

SOIL ASSESSMENT REPORT AND REMEDIATION WORKPLAN

AKINS SWEET GATHERING CRUDE OIL RELEASE SITE PLAINS EMS NO. 2004-00027 LATITUDE: N 32° 32′ 29″ LONGITUDE: W 103° 15′ 41″ LEA COUNTY, NEW MEXICO

Prepared For: Plains Marketing, L.P. 3705 East Highway 158 Midland, Texas 79706

Xink - 225695 Whity - FPAC0603451302 Wident - n PAC0603451463 Dication - PPAC0603451655

SEPTEMBER 2005 Ref. no. 039137



Prepared by: Conestoga-Rovers & Associates (formerly

BNC Environmental Services, Inc.)

2135 S. Loop 250 West Midland, Texas 79703

Office: (432) 686-0086 Fax: (432) 686-0186

web: http://www.CRAworld.com



October 4, 2005

Mr. Larry Johnson New Mexico Oil Conservation Division Environmental Bureau 1625 N. French Drive Hobbs, New Mexico 88240

RE: Soil Assessment Report and Remediation Workplan Akins Sweet Pipeline Release S28, T20S, R37E Unit Letter L (NW/4, SW/4) Lea County, NM Landowner: New Mexico State Land Office

Dear Mr. Johnson:

Enclosed is a soil assessment report documenting site activities performed during the month of June 2005 for the Plains Pipeline release at the above referenced site. Included with this report is a workplan detailing additional activities proposed to obtain closure of this site per NMOCD guidelines. Also enclosed with this report is a copy of the C-141 for your reference.

Thank you for your time and consideration in this matter. If you have any questions or require further information, please contact me at (432) 686-1769.

Thank you,

Daniel Bryant Environmental & Regulatory Compliance Specialist Office: 432-686-1769 Cell: 432-557-5865 dmbryant@paalp.com



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1.0 INTRODUCTION

The Soil Assessment portion of this report presents soil boring data collected at the Akins Sweet Gathering Crude Oil Release Site (hereafter referred to as the "Site") by Conestoga-Rovers & Associates (CRA) on behalf of Plains Marketing, L.P. (Plains). Soil sampling activities were performed in accordance with our *Assessment Workplan* dated June 10, 2005 that was submitted to the Hobbs District office of the New Mexico Oil Conservation Division (NMOCD) office prior to performing the field activities.

The Site is located approximately 5.7 miles south of Monument, New Mexico in the NW ¼ of the SW ¼ (Unit Letter L), Section-28, Township-20-South, and Range-37-East. The Site coordinates are 32° 32′ 29.264″ North Latitude and 103° 15′ 41.465″ West Longitude (FIGURE 1).

The subject release occurred on January 28, 2004, and was a result of a crude oil release from a surface-laid, 4-inch diameter steel gathering pipeline at the Site. Subsequently, Environmental Plus, Inc. (EPI) submitted a correspondence titled *LINK Energy Atkins 4" Gathering (2004-00027) Initial C-141*, and a Release Notification and Corrective Action (Form C-141) both dated January 30, 2004 to the NMOCD Hobbs District office detailing the release and proposed remedial action plan for the site. The Form C-141 indicated a release of 50-barrels and 0-barrels recovered. Photographs (PHOTOs 1 & 2) presented in the Photographs Section of this report illustrate the surficial hydrocarbon impacts subsequent to the release event. A copy of the EPI correspondence and the Form C-141 is provided as APPENDIX A.

EPI, on behalf of Link Energy, initiated response activities and excavated visuallyimpacted soil to approximately 4-feet below ground surface (bgs). A total of 1,052-cubic yards of excavated material were reportedly transported to the nearby Lea Station Land Farm (#GW-351) for remediation by land farming and soil blending methods. A copy of the associated Form C-138 is provided as APPENDIX B.

In February 2004, two separate soil investigations were conducted by EPI in attempt to horizontally and vertically delineate the impacts at the Site. On February 4, 2004, soil samples were collected from periphery of the excavation in depths ranging from 2-to 5-feet in depth. On February 25, 2004, six trenches along the excavation floor were over-excavated to varying depths (2- to 10-feet) and soil samples were collected at their respective locations. Laboratory results from both investigations indicated that Total Petroleum Hydrocarbons (TPH) impacts had not been fully defined and additional assessment activities were warranted. A summary table depicting the results of the

analytical data and a figure illustrating locations and depths of data collected during these two separate soil investigations performed by EPI are provided in APPENDIX C.

CRA and Plains personnel conducted a Site visit on April 6, 2005 and noted an onsite remedial excavation and several soil stockpiles associated with the initial excavation at the Site (Photo 3). The dimensions of the excavation were approximately 140-feet in length, 10-feet in width and an average of 4-feet in depth. CRA also noted residual crude oil staining from the release along the west excavation wall as shown in Photo 4. Subsequently, CRA prepared and submitted an *Assessment Workplan, Plains All American, Akins Sweet Pipeline* #2004-00027, Crude Oil Release, Lea County, New Mexico, dated June 10, 2005 to Plains personnel and proposed further assessment of soil impacts at the Site. CRA understands that this document was provided to and approved by the Hobbs NMOCD office.

The assessment activities described within this report were performed on June 28 & 29, 2005. The soil borings were installed by Straub Corporation under the direct supervision of a CRA geologist.

