | | Date | Time | Date |
|--------|------------------------------------|--------|------------|-------|------------|
| Sample | Description | Matrix | Taken | Taken | Received |
| 298016 | Trench-1 6' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298017 | Trench-1 8' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298018 | Trench-1 10' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298019 | Bottom Hole 5' (AH-1 Second Spill) | soil | 2012-05-17 | 00:00 | 2012-05-21 |
| 298020 | Trench-2 4' (AH-4 First Spill) | soil | 2012-05-18 | 00:00 | 2012-05-21 |

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 17 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

lan fotura

Dr. Blair Leftwich, Director Dr. Michael Abel, Project Manager

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Case Narrative

Samples for project COG/White Oak State #1 were received by TraceAnalysis, Inc. on 2012-05-21 and assigned to work order 12052116. Samples for work order 12052116 were received intact at a temperature of 3.8 C.

Samples were analyzed for the following tests using their respective methods.

| | | Prep | Prep | \mathbf{QC} | Analysis |
|----------------------|--------------|------------------------|---------------------|---------------|---------------------|
| Test | Method | Batch | Date | Batch | Date |
| BTEX | S 8021B | 77584 | 2012-05-22 at 08:20 | 91448 | 2012-05-22 at 09:19 |
| Chloride (Titration) | SM 4500-Cl B | 77707 | 2012-05-21 at 10:21 | 91596 | 2012-05-29 at 10:23 |
| TPH DRO - NEW | S 8015 D | 77583 | 2012-05-22 at 08:20 | 91445 | 2012-05-22 at 09:20 |
| TPH GRO | S 8015 D | 77584 | 2012-05-22 at 08:20 | 91449 | 2012-05-22 at 09:45 |

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 12052116 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: May 29, 2012 114-6401363

Analytical Report

Sample: 298016 - Trench-1 6' (AH-1 Second Spill)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland Chloride (Titration) 91596 77707 | Analytic Date An Sample I | al Method: alyzed: Preparation: | SM 4500-Cl B 2012-05-29 2012-05-21 | Prep Method: Analyzed By: Prepared By: | N/A AR AR |
|--|---|---------------------------------|---------------------------------------|--|--|-----------------|
| D (| | a 1 | RL | TT 1 4 | | ы |
| Parameter | Flag | Cert | Result | Units | Dilution | RL |
| Chloride | | | 24.9 | mg/Kg | 5 | 4.00 |

Sample: 298017 - Trench-1 8' (AH-1 Second Spill)

| Chloride | υ | | <20.0 | mg/Kg | 5 | 4.00 |
|-------------|----------------------|----------|--------------|--------------|--------------|------|
| Parameter | Flag | Cert | RL Result | Units | Dilution | RL |
| Prep Batch: | 77707 | Sample I | Preparation: | 2012-05-21 | Prepared By: | AR |
| QC Batch: | 91596 | Date An | alyzed: | 2012-05-29 | Analyzed By: | AR |
| Analysis: | Chloride (Titration) | Analytic | al Method: | SM 4500-Cl B | Prep Method: | N/A |
| Laboratory: | Midland | | | | | |

Sample: 298018 - Trench-1 10' (AH-1 Second Spill)

| Laboratory: | Midland | | | | | |
|-------------------|----------------------|----------|---------------|--------------|--------------|---------------|
| Analysis: | Chloride (Titration) | Analytic | al Method: | SM 4500-Cl B | Prep Method: | N/A |
| QC Batch: | 91596 | Date An | alyzed: | 2012-05-29 | Analyzed By: | AR |
| Prep Batch: 77707 | | Sample 1 | Preparation: | 2012-05-21 | Prepared By: | ed By: AR |
| | | | \mathbf{RL} | | | |
| Parameter | Flag | Cert | Result | Units | Dilution | \mathbf{RL} |
| Chloride | U | | <20.0 | mg/Kg | 5 | 4.00 |

| Report Date: May 29, 2012 | Work Order: 12052116 | Page Number: 5 of 17 |
|---------------------------|------------------------|----------------------|
| 114-6401363 | COG/White Oak State #1 | Eddy Co., NM |

Sample: 298019 - Bottom Hole 5' (AH-1 Second Spill)

| Laboratory: Midland Analysis: BTEX QC Batch: 91448 | | Analytica Date Ana | al Method alyzed: | : S 8021 2012-0 | 1B)5-22 | | Prep Met Analyzed Propored | bod: S 5035 By: AG Bw: AC |
|--|------|-----------------------|----------------------|--------------------|-------------|--------|----------------------------------|---------------------------------|
| Prep Batch: 77384 | | Sample F | reparatio | n: 2012-0 | 10-22 | | Prepared | Dy: AG |
| | | | | \mathbf{RL} | | | | |
| Parameter | Flag | Cert | | Result | Ui | nits | Dilution | \mathbf{RL} |
| Benzene | υ | 1 | | < 0.0200 | mg/ | Kg | 1 | 0.0200 |
| Toluene | υ | 1 | | < 0.0200 | mg/ | ΊKg | 1 | 0.0200 |
| Ethylbenzene | U | 1 | | < 0.0200 | mg/ | ΊKg | 1 | 0.0200 |
| Xylene | U | 1 | | <0.0200 | mg/ | Kg | 1 | 0.0200 |
| | | a i | | T T '. | | Spike | Percent | Recovery |
| Surrogate | Flag | g Cert | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | | 2.29 | mg/Kg | 1 | 2.00 | 114 | 75 - 135.4 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.78 | mg/Kg | 1 | 2.00 | 89 | 63.6 - 158.9 |

Sample: 298019 - Bottom Hole 5' (AH-1 Second Spill)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH DRO - 91445 77583 | NEW | | Ana Dat Sarr | lytical M e Analyz pple Prep | lethod: ed: aration: | S 8015 1 2012-05 2012-05 | D -22 -22 | Prep Me Analyze Prepare | ethod: N d By: A d By: A | ∛/A \G \G |
|--|--|---------------|-------|-----------------------|------------------------------------|----------------------------|--------------------------------|-----------------|-------------------------------|--------------------------------|-----------------|
| | | | | | | RL | | | | | |
| Parameter | | \mathbf{Fl} | ag | Cert | | Result | | Units | Dilution | | \mathbf{RL} |
| DRO | | | | 1 | | <50.0 | | mg/Kg | 1 | Ę | 50.0 |
| Surrogate | Fla | ıg C | ert R | esult | Units | Dilu | tion | Spike Amount | Percent Recovery | Recove Limit | ery S |
| n-Tricosane | | | | 92.2 | mg/Kg | - | | 100 | 92 | 49.3 - 18 | 57.5 |

Sample: 298019 - Bottom Hole 5' (AH-1 Second Spill)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 91449 77584 | | Analytical M Date Analyz Sample Prep | ethod: 5 ed: 5 aration: 5 | S 8015 D 2012-05-22 2012-05-22 | | Prep Method: Analyzed By: Prepared By: | S 5035 AG AG |
|--|--------------------------------------|------|--|---------------------------------|--------------------------------------|-------|--|--------------------|
| | | | | R | L | | | |
| Parameter | | Flag | Cert | Resu | lt | Units | Dilution | \mathbf{RL} |
| GRO | | U | 1 | <2.0 | 0 | mg/Kg | 1 | 2.00 |