Section 2.0 and Section 3.0 of this report summarize the regulatory framework and soil assessment activities, respectively. Figures, photographs, tables, and appendices are provided to support the results associated with the assessment activities. Section 4.0 presents proposed soil remediation and site restoration tasks designed to facilitate Site closure (as appropriate) in coordination with the NMOCD.

2.0 REGULATORY FRAMEWORK

The NMOCD has regulatory jurisdiction over oil and gas production operations including crude oil pipeline spills and closure activities in the State of New Mexico. This project is being conducted under the regulatory guidance of the NMCOD, which requires that hydrocarbon-affected soils be remediated in such a manner that the potential for future affects to groundwater or the environment are minimized. The NMOCD clean up levels are determined on a site-by-site basis, and are based on ranking criteria, which is outlined in the NMOCD "*Guidelines for Remediation of Spills, Leaks, and Releases*", dated August 13, 1993. These ranking criteria guidelines are based on site characteristics consisting of: depth to groundwater (from base of affected soil), wellhead protection (useable water sources), and distance to surface water.

There are currently no monitoring wells or water wells on the Site to determine a sitespecific depth to groundwater. CRA reviewed the New Mexico Office of the State Engineer and the Interstate Stream Commission document "New Mexico Water Resource Atlas" dated December 2002. Plate 10 of this document shows the Site is situated between the groundwater elevation contours 3,400- and 3,500-feet above sea level. For site ranking purposes, the groundwater elevation at the Site is interpolated to be 3,475-feet above sea level. The surface elevation of the Site is approximately 3,505feet above sea level. Therefore, the estimated depth-to-groundwater based on the above information is approximately 30-40 feet bgs.

The Site is located in an area of oil and gas production and mostly vegetated by native range grass. In general, adjacent properties are relatively flat with a low relief, hilly, sandy and dry topography. The topographic map of the area does not indicate any surface water within 1-mile of the Site. Well head protection areas appear to be greater than 1,000-feet from the release site.

The table below illustrates the ranking criteria used by the NMOCD and includes sitespecific characteristics:

| CHARACTERISTIC | SELECTION | SCORE |
|---------------------------|-------------|-------|
| Depth to Groundwater | <50 feet | 20 |
| Wellhead Protection Area | >1,000 feet | 0 |
| Distance to Surface Water | >1,000 feet | 0 |

Ranking Criteria and Scoring

Total Score= 20

| Contaminant of Concern | >19 Score | 10-19 Score | 0-9 Score |
|------------------------|-----------|-------------|-----------|
| Benzene (mg/Kg) | 10 | 10 | 10 |
| Total BTEX (mg/Kg) | 50 | 50 | 50 |
| TPH (mg/Kg) | 100 | 1,000 | 5,000 |

Soil Recommended Remediation Action Levels

Based on the Site characteristics and the "Guidelines for Remediation of Spills, Leaks, and Releases" the Site has a ranking score of 20. Consequently, the ranking criteria Recommended Remediation Action Levels (RRALs) of 10 mg/Kg Benzene, 50 mg/Kg total Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), and 100 mg/Kg TPH are adopted for remediation activities at the Site.

3.0 SOIL ASSESSMENT

Prior to commencement of soil assessment activities, a site-specific health and safety plan (HASP) was developed by CRA in conjunction with the implementation of the Plains work permit system. CRA and all subcontractors onsite conducted daily tailgate safety meetings that included a job safety analysis (JSA) form completion, as well as discussions of the elements of the Plains work permit system including excavation safety.

Assessment activities described within the following section include the installation of seven soil borings, and subsurface soil sampling and analysis at the Site. The locations of the seven soil borings are illustrated in the Site Details Map (FIGURE 2).

3.1 SOIL BORING INSTALLATIONS AND SAMPLING

All soil boring locations were approved by Plains personnel and marked appropriately. The utility notification service was also notified and provided 48 hours to mark their utilities if present. Site preparation work including sloping sidewalls and ramping of ingress/egress ramps for excavation safety purposes was provided by Plains.

The seven soil borings were installed by Straub Corporation using the air-rotary method on June 28 & 29, 2005. Four of the seven soil borings (BH-1, BH-2, BH-3 & BH-5) were drilled in the existing excavation floor along the path of the crude oil release. Soil borings BH-1, BH-2, and BH-3 were advanced to 15-feet below the excavation floor (19feet bgs); BH-5 was advanced to 25-feet below the excavation floor (30-feet bgs). The remaining three borings (BH-4, BH-6 & BH-7) were drilled at 15-foot offsets from the edge of the excavation to approximately 20-feet bgs. Discrete soil samples were collected on 5-foot intervals with a split spoon. Half of each sample was containerized in a Zip-Loc® bag; the other half was containerized in a labeled, laboratory-supplied sample jar. After the bagged samples were allowed sufficient time to volatilize, headspace readings were recorded with a photo-ionization (PID) to measure the relative concentration of volatile organic compounds (VOCs) in the samples. A CRA geologist continuously recorded the soil sample lithologic data and drill cuttings on boring logs for each location. The jarred soil samples were immediately placed on ice in insulated coolers, chilled to a temperature of approximately 4°C (40° F). Soil samples collected for laboratory analyses were based on physical observations, field VOC measurements and as directed by Plains personnel in the field. The samples were analyzed for TPH concentrations by EPA Method 8015B modified for diesel range organics (DRO) and gasoline range organics (GRO) as well as, BTEX by EPA Method 8021B. The coolers

were sealed for shipment and proper chain-of-custody documentation accompanied the samples to TraceAnalysis, Inc. (Trace) in Lubbock, Texas for laboratory analysis.

After drilling and sampling activities were completed, the borings were permanently plugged with a bentonite/grout mixture to prevent subsurface impact from surface runoff. Boring Log Legend and Notes, Logs and Details for Soil Borings BH-1 through BH-4, Logs and Details for Soil Borings BH-5 through BH-7 (including PID measurements), and Soil Boring Analytical Results- June 2005 are presented on FIGURES 3-6, respectfully. In addition, New Mexico Office of the State Engineer Well Records for each boring is provided in APPENDIX D.

3.2 SUBSURFACE LITHOLOGY

Soil samples were logged by a CRA field geologist and the general subsurface lithologies observed in the samples are presented below. The interval thicknesses, depths, and occurrences for the following soil types are presented within the boring logs and details for each soil boring (FIGURES 3-5). The subsurface soil types encountered during the assessment include the following descriptions:

- Soil Type #1 is a Sand, pale reddish brown, dry, soft, weakly cemented, fine grained, some interbedded thin caliche layers, some clayey sand layers;
- Soil Type #2 is a Silty Sand with Clay, very pale orange, moist, medium stiff, moderately cemented, some interbedded thin caliche layers.
- Soil Type #3 is a Sand, pale reddish brown, moist, stiff, moderately cemented with indurated layers; and
- Soil Type #4 is a Sandy Limestone, moderate orange pink, moist, moderately hard, well cemented, slightly weathered.

3.3 SOIL ASSESSMENT RESULTS

Twenty soil samples were collected from varying depths within the seven soil borings and submitted to Trace for BTEX and TPH (DRO/GRO) analysis. The submitted samples were selected to evaluate the highest possible contaminant concentration(s) in each soil boring and to assess vertical and horizontal extent of hydrocarbon impacts.

TABLE I demonstrates the soil sample analytical results for BTEX and TPH (DRO/GRO) from the seven soil borings advanced at the Site during the assessment. The NMOCD

RRALs are also presented for comparison to the analytical results. All 20 soil samples collected exhibited concentrations below the NMOCD RRAL for both BTEX and TPH (DRO/GRO). Copies of the certified analytical reports and chain-of-custody documentation are attached as APPENDIX E.

Soil boring (SB-1 through SB-7) locations were determined based on approximate sample trench locations during the previous EPI soil assessment in February 2004; however, TPH analytical results from CRA's assessment did not correspond with the analytical results from EPI's previous assessment. Several contributing factors can be attributed to the discrepancies in the analytical data. Although limited historical project information was provided to CRA, the analytical discrepancies may be explained as follows:

- Based on the previous data collected by EPI and sample locations maps presented to CRA, CRA attempted to duplicate the EPI trench samples but CRA cannot warrant that these recent samples were collected in the exact same locations;
- CRA's use of decontaminated discrete soil sampling tools versus EPI's unknown sample collection methodology most likely precluded cross contamination of soil samples; and
- Natural attuentation processes over time most likely attributed to reduced concentrations.

Based on site specific clean up goals administered by the NMOCD and analytical results from the soil assessment activities, the vertical extent of the impacted soils has been fully delineated at the sampled locations; however, photos 5 & 6 in the photographs section of this report demonstrate that hydrocarbon stained soils still exist along a shallow portion of the west wall excavation. Additional remedial activities are proposed to evaluate the horizontal extent of the hydrocarbon stained soils as detailed in Section 4.0.

4.0 SOIL REMEDIATION WORKPLAN

This portion of the report describes proposed soil remediation activities to remove hydrocarbon-affected soils and perform Site restoration activities. This Soil Remediation Workplan is based upon existing Site conditions, consultation with Plains personnel and associated NMOCD guidance documents.

The primary objective of this Soil Remediation Workplan is to remove the affected soils from the Site that exhibit hydrocarbon concentrations above NMOCD regulatory guidelines and obtain written acknowledgement from the NMOCD for no further action upon completion of proposed soil remediation activities at the Site. Hydrocarbon-affected surficial soils stockpiled at various locations are also targeted for sampling and analysis to evaluate hydrocarbon concentrations. According to Plains personnel, the large stockpile (estimated at 1000 cy) on the east side of the existing excavation was clean material brought to the Site by EPI for use as backfill material. This stockpile will not be sampled. If laboratory analysis of the other stockpiles indicate significant BTEX and/or TPH concentrations, these soil will be removed from the Site. The initial excavation and associated soil stockpiles, the proposed remedial excavation area, the proposed soil-staging area (SSA), and site details are presented in FIGURE 7. Excavated soils are scheduled for transportation under manifest to the NMOCD- permitted Lea Station Land Farm (#GW-351).

The following sections outline the general tasks proposed for this Soil Remediation Workplan. The findings of the remediation activities will be presented in a Site Closure Report for the Plains Akins Sweet Site.

4.1 TASK 1- PROJECT DEVELOPMENT

Several project development activities are identified for this portion of the work scope and financial plan for the Site. The activities include: a) updating of the Site Specific Health and Safety Plan; b) client communication; c) regulatory liaison; d) field activity preparation; and e) generation of the soil remediation work scope as presented in this document.