.

| Report Date: May 29, 2012 114-6401363 | | C | Page Number: 6 of 17 Eddy Co., NM | | | | | |
|--|------|----------|--------------------------------------|-------|----------|-----------------|---------------------|--------------------|
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | <u> </u> | 2.12 | mg/Kg | 1 | 2.00 | 106 | 58.5 - 155.1 |
| 4-Bromofluorobenzene (4-BFB) | | | 1.80 | mg/Kg | 1 | 2.00 | 90 | 45.1 - 162.2 |

Sample: 298020 - Trench-2 4' (AH-4 First Spill)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland BTEX 91448 77584 | | | Analytica Date Ana Sample F | al Method alyzed: Preparatio | l: S 802 2012-(on: 2012-(| 1B)5-22)5-22 | | Prep Met Analyzed Prepared | thod: By: By: | S 5035 AG AG |
|--|-----------------------------------|------|------|-----------------------------------|------------------------------------|----------------------------------|----------------------|-----------------|----------------------------------|-------------------------|--------------------|
| | | | | | | \mathbf{RL} | | | | | |
| Parameter | | Flag | S | Cert | | Result | U | nits | Dilution | | \mathbf{RL} |
| Benzene | | U | | 1 | | < 0.0200 | mg/ | 'Kg | 1 | | 0.0200 |
| Toluene | | υ | | 1 | | < 0.0200 | mg/ | ΊKg | 1 | | 0.0200 |
| Ethylbenzene |) | U | | 1 | | < 0.0200 | mg | ΊKg | 1 | | 0.0200 |
| Xylene | | U | | 1 | | < 0.0200 | mg/ | Kg | 1 | | 0.0200 |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Re L | covery imits |
| Trifluorotolue | ene (TFT) | | | | 2.18 | mg/Kg | 1 | 2.00 | 109 | 75 - | - 135.4 |
| 4-Bromofluor | obenzene (4-BFB) | | | | 1.76 | mg/Kg | 1 | 2.00 | 88 | 63.6 | - 158.9 |

Sample: 298020 - Trench-2 4' (AH-4 First Spill)

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland Chloride (Titration) 91596 77707 | Analytic Date An Sample I | al Method: alyzed: Preparation: | SM 4500-Cl B 2012-05-29 2012-05-21 | Prep Method: Analyzed By: Prepared By: | N/A AR AR |
|--|---|---------------------------------|---------------------------------------|--|--|-----------------|
| | | | RL | | | |
| Parameter | Flag | Cert | Result | Units | Dilution | \mathbf{RL} |
| Chloride | | | 781 | mg/Kg | 5 | 4.00 |

Sample: 298020 - Trench-2 4' (AH-4 First Spill)

| Laboratory: | Midland | | | | |
|-------------|---------------|---------------------|------------|--------------|-----|
| Analysis: | TPH DRO - NEW | Analytical Method: | S 8015 D | Prep Method: | N/A |
| QC Batch: | 91445 | Date Analyzed: | 2012-05-22 | Analyzed By: | AG |
| Prep Batch: | 77583 | Sample Preparation: | 2012-05-22 | Prepared By: | AG |

| Report Date: May 2 114-6401363 | | CC | Work Order DG/White | | Page Number: 7 of 17 Eddy Co., NM | | | |
|-----------------------------------|------|------|------------------------|-------|--------------------------------------|-----------------|---------------------|--------------------|
| Parameter | | Flag | Cert | I | RL Result | Units | Dilution | \mathbf{RL} |
| DRO | | | 1 | | <50.0 | mg/Kg | 1 | 50.0 |
| Surrogate | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| n-Tricosane | | | 107 | mg/Kg | 1 | 100 | 107 | 49.3 - 157.5 |

Sample: 298020 - Trench-2 4' (AH-4 First Spill)

.

| Laboratory: Analysis: QC Batch: Prep Batch: | Midland TPH GRO 91449 77584 | | | Analytic Date An Sample | cal Metho nalyzed: Preparat | od: S 80 2012 ion: 2012 | 15 D 2-05-22 2-05-22 | | Prep Met Analyzed Prepared | hod: S 5035 By: AG By: AG |
|--|--------------------------------------|------|------|-------------------------------|-----------------------------------|-------------------------------|----------------------------|-----------------|----------------------------------|---------------------------------|
| | | | | | | \mathbf{RL} | | | | |
| Parameter | | Flag | | Cert | | Result | U | nits | Dilution | RL |
| GRO | | U | | 1 | | <2.00 | mg | /Kg | 1 | 2.00 |
| Surrogate | | | Flag | Cert | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolue | ene (TFT) | | | | 1.96 | mg/Kg | 1 | 2.00 | 98 | 58.5 - 155.1 |
| 4-Bromofluor | obenzene (4-BFB) | | | | 1.70 | mg/Kg | 1 | 2.00 | 85 | 45.1 - 162.2 |

Report Date: May 29, 2012 114-6401363 :

Method Blanks

| Method Diank (1 |) QC I | Batch: 91445 | | | | | | | | |
|--|------------|--------------|-----------------|--|--|--|--|---|---|---|
| QC Batch: 91445 | i | | Date A | Analyzed: | 2012-05- | 22 | | Analy | zed By: | AG |
| Prep Batch: 77583 | | | QC Pi | eparation: | 2012-05- | 22 | | Prepa | red By: | AG |
| | | | | | | MD | L | | | |
| Parameter | | Flag | | Cert | | Resu | lt | Units | | \mathbf{RL} |
| DRO | | | | 1 | | <14 | .5 | mg/Kg | | 50 |
| | | | | | | | Spike | Percent | Reco | overy |
| Surrogate | Flag | Cert | Result | Units | Dilu | ition | Amount | Recovery | Lir | nits |
| n-Tricosane | | | 106 | mg/Kg |] | 1 | 100 | 106 | 52 - | 140.8 |
| Method Blank (1 |) QC I | Batch: 91448 | | | | | | | | |
| QC Batch: 91448 Prep Batch: 77584 | | | Date A QC Pi | Analyzed: reparation: | 2012-05- 2012-05- | 22 22 | | Analyz Prepar | zed By: red By: | AG AG |
| QC Batch: 91448 Prep Batch: 77584 | 5 | | Date A QC Pr | Analyzed: reparation: | 2012-05- 2012-05- | 22 22 MI | DL | Analyz Prepar | zed By: red By: | AG AG |
| QC Batch: 91448 Prep Batch: 77584 Parameter | } | Flag | Date A QC Pr | Analyzed: reparation: Cert | 2012-05- 2012-05- | 22 22 MI Resu | DL ilt | Analyz Prepar Units | zed By: red By: | AG AG RL |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene | l | Flag | Date A QC Pr | Analyzed: reparation: Cert | 2012-05- 2012-05- | 22 22 MI <u>Rest</u> <0.004 | DL 1lt | Analyz Prepar Units mg/Kg | zed By: red By: | AG AG RL 0.02 |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene Toluene | l | Flag | Date A QC Pr | Analyzed: reparation: Cert | 2012-05- 2012-05- | 22 22 MI Rest <0.004 <0.009 | DL 1lt 70 80 | Analyz Prepar Units mg/Kg mg/Kg | zed By: red By: | AG AG RL 0.02 0.02 |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene Toluene Ethylbenzene Xulona | 5 1 | Flag | Date A QC Pr | Analyzed: reparation: Cert | 2012-05- 2012-05- | 22 22 MI Rest <0.004 <0.009 <0.005 | DL 11t 70 80 00 70 | Analyz Prepar <u>Units</u> mg/Kg mg/Kg mg/Kg | zed By: red By: | AG AG RL 0.02 0.02 0.02 0.02 |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene Toluene Ethylbenzene Xylene | s | Flag | Date A QC Pr | Analyzed: reparation: Cert 1 1 1 1 | 2012-05- 2012-05- | 22 22 MI Rest <0.004 <0.009 <0.005 <0.01 | DL 1lt 70 80 00 70 | Analyz Prepar Units mg/Kg mg/Kg mg/Kg mg/Kg | zed By: red By: | AG AG RL 0.02 0.02 0.02 0.02 0.02 |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene Toluene Ethylbenzene Xylene | | Flag | Date A QC Pr | Analyzed: reparation: Cert 1 1 1 | 2012-05- 2012-05- | 22 22 MI Rest <0.004 <0.009 <0.005 <0.01 | DL 1lt 70 80 00 70 Spike | Analyz Prepar Units mg/Kg mg/Kg mg/Kg mg/Kg Percent | zed By: red By: Recov | AG AG RL 0.02 0.02 0.02 0.02 very |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene Toluene Ethylbenzene Xylene Surrogate | | Flag | Date A QC Pr | Analyzed: reparation: Cert 1 1 1 1 1 Result | 2012-05- 2012-05- Units | 22 22 MI Resu <0.004 <0.009 <0.005 <0.01 Dilution | DL 1lt 70 80 00 70 Spike 1 Amount | Analyz Prepar Units mg/Kg mg/Kg mg/Kg mg/Kg Percent Recovery | zed By: red By: Recor Lim | AG AG 0.02 0.02 0.02 0.02 very its |
| QC Batch: 91448 Prep Batch: 77584 Parameter Benzene Toluene Ethylbenzene Xylene Surrogate Trifluorotoluene (T) | 6 | Flag Flag | Date A QC Pr | Analyzed: reparation: Cert 1 1 1 1 Result 2.25 | 2012-05- 2012-05- Units mg/Kg | 22 22 MI Resu <0.004 <0.009 <0.005 <0.01 Dilution 1 | DL 11t 70 80 00 70 Spike 1 Amount 2.00 | Analyz Prepar Units mg/Kg mg/Kg mg/Kg mg/Kg Percent Recovery 112 | zed By: red By: Reco Lim 78 - 1 | AG AG RL 0.02 0.02 0.02 0.02 0.02 very its 23.6 |

| Method Blank (1) | QC Batch: 91449 | | | | |
|-------------------|-----------------|-----------------|------------|-------------|-------|
| QC Batch: 91449 | | Date Analyzed: | 2012-05-22 | Analyzed By | r: AG |
| Prep Batch: 77584 | | QC Preparation: | 2012-05-22 | Prepared By | r: AG |

| Report Date: May 29, 2012 114-6401363 | С | Work Order: 12052116 COG/White Oak State #1 | | | | Page Number: 9 of 17 Eddy Co., NM | | |
|---|----------------|--|-------------------------|--------------------|---------------------------------|--------------------------------------|--|--|
| Parameter Flag | 5 | Cert | | MDL Result | | Units | \mathbf{RL} | |
| GRO | | 1 | | <1.22 | | mg/Kg | 2 | |
| Surrogate Fla Trifluorotoluene (TFT) 4-Bromofluorobenzene (4-BFB) | g Cert | Result 2.04 1.58 | Units mg/Kg mg/Kg | Dilution 1 1 | Spike Amount 2.00 2.00 | Percent Recovery 102 79 | Recovery Limits 78.6 - 121 51 - 120 | |
| | | | | | | | | |
| Method Blank (1) QC Batch: 9159 | 6 | | | | | | | |
| QC Batch: 91596 Prep Batch: 77707 | Date . QC P | Analyzed: reparation: | 2012-05-2 2012-05-2 | 29 21 | | Analyze Prepare | d By: AR d By: AR | |

| | | | MDL | | |
|-----------|------|------|--------|-------|---------------|
| Parameter | Flag | Cert | Result | Units | \mathbf{RL} |
| Chloride | | | <3.85 | mg/Kg | 4 |

Report Date: May 29, 2012 114-6401363

Laboratory Control Spikes

Laboratory Control Spike (LCS-1)

| QC Batch: | 91445 | | | Date | Analyze | d: 201 | 12-05-22 | | | An | alyzed By | y: AG |
|---------------|---------------------------------------|--------------|--------------|----------|-----------|----------|----------|-------------|---------|-----------|-----------|-----------|
| Prep Batch: | 77583 | | | QC 1 | Preparati | on: 20 | 12-05-22 | | | Pre | pared By | 7: AG |
| | | | | | LCS | | | Spike | Ma | atrix | | Rec. |
| Param | | | F | C F | Result | Units | Dil. | Amount | Re | esult R | ec. | Limit |
| DRO | | | | 1 | 232 | mg/Kg | 1 | 250 | < | 14.5 9 | 03 62 | 2 - 128.3 |
| Percent recov | ery is based on th | e spike | rest | lt. RPD | is based | on the s | pike and | spike dupli | cate re | sult. | | |
| | | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
| Param | | \mathbf{F} | \mathbf{C} | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| DRO | | | 1 | 249 | mg/Kg | 1 | 250 | <14.5 | 100 | 62 - 128. | 3 7 | 20 |
| Percent recov | ery is based on th | e spike | resu | ilt. RPD | is based | on the s | pike and | spike dupli | cate re | sult. | | |
| | | LC | 5 | LCSD | | | | Spike | LCS | LCSD | | Rec. |
| Surrogate | | Resu | ılt | Result | . Un | its | Dil. | Amount | Rec. | Rec. | I | Limit |
| n-Tricosane | · · · · · · · · · · · · · · · · · · · | 107 | / | 109 | mg/ | ′Kg | 1 | 100 | 107 | 109 | 58.6 | 6 - 149.6 |