The project specific Health and Safety Plan (HASP) will be refined by CRA prior to conducting the soil excavation, removal, and backfilling activities. Safety and health issues associated with this project include working around excavations, heavy equipment, hydrocarbon-affected soils, and the presence of exposed crude oil pipelines in the general vicinity of the excavation. A CRA representative will implement the

HASP in the field. Tailgate safety meetings will be administered each morning prior to beginning work activities in accordance with HASP objectives.

Prior to initiating excavation activities, the Site will be thoroughly inspected by a competent person for any conditions requiring precautionary safety measures. In addition, the location of underground/aboveground utilities and pipelines will be clearly identified and marked. The appropriate utility companies must be identified prior to digging.

CRA understands that Plains will have obtained all necessary authorizations for access to the Site to enable the following on-site activities. CRA will attain a signed work authorization form from Plains and will notify the NMOCD approximately 48 hours prior to conducting any activities at the Site.

4.2 TASK 2 – EXCAVATION PLAN

Subsequent to implementation of the project development task, excavation activities at the Site will commence. FIGURE 7 presents both the existing and proposed soil staging areas and location and depth of the proposed remedial excavation. Based on the results of the soil assessment activities and existing Site conditions, the proposed remedial excavation will include visible hydrocarbon-impacted material along a section of the west wall of the existing excavation that was performed on January 29, 2004. Based on analytical results presented in TABLE I, the depth of the proposed remedial excavation is not anticipated to exceed the depth of the existing excavation floor (approximately 5-feet bgs); however, if the depth of the proposed remedial excavation exceeds 20-feet, an excavation plan will be written, reviewed and approved by an engineer prior to proceeding with excavation activities. Hydrocarbon-affected material from within the excavation will be removed utilizing heavy equipment and will be placed in the designated SSA.

CRA will request that Plains provide support systems (such as shoring, bracing, underpinning or pipe cradles) to assure the stability of structures and the protection of employees if excavation operations could affect the stability of adjoining walls or other structures. The northern and southern edges of the excavation were sloped for ingress/egress areas during initial excavation activities.

Soil samples will be periodically collected from within the proposed remedial excavation at various depths and locations based on visual observations and the judgment of CRA field personnel to assess the completeness of the soil removal activities. The soil samples will be field screened utilizing a PID calibrated to a 100-ppm

isobutylene standard. Each soil sample will be placed in resealable plastic bags leaving a headspace for volatile organic compounds (VOCs) to collect. After sufficient time has passed to allow for volatilization, the headspace in each bagged sample will be measured using the PID. Areas exhibiting excessive VOC concentrations and/or visual impacts will be over-excavated and field tested until reduced VOC concentrations and/or limited visual impacts are documented. Consequently, soil confirmation samples will then be collected and analyzed to document hydrocarbon concentrations at existing sampled locations.

4.3 TASK 3 – SOIL STAGING AND HAULING ACTIVITIES

Soil stockpiles, as shown on FIGURE 7, include soil material that remains from initial excavation and previous soil assessment activities. Hydrocarbon-affected soils to be removed from the proposed remedial excavation area will be staged at the proposed SSA as shown in FIGURE 7. All soil stockpiles onsite identified for offsite transport to the Lea Station Landfarm facility will be sampled (see Task 4 Confirmation Soil Sampling Plan & Task 5 - Waste Management). The materials will be loaded into trailer and dump trucks at either the prescribed SSA or existing location. Materials deemed appropriate for backfill, whether it be overburden material generated during excavation activities or material imported in from an agreed upon location for the express purpose of backfilling, will be stockpiled adjacent to the excavation area. Appropriate documentation including manifests and/or bills-of-lading will be maintained for all soils transported offsite and backhauled onsite.

4.4 TASK 4 – CONFIRMATION SOIL SAMPLING PLAN

Sidewall areas from the proposed remedial excavation, floor areas from the existing and proposed remedial excavations, existing soil stockpile materials, and SSA locations will be identified for confirmation soil sampling activities. The sample locations as shown on FIGURE 7 will be based on the professional judgment of the CRA geologist, geometry of the existing and proposed remedial excavations, quantities of existing soil stockpile materials and quantity of SSA locations. For planning purposes, a minimum of 4 grab samples from the floor of the existing excavation (North Excavation Floor, North Middle Excavation Floor, South Middle Excavation Floor, South Middle Excavation Floor, South Excavation (RE NE, RE NW, RE SE, RE SW, RE floor) are planned. In addition, two five-part composite samples from existing Soil Stockpiles 1 thru 4 (SS-1) and Soil Stockpiles 5 thru 6(SS-2), and one five-part composite sample from the proposed soil staging area stockpile (SSA-1) are planned. Based upon the analytical results of the existing soil stockpile samples, the material will either be transported to the Lea Station Landfarm, or utilized as backfill material (if TPH and BTEX results exhibit concentrations below NMOCD RRALS.)

Site-specific NMOCD ranking criteria cleanup levels of 10 mg/Kg benzene, 50 mg/Kg total BTEX and 100 mg/Kg TPH are adopted for remedial and closure activities at the Site. Soil samples will also be collected from any materials deemed appropriate for backfill including but not limited to overburden material generated during excavation activities. Soils exhibiting concentrations below NMOCD RRALs will be utilized for backfilling purposes. Soils exhibited concentrations above NMOCD RRALs will be treated onsite by blending or aeration techniques if feasible or transported to Lea Station Landfarm for management activities.