Laboratory Control Spike (LCS-1)

| QC Batch: | 91448 | Date Analyzed: | 2012-05-22 | Analyzed By: | \mathbf{AG} |
|-------------|-------|-----------------|------------|--------------|---------------|
| Prep Batch: | 77584 | QC Preparation: | 2012-05-22 | Prepared By: | AG |
| | | | | | |

| | | | \mathbf{LCS} | | | Spike | Matrix | | Rec. |
|--------------|--------------|---|----------------|-------|------|--------|-----------|------|--------------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit |
| Benzene | | 1 | 2.03 | mg/Kg | 1 | 2.00 | < 0.00470 | 102 | 86.5 - 124.9 |
| Toluene | | 1 | 2.07 | mg/Kg | 1 | 2.00 | < 0.00980 | 104 | 84.7 - 122.5 |
| Ethylbenzene | | 1 | 2.08 | mg/Kg | 1 | 2.00 | < 0.00500 | 104 | 79.4 - 118.9 |
| Xylene | | 1 | 6.26 | mg/Kg | 1 | 6.00 | < 0.0170 | 104 | 77.5 - 119 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| | | | LCSD | | | Spike | Matrix | | Rec. | | RPD |
|--------------|--------------|---|--------|-------|------|--------|-----------|------|--------------|-----|-------|
| Param | \mathbf{F} | С | Result | Units | Dil. | Amount | Result | Rec. | Limit | RPD | Limit |
| Benzene | | 1 | 2.06 | mg/Kg | 1 | 2.00 | < 0.00470 | 103 | 86.5 - 124.9 | 2 | 20 |
| Toluene | | ı | 2.08 | mg/Kg | 1 | 2.00 | < 0.00980 | 104 | 84.7 - 122.5 | 0 | 20 |
| Ethylbenzene | | ı | 2.14 | mg/Kg | 1 | 2.00 | < 0.00500 | 107 | 79.4 - 118.9 | 3 | 20 |
| Xylene | | 1 | 6.36 | mg/Kg | 1 | 6.00 | < 0.0170 | 106 | 77.5 - 119 | 2 | 20 |

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

| Report Date: May 29, 2012 114-6401363 | | | | Work C COG/Wł | Order: 12 nite Oak | 052116 State 7 | #1 | | | I | Page Nu | mber: Eddy (| 11 of 17 Co., NM |
|---|---------------------|-----------------|--|---|---|---|--|---|------------------------------|--|---|---|--|
| 0 | | | | S LCS | SD | | Dil | Spik | e L | CS | LCSD |] | Rec. |
| Surrogate | | | | $\frac{11}{2}$ $\frac{11}{2}$ | uit U | nits | $\frac{D_{\text{II}}}{1}$ | | | $\frac{100}{104}$ | <u>102</u> | 73 (| 11116 |
| A Bromofluorobengene (4.BFB) | | | 2.0 | 9 2.0 D 10 | $10 m_{\rm e}$ | /Kg | 1 | 2.00 | , 1 1 | 04 | 08 | 65.4 | - 110 0 |
| | | | | | <u> </u> | <u>,0</u> | | | | | | | |
| Laboratory Control Spike (L | ∕CS- : | L) | | | | | | | | | | | |
| QC Batch: 91449 | | | Date | Analyze | d: 201 | 2-05-2 | 2 | | | | Analy | zed Bv | : AG |
| Prep Batch: 77584 | | | QC | Preparati | ion: 201 | 2-05-2 | $\frac{1}{2}$ | | | | Prepa | red By | AG |
| | | | | ~~~~ | | | | a | | | | - | |
| P | | - | а т | LCS | TT | D:1 | | Spike | Mat | | D | ł | lec. |
| CPO | | F | <u> </u> | esuit | Units mg/Kg | <u>1</u> | <i>P</i> | 20 0 | $-\frac{\text{Res}}{1}$ | uii 22 | 83 | 67.3 | $\frac{11110}{1057}$ |
| Percent recovery is based on the | spike | rest | ılt. RPD | is based | on the s | pike ar | nd spi | ike dupli | cate re | sult. | | 01.0 | - 100.1 |
| · | - | | LCSD | | | Spike | - M | - Iatrix | | R | ec. | | RPD |
| Param | \mathbf{F} | С | Result | Units | Dil. | Amour | nt R | lesult | Rec. | Li | mit | RPD | Limit |
| GRO | | 1 | 18.3 | mg/Kg | 1 | 20.0 | < | <1.22 | 92 | 67.3 - | 105.7 | 10 | 20 |
| Percent recovery is based on the | spike | resu | ılt. RPD | is based | on the s | pike ar | ıd spi | ke dupli | cate re | sult. | | | |
| Ū | • | | | | ~ | - | • | - - | | a a | t dap | - | |
| G | | | | S LC | 5D | | D:1 | Spike | e L | CS | LCSD | ł T | lec. |
| Surrogate | | | Rest | ut Res | unt U | nus | D_{II} . | Amou | nt n | Lec. | nec. | L | 111.0 |
| | | | 10 | 1 90 | 11 m | ·/Va | 1 | 2 00 | | 00 | 100 | 00 | |
| 4-Bromofluorobenzene (4-BFB) | | | 1.8 1.6 | 2.0 4 1.8 |)1 mg 86 mg | ;/Kg ;/Kg | 1 1 | 2.00 2.00 | | 90 82 | 100 93 | 80 - 56.4 | - 106.6 |
| 4-Bromofluorobenzene (4-BFB) | (CS-: | L) | 1.8 1.6 |) 2.0 4 1.8 |)1 mg 36 mg | ;/Kg ;/Kg | 1 1 | 2.00 2.00 | | 90 82 | 100 93 | 80 - 56.4 | - 106.6 |
| 4-Bromofluorobenzene (4-BFB) | CS- | L) | 1.8 1.6 | 0 2.0 4 1.8 |)1 mg 36 mg | ;/Kg ;/Kg | 1 1 | 2.00 2.00 | | 90 | 100 93 | 80 - 56.4 | - <u>106.6</u> |
| 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (L QC Batch: 91596 Prep Batch: 77707 | .CS-: | L) | 1.8 1.6 Date QC | 0 2.0 4 1.8 9 Analyze Preparati |)1 mg 36 mg cd: 201 ion: 201 | ;/Kg ;/Kg 12-05-2 12-05-2 | 1 1 9 | 2.00 2.00 | | 90 82 | 100 93 Analy Prepa | 80 - 56.4 rzed By red By: | - 106.6 - AR AR |
| 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (L QC Batch: 91596 Prep Batch: 77707 | CS-: | L) | 1.8 1.6 Date QC | 0 2.0 4 1.8 9 Analyze Preparati LCS |)1 mg 36 mg 2d: 201 ion: 201 | ;/Kg ;/Kg 12-05-2 12-05-2 | 1 1 9 1 | 2.00 2.00 Spike | Ν | 90 82 1atrix | 100 93 Analy Prepa | 80 - 56.4 zed By red By | - 106.6 - AR AR Rec. |
| 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (L QC Batch: 91596 Prep Batch: 77707 | .CS-: | L) F | 1.8 1.6 Date QC | 0 2.0 4 1.8 9 Analyze Preparati LCS Result | 01 mg 36 mg 36: 201 ion: 201 Units | ;/Kg ;/Kg 12-05-2 12-05-2 12-05-2 D | 1 1 9 1 il. | 2.00 2.00 Spike Amoun | N t F | 90 82 Aatrix Tesult | 100 93 Analy Prepa | 80 - 56.4 zed By red By: c. | - 106.6 - AR AR Rec. Limit |
| 4-Bromofluorobenzene (4-BFB) 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (L QC Batch: 91596 Prep Batch: 77707 Param Chloride | (CS-: | l) F | 1.8 1.6 Date QC | 2 2.0 4 1.8 • Analyze Preparati LCS Result 2600 | 01 mg 36 mg 36 mg 36 mg 36 mg 36 mg 40 mg | ;/Kg ;/Kg 12-05-2 12-05-2 12-05-2 D | 1 1 9 1 il. 1 | 2.00 2.00 Spike Amoun 2500 | N t F | 90 82 Aatrix Lesult <3.85 | 100 93 Analy Prepa Re 10 | 80 - 56.4 rzed By red By c. 4 8 | 111.2 - 106.6 : AR AR AR Sec. Limit 5 - 115 |
| 4-Bromofluorobenzene (4-BFB) 4-Bromofluorobenzene (4-BFB) QC Batch: 91596 Prep Batch: 77707 Param Chloride Percent recovery is based on the | CS-: | l) F resu | 1.8 1.6 Date QC C | 20 2.0 4 1.8 9 Analyze Preparati LCS Result 2600 is based | $\frac{11 \text{ mg}}{36 \text{ mg}}$ $\frac{16 \text{ mg}}{201}$ $1000000000000000000000000000000000000$ | /Kg ;/Kg 2-05-2 2-05-2 2-05-2 pike ar | 1 1 9 1 1 1 1 nd spi | 2.00 2.00 Spike Amoun 2500 ike duplie | N t F cate res | 90 82 Aatrix Cesult <3.85 sult. | 100 93 Analy Prepa | 80 - 56.4 rzed By red By c. 4 8 | AR AR AR Limit 5 - 115 |
| 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (L QC Batch: 91596 Prep Batch: 77707 Param Chloride Percent recovery is based on the | cS-: | L) F rest | 1.8 1.6 QC C Ilt. RPD LCSD | 2 2.0 4 1.8 • Analyze Preparati LCS Result 2600 is based | $\frac{11 \text{ mg}}{36 \text{ mg}}$ $\frac{16 \text{ mg}}{36 \text{ mg}}$ $1000000000000000000000000000000000000$ | //Kg ;/Kg 2-05-2 2-05-2 2-05-2 D g pike ar Spil | 1 1 9 1 1 nd spi ke | 2.00 2.00 Spike Amoun 2500 ike duplie Matrix | N t F cate re | 90 82 Aatrix Result <3.85 sult. | 100 93 Analy Prepa Re 10 Rec. | 80 - 56.4 rzed By red By: c. 4 8 | AR AR AR Limit 5 - 115 RPD |
| 4-Bromofluorobenzene (4-BFB) 4-Bromofluorobenzene (4-BFB) Laboratory Control Spike (L QC Batch: 91596 Prep Batch: 77707 Param Chloride Percent recovery is based on the Param | .CS-: spike F | l) F resu | 1.8 1.6 QC C lt. RPD LCSD Result | 2) 2.0 4 1.8 9 Analyze Preparati LCS Result 2600 is based Units | $\frac{11 mg}{36 mg}$ $\frac{13}{36 mg}$ $\frac{13}{36}$ $\frac{13}{3$ | ;/Kg ;/Kg ;/Kg 2-05-2 2-05-2 2 2-05-2 D 5 pike ar Spil Amo | 1 1 9 1 1 nd spi ke unt | 2.00 2.00 2.00 Spike Amoun 2500 ke duplie Matrix Result | N t F cate res Rec. | 90 82 Aatrix Cesult <3.85 sult. I L | 100 93 Analy Prepa Rec. imit | 80 - 56.4 rzed By red By c. 4 8 RPD | - 106.6 - 106.6 - AR AR Rec. Limit SPD Limit |

| Matrix Spike (MS-1) Spiked QC Batch: 91445 Prep Batch: 77583 Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane F Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F ike res F C ike res MS tesult 108 | e: 29802 Dat QC <u>1</u> sult. RPI MSD Result 228 sult. RPI MS Result 10 | 0 te Anal Prepar MS Result 237 D is bas t Uni mg/ D is bas D ult 7 | yzed: ration: Unit mg/F sed on th its Dil Kg 1 sed on th Units mg/Kg | 2012-05-22 2012-05-22 55 Dil. 6 spike and Spike . Amour 250 e spike and Dil. 1 | Spike Amoun 250 d spike dup Matrix at Result <14.5 d spike dup Spike Amount 100 | Ma t Re icate re Rec. 91 icate re MS Rec. 108 | atrix sult 14.5 sult. R Li 45.5 sult. | Analy Prepa Rec. 95 ec. mit - 127 MSD Rec. | rzed By: red By: I 45. RPD 4 R Li | AG AG Rec. imit 5 - 127 RPD Limit 20 ec. mit |
|---|---|---|--|---|--|---|--|---|--|--|---|
| QC Batch: 91445 Prep Batch: 77583 Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F ike res F C ike res MS Cesult 108 | Dat QC 1 sult. RPI MSD Result 228 sult. RPI MS Resu 10 | te Anal Prepar Result 237 D is bas t Uni mg/ D is bas D ult 7 | yzed: ration: Unit mg/H sed on th its Dil Kg 1 sed on th Units mg/Kg | 2012-05-22 2012-05-22 2012-05-22 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | Spike Amoun 250 d spike dup Matrix at Result <14.5 d spike dup Spike Amount 100 | Ma t Re c icate re Rec. 91 icate re MS Rec. 108 | atrix esult 14.5 sult. R Li 45.5 sult. | Analy Prepa Rec. 95 ec. mit - 127 MSD Rec. | rzed By: red By: Li RPD 4 R Li | AG AG Rec. imit 5 - 127 RPD Limit 20 ec. mit |
| Prep Batch: 77583 Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F ike res F C ike res MS Result 108 | QC 1 sult. RPI MSD Result 228 sult. RPI MS Resu 10 | MS Result 237 D is bas t Uni mg/ D is bas D ult | Unit mg/F sed on th its Dil Kg 1 sed on th Units mg/Kg | 2012-05-22 s Dil. kg 1 e spike and Spike Amour 250 e spike and Dil. 1 | Spike Amoun 250 d spike dup Matrix t Result <14.5 d spike dup Spike Amount 100 | Ma t Red icate re Rec. 91 icate re: MS Rec. 108 | atrix sult 14.5 sult. R Li 45.5 sult. | Prepa Rec. 95 ec. mit - 127 MSD Rec. | red By: I 45 RPD 4 R Li | AG Rec. imit 5 - 127 RPD Limit 20 ec. mit |
| Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F ike res F C ike res MS tesult 108 | C 1 sult. RPI MSD Result 228 sult. RPI MS Resu 10' | MS Result 237 D is bas t Uni mg/ D is bas D ult 7 | Unit mg/E sed on th its Dil Kg 1 sed on th Units mg/Kg | s Dil. <u>Kg 1</u> e spike and Spike <u>Amour</u> 250 e spike and Dil. <u>1</u> | Spike Amoun 250 d spike dup Matrix at Result <14.5 d spike dup Spike Amount 100 | Ma t Re c icate re Rec. 91 icate re MS Rec. 108 | atrix esult 14.5 sult. R Li 45.5 sult. | Rec. 95 ec. mit - 127 MSD Rec. | I 45. RPD 4 REL | Rec. imit 5 - 127 RPD Limit 20 ec. mit |
| Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F ike res F C ike res MS Cesult 108 | C isult. RPI MSD Result 228 sult. RPI MS Resu 10 | MS Result 237 D is bas t Uni mg/ D is bas D ult 7 | Unit mg/F sed on th its Dil Kg 1 sed on th Units mg/Kg | s Dil. <u>Kg</u> 1 e spike and Spike Amour 250 e spike and Dil. 1 | Spike Amoun 250 d spike dup Matrix t Result <14.5 d spike dup Spike Amount 100 | Ma t Re c icate re Rec. 91 icate re MS Rec. 108 | atrix sult 14.5 sult. R Li 45.5 sult. | Rec. 95 ec. mit - 127 MSD Rec. | I L 45. RPD 4 R Li | Rec. imit 5 - 127 RPD Limit 20 ec. mit |
| Param DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F ike res F C ike res MS Result 108 | C isult. RPI MSD Result 228 sult. RPI MS Resu 10 | Result 237 D is bas t Uni mg/ D is bas D ult 7 | Unit mg/F sed on th its Dil Kg 1 sed on th Units mg/Kg | s Dil. <u>kg</u> 1 e spike and Spike <u>Amour</u> 250 e spike and Dil. 1 | Amoun 250 d spike dup Matrix t Result <14.5 d spike dup Spike Amount 100 | t Rec. Rec. 91 icate re: MS Rec. 108 | esult 14.5 sult. R Li 45.5 sult. | Rec. 95 ec. 127 MSD Rec. | Li RPD 4 R Li | imit 5 - 127 RPD Limit 20 ec. mit |
| DRO Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | ike res F C ike res MS tesult 108 | ¹ Sult. RPI MSD Result 228 Sult. RPI MS Resu 10 | 237 D is bas t Uni mg/ D is bas D ult 7 | mg/H sed on th its Dil Kg 1 sed on th Units mg/Kg | kg 1 e spike and Spike . Amour 250 e spike and Dil. 1 | 250 d spike dup Matrix t Result <14.5 d spike dup Spike Amount 100 | <pre>classificate re Rec. 91 icate re MS Rec. 108</pre> | 14.5 sult. R Li 45.5 sult. | 95 ec. mit - 127 MSD Rec. | 45. RPD 4 RLi | RPD Limit 20 ec. mit |