The soil samples will be delivered to Trace Analysis for TPH (GRO/DRO) analysis by EPA Method 8015 (modified) and BTEX analyses by EPA Method 8021B. Each container will be labeled, placed on ice in an insulated cooler, and chilled to a temperature of approximately 40°F (4°C). The cooler will be sealed for shipment to the laboratory. Proper chain-of-custody documentation will accompany the samples to the laboratory.

4.5 TASK 5 – WASTE MANAGEMENT

Waste characterization analytical data and the submittal and approval of NMOCD Form C-138 and Certificate of Waste Status (APPENDIX F) will be obtained prior to the offsite removal of the affected soils. Hydrocarbon-affected soils removed from the Site are identified for offsite disposal/treatment at the Lea Station Landfarm facility located approximately 5-miles south of Monument, New Mexico. The estimated volume of soils targeted for transport to the Lea Station Landfarm facility is anticipated to be approximately 500-cubic yards. Manifests and bills-of-lading documentation will be maintained to track the actual amount of soil removed from the Site.

4.6 TASK 6 – SITE RESTORATION

Stockpiled overburden material onsite that exhibits TPH (GRO/DRO) and BTEX concentrations below NMOCD regulatory levels will initially be utilized to backfill the lower portions of the remedial excavation. Subsequently, soils imported from an agreed

upon location will be used to fill and raise both the existing and proposed remedial excavations to existing surface grade. All backfill material will be compacted using the tracks of a bulldozer or similar heavy equipment. Final grading of construction related surface areas will be performed to mitigate wind erosion and facilitate re-vegetation. The Site will be reseeded with a grass seed mixture acceptable to the landowner.

4.7 TASK 7 – SITE CLOSURE REPORT

A document summarizing the findings of the Soil Remedial Workplan activities (Section 4.0) is proposed for submittal to the NMOCD Hobbs District 1 office in the form of a Site Remediation/Closure Report. The report will summarize soil excavation/staging activities, confirmation sampling results, as well as providing documentation of waste management and site restoration activities. Site figures, certified laboratory reports, manifests, bills-of-lading, and other relevant project information will be provided in the report. If the findings of the report indicate that the Site is eligible for closure, a site closure request is proposed for submittal to the NMOCD Hobbs District 1 office for consideration of the approved soil remediation activities implemented at the Site. As appropriate, the proposed document will request written acknowledgement from the NMOCD for no further action regarding remedial activities at the Site.

CRA is prepared to begin work on this project subsequent to NMOCD approval (with any modifications) of this Soil Remediation Workplan and Plains notification to proceed. If you have any questions, comments, or require additional information, please contact us at (432) 686-0086.

All of Which is Respectfully Submitted, Conestoga-Rovers & Associates

/ James Ornelas Project Manager

homas Chargon

Thomas C. Larson Operations Manager



SLR



SOIL TYPE





092705

SL

borlog

039137

SOIL BORINGS LEGEND AND NOTES

PLAINS MARKETING, L.P. LEA COUNTY, NEW MEXICO AKINS SWEET #2004-00027



^{028121 8}H1-8H4 2FK 085002







PLAINS ALL AMERICAN AKINS SWEET GATHERING EMS No. 2004-00027 Unit Letter L, Section 28, T 20 S, R 37 E Lea County, New Mexico



Photo 1. 4" Gathering Release Point dated January 28, 2004.



Photo 2. South View Showing Crude Oil Release dated January 28, 2004.



PLAINS ALL AMERICAN AKINS SWEET GATHERING EMS No. 2004-00027 Unit Letter L, Section 28, T 20 S, R 37 E Lea County, New Mexico



Photo 3. North View of Existing Excavation and Soil Stockpiles dated April 6, 2005.



Photo 4. Visual Staining on West Excavation Wall dated April 6, 2005.



PLAINS ALL AMERICAN AKINS SWEET GATHERING EMS No. 2004-00027 Unit Letter L, Section 28, T 20 S, R 37 E Lea County, New Mexico



Photo 5. West View of Visual Staining on West Excavation Wall dated July 19, 2005.



Photo 6. Northwest View Visual Staining on West Excavation Wall dated July 19, 2005.



AKINS SWEET GATHERING #2004-00027 SOIL ANALYTICAL SUMMARY LEA COUNTY, NEW MEXICO PLAINS MARKETING, L.P. **TABLE]**

(mg/kg) (GRO/DRO) ng/kg 100 BDL TPH (8015B Modified) mg/kg (mg/kg) GRO <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 I New Mexico Oil Conservation Division Recommended Remediation Action Levels (Total Ranking Score > 19) (mg/kg) <50.0 mg/kg <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 DRO <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 <50.0 Ethyl-Benzene Total Xylenes TOTAL BTEX (mg/kg) 0.0106 mg/kg BDL 20 <0.0100 <0.0100 <0.0100 (mg/kg) <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 0.0106 mg/kg <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 (mg/kg) <0.0100 mg/kg Toluene <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 (mg/kg) <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 mg/kg <0.0100 <0.0100 Benzene (mg/kg) <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 <0.0100 mg/kg 9 Date 6/28/05 Sample Depth (feet) (14-15) (14-15) (14-15) (19-20) (14-15) (19-20) (24-25) (19-20) (19-20) (9-10) (9-10) (9-10) (9-10) (4-5) (4-5) (4-5) (4-5) (4-5) (4-5) (4-5) Sample BH-2 BH-3 BH-5 BH-6 BH-7 BH-1 BH4 9

Notes:

1. BTEX analyses by EPA Method 8021B.

2. TPH analyzed by EPA Method 8015B Mod.

3. Bold concentrations above lab reporting limits.

BDL- Below Detection Limits.