| Percent recovery is based on the sp Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | ike res F C ike res MS tesult 108 | sult. RPI MSD Result 228 sult. RPI MS Resu 10 | D is bas t Un mg/ D is bas D ult | its Dil Kg 1 ied on th Units mg/Kg | e spike and Spike . Amour 250 e spike and Dil. 1 | d spike dup Matrix at Result <14.5 d spike dup Spike Amount 100 | Rec. 91 icate res MS Rec. 108 | sult. R Li 45.5 sult. | ec. mit - 127 MSD Rec. | RPD 4 R Li | RPD Limit 20 ec. mit |
| Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F C ike res MS Result 108 | MSD Result 228 sult. RPI MS Resu 10 | t Un mg/ D is bas D ult 7 | its Dil Kg 1 sed on th Units mg/Kg | Spike Amour 250 e spike and Dil. 1 | Matrix t Result <14.5 d spike dupl Spike Amount 100 | Rec. 91 icate res MS Rec. 108 | R <u>Li</u> 45.5 sult. | ec. mit - 127 MSD Rec. | RPD 4 R Li | RPD Limit 20 ec. mit |
| Param DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | F C 1 ike res MS tesult 108 | Result 228 sult. RPI MS Resu 10 | t Uni mg/ D is bas D ult 7 | its Dil Kg 1 sed on th Units mg/Kg | Amour 250 e spike and Dil. 1 | t Result <14.5 d spike dupl Spike Amount 100 | Rec. 91 icate res MS Rec. 108 | Li 45.5 sult. | mit - 127 MSD Rec. | RPD 4 R Li | Limit 20 ec. mit |
| DRO Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | ike res MS tesult 108 | 228 sult. RPI MS Resu 10' | mg/ D is bas D alt 7 | Kg 1 sed on th Units mg/Kg | 250 e spike and Dil. 1 | <14.5 d spike dupl Spike Amount 100 | 91 icate res MS Rec. 108 | 45.5 sult. | - 127 MSD Rec. | 4 R Li | 20 ec. mit |
| Percent recovery is based on the sp Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | ike res MS Lesult 108 | sult. RPI MS Resu 10' | D is bas D ult 7 | units mg/Kg | e spike and Dil. 1 | d spike dupl Spike Amount 100 | icate re MS Rec. | sult. | MSD Rec. | R Li | ec. mit |
| Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | MS lesult 108 | MS Resu 10' | D ult 7 | Units mg/Kg | Dil. | Spike Amount 100 | MS Rec. 108 |] | MSD Rec. | R Li | ec. mit |
| Surrogate F n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | lesult 108 | Rest 10' | ult 7 | Units mg/Kg | Dil. | Amount 100 | Rec. | | Rec. | Li | mit |
| n-Tricosane Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | 108 | 10' | 7 | mg/Kg | 1 | 100 | 108 | | 105 | 1= 1 | |
| Matrix Spike (MS-1) Spiked QC Batch: 91448 Prep Batch: 77584 Param Benzene | | | | | | | | | 107 | 45.4 | - 145.8 |
| ParamBenzene | | Dat QC | te Anal; Prepar | yzed: 2 ation: 2 | 2012-05-22 2012-05-22 | | | | Analy Prepa | red By: red By: | AG AG |
| Param Benzene | | | MS | | | Spike | Matr | iv | | R | ec |
| Benzene | F | C R | lesult | Units | Dil. | Amount | Resu | lt | Rec. | Li | mit |
| | | 1 | 2.43 | mg/Kg | 1 | 2.00 | < 0.00 | 470 | 122 | 69.3 | 159.2 |
| Toluene | | 1 | 2.58 | mg/Kg | 1 | 2.00 | < 0.00 | 980 | 129 | 68.7 | - 157 |
| Ethylbenzene | | 1 | 2.87 | mg/Kg | 1 | 2.00 | < 0.00 | 500 | 144 | 71.6 · | 158.2 |
| Xylene | | 1 | 8.55 | mg/Kg | 1 | 6.00 | < 0.01 | 70 | 142 | 70.8 | 159.8 |
| Percent recovery is based on the sp | ike res | ult. RPI | D is bas | ed on the | e spike and | l spike dupl | icate res | sult. | | | |
| | | MSD | | | Spike | Matrix | - | Re | ec. | | RPD |
| Param H | · C | Result | Units | Dil. | Amount | Kesult | Hec. | | mit | <u>KPD</u> | Limit |
| Benzene | 1 | 2.34 9.49 | mg/K | g 1 ~ 1 | 2.00 | <0.00470 | 117 | 69.3 - 69.7 | 159.2 | 4 | 20 |
| Ethylbenzene | 1 | 2.40 | mg/K | ь і σ1 | 2.00 | | 138 | 00.7 71.6 - | 158.2 | -+ 4 | 20 |
| Xvlene | 1 | 8.22 | mg/K | б. г 1 | 6.00 | < 0.0170 | 137 | 70.8 - | 159.8 | 4 | 20 |
| Percent recovery is based on the sp | ike res | ult. RPI | D is bas | ed on the | e spike and | l spike dupl | icate res | sult. | | | |
| | 5 | 7/ | 19 | MGD | • · · · · · · | C | lro 1 | MC | MGD | п | ~~ |
| Surrogate | | Res | io sult I | Result | Units | Dil Ame | ne I unt I | Rec | Rec | к Ц | ee. mit |
| Trifluorotoluene (TFT) | | 2.1 | 27 | 2.69 | mg/Kg | 1 2 | | 114 | 134 | 71.4 | 133.9 |

continued ...

| Report Date: May 29, 2012 114-6401363 | | Wor COG/ | rk Orde /White | er: 1 Oak | 2052116 x State # | 1 | | |] | Page Nu | mber: Eddy (| 13 of 17 Co., NM | | |
|--|------|-------------|-------------------|--------------|----------------------|----------|---|--------|----------|----------|-----------------|---------------------|--------|--------------|
| matrix spikes continued | | | | 6 | | | | | a | •• | MG | MOD | | ~ |
| Gurragata | | | N Da | 15 mit | MSD | | Unito | ъя | Sp Am | ike | MS | MSD | ן ד | tec. imit |
| A-Bromofluorobenzene (4-BFB) | | | | <u>94</u> | 2 56 | n | $\frac{0 \text{ mbs}}{\alpha \sigma/K\sigma}$ | 1 | AIII | <u>5</u> | 112 | 128 | 72.6 | _ 144 1 |
| | | | | | 2100 | | | | | | | | | |
| Matrix Spike (MS-1) Spike | d Sa | ampl | e: 29802 | 0 | | | | | | | | | | |
| OC Batch: 91449 | | | Dat | - Ano | wred | 20 | 12-05-22 | | | | | Anala | zed Ry | · AG |
| Prep Batch: 77584 | | | QC | Prepa | aration: | 20 |)12-05-22 | | | | | Prepa | red By | : AG |
| | | | | | | | | | | | | | | |
| | | | | MS | | | | S | pike | M | latrix | |] | Rec. |
| Param | _ | F | C | Result | Ur | nits | Dil. | Ar | nount | R | esult | Rec. | L | imit |
| GRO | | | 1 | 24.4 | mg | /Kg | 1 | 2 | 20.0 | < | (1.22) | 122 | 28.2 | - 157.2 |
| Percent recovery is based on the | spik | e res | ult. RP | D is ba | ased on | the | spike an | d spik | e dup | licate | result. | | | |
| | | | MGD | | | | Spike | Ме | triv | | D | 00 | | חספ |
| Param | ਸ | С | Result | Un | ita T | 11 | Amount | Re | gult | Rec | Li | mit | RPD | Limit |
| GBO | Ľ | | 24.2 | 01 | Κσ | <u>1</u> | 20.0 | < | 1.22 | 121 | 28.2 | - 157.2 | 1 | 20 |
| Percent recovery is based on the | snik | - res | ult RPI | D is he | sed on | - the | snike an | 1 snik | e dun | licate | result | | | |
| Toronic receivery is based on the | opin | 0 100 | 410. 101 1 | | 0001 011 | 0110 | Spine an | a opin | o uup | 10000 | repure | | | |
| ~ | | | _M | IS | MSD | | | | Sp | ike | MS | MSD | F | lec. |
| Surrogate | | | Re | sult | Result | | Units | Dil. | Ame | ount | Rec. | Rec. | | imit |
| A Dram August hanges (4 DED) | | | 2. | 22 95 | 2.39 | n | ng/Kg | 1 | - | 2 | 111 | 120 | 75.5 | - 122.3 |
| 4-Bromondorobenzene (4-BFB) | | | ۷. | | 2.29 | 1 | iig/ Kg | | | | 112 | 114 | | - 122.4 |
| Matrix Spike (MS-1) Spike | d Sa | ample | e: 29802 | 0 | | | | | | | | | | |
| QC Batch: 91596 | | | Dat | e Ana | lyzed: | 20 |)12-05-29 | | | | | Analy | zed By | : AR |
| Prep Batch: 77707 | | | QC | Prepa | ration: | 20 |)12-05-21 | | | | | Prepa | red By | AR |
| | | | | | | | | | | | | | | |
| | | | | MS | | | | S | pike | Μ | latrix | | F | lec. |
| Param | | F | <u>C</u> 1 | Result | Ur | nits | Dil. | An | nount | R | esult | Rec. | L | imit |
| Chloride | | | | 2850 | mg | /Kg | 5 | 2 | 2500 | | 781 | 83 | 79.4 | - 120.6 |
| Percent recovery is based on the | spik | e res | ult. RPI | D is ba | sed on | the | spike and | l spik | e dup | licate | result. | | | |
| | | | MSD | | | | Spike | Ma | trix | | R | lec. | | RPD |
| Param | F | С | Result | Uni | its D |)il. | Amount | Re | sult | Rec. | Li | $_{ m mit}$ | RPD | Limit |
| Chloride | | | 2800 | mg/ | Kg | 5 | 2500 | 7 | 81 | 81 | 79.4 - | - 120.6 | 2 | 20 |

٠

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Report Date: May 29, 2012 114-6401363

Calibration Standards

Standard (CCV-1)

| QC Batch: | 91445 | | | Date | Analyzed: | 2012-05-22 | | Analy | zed By: AG |
|-----------|-------|------|------|-------|-----------|------------|----------|----------|------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | | 1 | mg/Kg | 250 | 244 | 98 | 80 - 120 | 2012-05-22 |

Standard (CCV-2)

| QC Batch: | 91445 | | | Date | Analyzed: | 2012-05-22 | | Analy | zed By: AG |
|-----------|-------|------|------|-------|--------------|---------------|-----------------|---------------------|------------|
| | | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | | 1 | mg/Kg | 250 | 259 | 104 | 80 - 120 | 2012-05-22 |

Standard (CCV-1)

| QC Batch: 91448 | | | | Date Ana | alyzed: 201 | Analyzed By: AG | | | |
|-----------------|---|------|------|----------|-------------|-----------------|----------|----------|------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | | 1 | mg/kg | 0.100 | 0.103 | 103 | 80 - 120 | 2012-05-22 |
| Toluene | | | 1 | mg/kg | 0.100 | 0.106 | 106 | 80 - 120 | 2012-05-22 |
| Ethylbenzen | e | | 1 | mg/kg | 0.100 | 0.112 | 112 | 80 - 120 | 2012-05-22 |
| Xylene | | | 1 | mg/kg | 0.300 | 0.343 | 114 | 80 - 120 | 2012-05-22 |

Standard (CCV-2)

QC Batch: 91448

Date Analyzed: 2012-05-22

Analyzed By: AG

| Report Date: May 114-6401363 | 29, 2012 | | Wo COG | ork Order: 1 /White Oal | 2052116 « State #1 | • • • • • • • • • • • • • • • • • • • | Page Nur | mber: 15 of 17 Eddy Co., NM |
|---------------------------------|----------|------|-----------|----------------------------|------------------------|---------------------------------------|-------------------------------|--------------------------------|
| Param | Flag | Cert | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
| Benzene | | 1 | mg/kg | 0.100 | 0.0963 | 96 | 80 - 120 | 2012-05-22 |
| Toluene | | 1 | mg/kg | 0.100 | 0.0956 | 96 | 80 - 120 | 2012-05-22 |
| Ethylbenzene | | 1 | mg/kg | 0.100 | 0.0940 | 94 | 80 - 120 | 2012-05-22 |
| Xylene | | 1 | mg/kg | 0.300 | 0.281 | 94 | 80 - 120 | 2012-05-22 |