4

January 30, 2004

Mr. Larry Johnson New Mexico Oil Conservation Division 1625 North French Hobbs, New Mexico 88240

Subject: LINK Energy Atkins 4" Gathering (2004-00027) Initial C-141

Dear Mr. Johnson:

Environmental Plus, Inc. (EPI), on behalf of Mr. Frank Hernandez, LINK Energy LLC, submits the attached New Mexico Oil Conservation Division Form C-141 for the above referenced leak site located on lands owned by the State of NM. The release volume is estimated to be 50-bbl of crude petroleum with 0-bbl recovered. The release site is located in the NW¼ of the SW¼ (Unit Letter L), Section 28, Township 20 South, and Range 37 East. The geographic location is N32°32'29.264"; W103°15'41.465". The site is ~5.7 miles south (bearing 177.9°) from Monument, Lea County, New Mexico. According to information obtained from the New Mexico Office of the State Engineer (NMOSE) database, ground water level beneath this site is ~40-ft bgs. The site matrix ranking for this site is 20 due to the depth to ground water from the lower contaminant level being <50-ft.

The remedial action plan for this site is to delineate and characterize the soil contamination within the surface extents of the release, excavate, dispose of and/or blend and attenuate on-site the RCRA non-exempt contaminated soils, and backfill the excavation with clean soil obtained on-site and/or off-site from private or public sources. Any contaminated soils removed from the site will be disposed of in an NMOCD approved surface waste treatment facility.

The Constituents of Concern (CoC's) and associated NMOCD acceptable remedial levels are as follows:

- BTEX⁸⁶²⁰ (Benzene, Toluene, Ethyl Benzene, and Xylenes): 50 mg/kg
- TPH^{8015m} (Total Petroleum Hydrocarbon): 100 mg/kg
- Benzene⁸⁶²⁰: 10 mg/kg

It is EPI's policy to evaluate crude oil release sites for the presence of elevated levels of SO_4^{-} and Cl^{-} ions. These inorganic constituents are often present in subsurface soils associated with sour crude releases and/or releases containing a



ENVIRONMENTAL PLUS, INC. Micro-Blaze Mino-Blaze Out State Approved Land Farm and Environmental Services

brine component. Chloride and sulfate contamination of the soil will be evaluated relative to NMWQCC Ground Water Standards, 250 mg/ml and 600 mg/ml respectively.

If there are any questions please call Mr. Ben Miller, or myself, at our office or at (505) 390-0288 and (505) 390-9804, respectively or Mr. Frank Hernandez at (505) 631-3095. All official written communications should be addressed to:

Mr. Frank Hernandez EOTT Energy Pipeline, L.P. PO Box 1660 Midland, TX 79701

Sincerely,

the Stand

John Good EPI Environmental Consultant

cc: Frank Hernandez, LINK Energy – Dist Environmental Supv., w/enclosure Jeff Dann – LINK Energy - Environmental Specialist, w/enclosure Ben Miller, EPI Vice President and General Manager Pat McCasland, EPI Technical Manager Sherry Miller, EPI President file







| District | I |
|----------|---|
| | |

Date:

1/30/04

Phone:

1625 N. French Dr., Hobbs, NM 88240

State of New Mexico Energy Minerals and Natural Resources

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

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

Release Notification and Corrective Action

| OPERATOR | | | | | ☑ Initial Report | □ Final Report | | |
|---------------------------------|-----------------------------------|------------------|-----------------------------------|------------------|---|-----------------------------|---|-------------------|
| Name of Company | | | | Contact | | | | |
| Link Energy | LLC | | | | Frank Hern | andez | | |
| Address | | | | | Telephone N | 0. | | |
| P.O. Box 16 | 60 | | Midland, | TX 79702 | (505) 631-3 | 095 | | |
| Facility Name | e | | | | Facility Type | • | | |
| Atkins 4" G | athering Pip | eline | | | Crude Oil G | athering Pipeline | | |
| Surface Own | er | | | Mineral Owr | ner Lease No. | | | |
| State of New | Mexico | | | NA | | | NA | |
| | | | LC | OCATION | OF RELEA | ASE | | <u></u> |
| Unit Letter | Section | Township | Range | Feet from | Feet from | Longitude | Latitude | County: |
| L | 28 | 208 | 37E | South Line | West Line | W103° 15' 41.465" | N32° 32' 29.264'' | Lea |
| L | | L, | N | ATURE O | F RELEAS | SE | | <u> </u> |
| Type of Rele | ase | | | | Volume of R | elease | Volume Recovered | |
| Crude Oil R | elease and a | ssociated con | nponents | | 50 | bbl | 0 | bbl |
| Source of Re | lease | | | | Date and Ho | ur of Occurrence | Date and Hour of Discovery | |
| 4" Steel Pip | eline | | | | 1/28/04 PM | | 1/28/2004 PM | |
| was Immedia | ate Notice Gr | ven? | Not R | equired | II YES, 10 V | whom? | | |
| By Whom? | | | | cquircu | Date and Hour | | | |
| John Good - | EPI | | | | 1/29/04 8:10 AM | | | |
| Was a Water | course Reach | ed? | | | If YES, Volume Impacting the Watercourse. | | | |
| | | □ Yes | ☑ No | | NA | | | |
| If a Watercon | urse was Impa | acted, Describ | e Fully.* | | | | | |
| | | | | | | | | |
| Describe Cau | use of Probler | n and Remedi | al Action Tal | cen.* | | | | |
| Internal pip | eline corrosi | on | | | | | | |
| Describe Are | Affected or | d Cleanup A | tion Takan * | | | | | |
| 1.133-ft2 su | a Anceleu a rface area af | fected: 50-bb | of product | released. 0 r | ecovered: R(| `RA Non-Exempt N | on-hazardous gross | dv |
| contaminate | d soil was ex | cavated and | transported | to LINK's L | ea Station la | nd farm by EPI. | on nazar dous gross | • 9 |
| | | | | | | | | |
| I hereby certify | y that the inform | mation given at | ove is true and | complete to the | ne best of my k | nowledge and understan | nd that pursuant to NM | OCD rules and |
| health or the er | operators are re vironment. Th | e acceptance of | and/or nie cert a C-141 report | by the NMOCI | Dications and per | norm corrective actions | for releases which may deve the operator of liabi | lity should their |
| operations hav | e failed to ade | quately investig | ate and remed | iate contaminat | ion that pose a | threat to ground wate | r, surface water, human | n health or the |
| environment. | In addition, NM | OCD acceptance | e of a C-141 re | port does not re | elieve the operat | tor of responsibility for a | compliance with any othe | er federal, state |
| or local laws a | nd/or regulation | S. | ۱ | | | | | |
| Signature: | A | ank ! | Scronan | idy_ | | OIL CONSERVA | TION DIVISION | |
| Printed Nam | e: | Frank Hern | andez | | Approved by District Supervisor: | | | |
| Title: | District Env | vironmental S | Supv. | | Approval Da | ate: | Expiration Date: | |
| E-Mail | | | | | <u> </u> | | • • <u> </u> | |
| E-Mail Irank.nernandez@eott.com | | | | Conditions o | of Approval: | Γ | Attached | |

(505) 631-3095

| Elin | kEr | nergy |
|------|-----|-------|
|------|-----|-------|

Incident Date and NMOCD Notified?

1/28/2004 PM

Т

1/29/04 8:10 AM

| | | 1/28/20 | 04 PM 1/29/04 8: | 10 AM | | | |
|--|--------------------------------------|----------------------------------|------------------------------------|---------------------------------|--|--|--|
| SITE: Atkins 4" G | athering Pipeline | | Assigned Site | Reference | 2004-00027 | | |
| Company: | Company: Link Energy LLC | | | | | | |
| Street Address: | Street Address: 5805 East Highway 80 | | | | | | |
| Mailing Address: | ailing Address: P.O. Box 1660 | | | | | | |
| City, State, Zip: | ty, State, Zip: Midland, TX 79702 | | | | | | |
| Representative: | Frank Hern | andez | | _ | | | |
| Representative Teleph | one: (505) 6 <u>31</u> - | 3095 | | | | | |
| Telephone: | | | | | | | |
| Fluid volume released | (bbls): 50 | Recovere | ed (bbls): 0 | | | | |
| | >25 bbls: Noti | fy NMOCD ver | bally within 24 hrs and submit for | m C-141 within | 15 days | | |
| | 5-25 bbls: Submit form C- | 141 within 15 d | ays (Also applies to unauthorized | releases of 50- | 500 mcf Natural Gas) | | |
| Leak, Spill, or Pit (LSP |) Name: | 2004-00027 | 7 | | | | |
| Source of contamination | on: | 4" Steel Pip | peline | | | | |
| Land Owner, i.e., BLM | , ST, Fee, Other: | State of Ne | w Mexico State Land Of | fice - Santa | Fe, NM | | |
| LSP Dimensions: | | 140 x 10 (s | ee Plate 3, Attachments) | | | | |
| LSP Area: | | 1,133 | -ft ² | | | | |
| Location of Reference | Point (RP): | | | | | | |
| Location distance and | direction from RP: | | | | | | |
| Latitude: | | N32° 32' 29 | 9.264" | | | | |
| Longitude: | | W103° 15' | 41.465" | | | | |
| Elevation above mean | sea level: | 3510 | -ft amsl | | | | |
| Feet from South Section | on Line: | 1700 | | | | | |
| Feet from West Section | on Line: | 1057 | | | | | |
| Location - Unit and 1/4 | 1/4: UL- | Ļ | NW 1/4 of SW | 1/4 | | | |
| Location - Section: | | 28 | | | | | |
| Location - Township: | | 20S | | | | | |
| Location - Range: | | 37E | | | | | |
| Surface water body wi | thin 1000' radius of Site | e: | 0 | | | | |
| Surface water body wi | thin 1000' radius of Site | e: | 0 | | | | |
| Domestic water wells v | within 1000' radius of S | lite: | 0 | | | | |
| Domestic water wells | within 1000' radius of S | Site: | 0 | | | | |
| Agricultural water wells | s within 1000' radius of | Site: | 0 | | | | |
| Agricultural water wells | s within 1000' radius of | Site: | 0 | | | | |
| Public water supply we | ells within 1000' radius | of Site: | 0 | | | | |
| Public water supply we | ells within 1000' radius | of Site: | 0 | | | | |
| Depth (ft) from land su | Inface to ground water | (DG): | 40 | | ······································ | | |
| Depth (ft) of contamina | ation (DC): | | 8 | | | | |
| Depth (ft) to ground water (DG - DC = DtGW): 32 | | | | | | | |
| 1. Grour | nd Water | 2. Welli | nead Protection Area | 3. | Distance to Surface Water Body | | |
| If Depth to GW <50 feet: 20 points | | If <1000' from water source, or, | | <200 horizontal feet: 20 points | | | |
| If Depth to GW 50 to 9 | 99 feet: 10 points | source: 20 | points | 200-100 1 | norizontal feet: 10 points | | |
| <u> </u> | If >1000' from water source. or. | | | | | | |
| If Depth to GW >100 feet: 0 points >200' 1 source | | | n private domestic water >1000 h | | 1000 horizontal feet: 0 points | | |
| Ground water Score: 20 We | | Wellhead P | ead Protection Area Scor 0 Surface | | ater Score: 0 | | |
| Site Rank (1+2+3) = 20 | | | | | | | |
| | Total Si | ite Ranking | Score and Acceptable | Concentrat | lions | | |
| Parameter | 20 or > | | 10 | | 0 | | |
| Benzene ¹ | 10 ppm | | 10 ppm | | 10 ppm | | |
| BTEX ¹ | 50 ppm | | 50 ppm | | 50 ppm | | |
| TPH | 100 ppm | | 1000 ppm | | 5000 ppm | | |
| ¹ 100 ppm field VOC h | eadspace measureme | nt may be s | ubstituted for lab analysis | | | | |