Standard (CCV-1)

| QC Batch: | 91449 | | Date | Analyzed: | 2012-05-22 | | Analy | zed By: AG |
|-----------|-------|-----------------|-------|--------------|---------------|-----------------|---------------------|------------|
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | Flag | \mathbf{Cert} | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | 1 | mg/Kg | 1.00 | 1.07 | 107 | 80 - 120 | 2012-05-22 |

Standard (CCV-2)

| QC Batch: | 91449 | | | Date | Analyzed: | 2012-05-22 | | Analy | zed By: AG |
|-----------|-------|------|------|-------|--------------|---------------|-----------------|---------------------|------------|
| | | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date |
| Param | F | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | | 1 | mg/Kg | 1.00 | 0.946 | 95 | 80 - 120 | 2012-05-22 |

Standard (CCV-1)

| QC Batch: | 91596 | | | Date A | analyzed: 2 | 2012-05-29 | | Analy | zed By: AR |
|-----------|-------|------|------|--------|-------------|------------|----------|----------|------------|
| | | | | | CCVs | CCVs | CCVs | Percent | |
| | | | | | True | Found | Percent | Recovery | Date |
| Param | | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Chloride | | | | mg/Kg | 100 | 100 | 100 | 85 - 115 | 2012-05-29 |

Standard (CCV-2)

QC Batch: 91596

Date Analyzed: 2012-05-29

Analyzed By: AR

| Report Date: M 114-6401363 | May 29, 2012 | | CC | Work Order: OG/White O | 12052116 ak State #1 | | Page Nu | mber: 16 of 17 Eddy Co., NM | | | |
|-------------------------------|--------------|-----------------------|-------|---------------------------|-------------------------|-----------------|---------------------|--------------------------------|--|--|--|
| | | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date | | | |
| Param | Flag | Cert | Units | Conc. | Conc. | Recovery | Limits | Analyzed | | | |
| Chloride | | | mg/Kg | 100 | 100 | 100 | 85 - 115 | 2012-05-29 | | | |

Work Order: 12052116 COG/White Oak State #1 Page Number: 17 of 17 Eddy Co., NM

Appendix

Report Definitions

| Name | Definition |
|------|----------------------------|
| MDL | Method Detection Limit |
| MQL | Minimum Quantitation Limit |
| SDL | Sample Detection Limit |

Laboratory Certifications

| | Certifying | Certification | Laboratory |
|---|------------|---------------------|---------------|
| С | Authority | Number | Location |
| - | NCTRCA | WFWB384444Y0909 | TraceAnalysis |
| - | DBE | VN 20657 | TraceAnalysis |
| - | HUB | 1752439743100-86536 | TraceAnalysis |
| - | WBE | 237019 | TraceAnalysis |
| 1 | NELAP | T104704392-11-3 | Midland |

Standard Flags

- F Description
- B Analyte detected in the corresponding method blank above the method detection limit
- H Analyzed out of hold time
- J Estimated concentration
- Jb The analyte is positively identified and the value is approximated between the SDL and MQL. Sample contains less then ten times the concentration found in the method blank. The result should be considered non-detect to the SDL.
- Je Estimated concentration exceeding calibration range.
- Qc Calibration check outside of laboratory limits.
- Qr RPD outside of laboratory limits
- Qs Spike recovery outside of laboratory limits.
- Qsr Surrogate recovery outside of laboratory limits.
- U The analyte is not detected above the SDL

Attachments

The scanned attachments will follow this page.

Please note, each attachment may consist of more than one page.

| Analysis Request of Chain of Custody Record | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
|---|---------------|---------------------------------------|-----------------------|-------|------|---|--------|-------------|-----|-----------------|---------|------------------------|------------|--|-------------|---------------|--------------|---------|----------------|-------------|--------------|-----------------------|-----------------------|----------------|-------------|------------------|--------------|--|
| | | | (| | | 7 | | · | | | | | - | ANALYSIS REQUEST (Circle or Specify Method No.) | | | | | | | | | | | | | | |
| | | | and the second second | | | TETRA TECH 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 • Fax (432) 682-3946 | | | | | | | ŧ. | 5 Ext. to C35) | Cr Ph Ho Sa | d Vr Pd Hg Se | | | | | | | | | DS | | | |
| CLIENT NAM | AE: | · · · · · · · · · · · · · · · · · · · | | | | SITE MANAGER: | Ŀ | 2 | F | RES | ERV | ATIVE | | ŝ | | S S | | | 624 | 629/ | | | | | H. | | | |
| DRO JECT N | <u></u> | <u> </u> | The Toward | | | | | | | M | ETH(| <u>о</u> с | _ | | | As I | 9 | ŝ | /8260 | 22 | | | | | tions, | | | |
| 114-6 | | e 3 | [" | .001 | 201 | G/ Libits Dale St TB | | NO S | Ê | | | | 6 | P | 0 P P | ġ | es Volati | AOIG | 8240/ | 1. Vol | 8 | | Air | tos) | s/Ca | | | |
| LAB I.D. NUMBER | DATE | TIME | MATRIX | COMP. | GRAB | SAMPLE IDENTIFICATION | | | HCL | HNO3 | ICE | NONE | 3TEX 8021B | 5108 (Hai | PAR 8298 | TCLP Metal | TCLP Volati | RCI | GC.MS Vol. | PCB's 8080/ | Pest. 808/60 | Chloride Gamma Sno | Alpha Beta (| PLM (Asbes | Major Anion | Hold | | |
| 298016 | ~1.2 | | < | | V | Treat-1 1' louiser (e 11 | | | ╈ | | | | | | | Ť | | ╀ | ┝╌╀ | | | × | 1 | | | | ╎ | |
| 017 | 1 | | 1 | | | Treachil R' (AHI Samuel Sail | 3 | it i | | | | | \uparrow | | ╈ | | | | | ╎ | | X | \uparrow | | ╡ | | ╈ | |
| 018 | | | \prod | | | Trench-1 10' (AH-1 Second Spill) | | \parallel | T | | | | | | | | | | | T | | X | | | | | 1 | |
| 019 | | | | | | , (Second Spill) Bottom Hole 5 (AH-1) | | | | | | | | X | | | | | | | | | | | | | | |
| 020 | 5/18 | | | | | Trench - 2 4' (AH-4 Just Sould) | \Box | \prod | | | \prod | | X | X | | | | | | | | X | | | | | | |
| 021 | - | | | | | Tecrat-2 6 (AH-4 Just Sp. 11) | | \parallel | | | | | | | | | | | | | | × | 1 | |) | | \downarrow | |
| 072 | | | 1 | | 1 | Trench 2 B' (AH4 fast Spill) | | ₩ | | | ¥ | | | $\left \right $ | | | | | Ø | | | × | 1 | | | \square | | |
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