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

State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-138 Revised March 17, 1999

> Submit Original Plus 1 Copy to Appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| REQUEST FUR AFFROVAL TO | ACCELI SOLID WAS IE |
|--|---|
| | 4. Generator |
| 1. RCRA Exempt: 🔲 Non-Exempt: 🔀 | Link Energy |
| | 5. Originating Site |
| Verbal Approval Received: Yes 🗌 No 🗌 | Atkins 4" Gathering ref#2004-00027 |
| 2. Management Facility Destination: | 6. Transporter |
| Link Energy Lea Station Land Farm #GW-351 | Environmental Plus, Inc. |
| 3 Address of Facility Operator: Environmental Plus, Inc. | 8. State |
| | New Mexico |
| 7. Location of Material (Street Address or ULSTR) UL-L, N | W4 of the SW4 of Section 28 20S R37E |
| 9. <u>Circle One</u> : | |
| A. All requests for approval to accept oilfield exempt wastes with Generator; one certificate per job. All requests for approval to accept non-exempt wastes must prove the material is not-hazardous and the Generator's cert listing or testing will be approved. | vill be accompanied by a certification of waste from t be accompanied by necessary chemical analysis to ification of origin. No waste classified hazardous by |
| All transporters must certify the | wastes derivered are only those consigned for transport. |
| BRIEF DESCRIPTION OF MATERIAL: | |
| Crude Oil Contaminated Soil | |
| | • |
| | 1052 |
| Estimated Volume <u>50</u> cy Known Volume (to be entered l | by the operator at the end of the haul) cy |
| and the second | |
| SIGNATURE Stank Newson of TITLE: Env Waste Management Pacility Authorized Agent | ironmental Coordinator DATE: <u>4-23-04</u> |
| | |
| TTPE OR PRINT NAME: <u>PTANK Hermangez</u> TELEPHC | JNE NU |
| | , second s |
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| | |
| t this space for sidle use | |
| 林氏語 ゆうかだ ひつから 運動 読む話 たかえたかえ あいない キューアルウィット あいとうとうせんひょう はくぶんせん | 토막승규가 운전이 같은 것은 것을 가지 않는 것이다. 이 가지 않는 것이다. 이 가지 않는 것이다. 이 가지 않는 것이 가지 않는 것이다. 이 가지 않는 것이 가지 않는 것이 가지 않는 것이 가지 않 같은 것이 같은 것이 있는 것 |
| APPROVED BY | |
| APPROVED BY: | DATE |
| APPROVED BY: | DATE: |

| ele artes | highlighted calls incl | and values | Link E | nergy LI | LC - Atk | ins 4" C | Satherin | g 2004 | -00027 | Ka: BTEX # | 50 mo/Ko (| 2 = 250 mg | Ker SO4 • F | 500 maño |
|-----------|------------------------|------------|------------------|-------------|------------------|------------------|------------------|--------|----------|------------|------------------|------------------|---------------------|----------|
| Sample | Excavation | Depth | SAMPLE ID: | VOC3 | GRO ³ | DRO ⁴ | TPH ³ | atex* | Bergana | Toluene | EShyl Senzene | Total Xylenes | Cr. | so, |
| Liens | Compary - ca | (1- bash | | <u>5000</u> | mg/Kg | ma/Ke | mg/Kg | maika | morkg | mg/Ka | mg/Kg | mg/X.g | #:9 [/] X9 | mg/Kg |
| 4-Feb | SideWall-NW | 4 | SLA4020404NW/SWC | ļ | 5,0 | 3.0 | 8.0 | 0.100 | 0.020 | 0.620 | 0.020 | 0.040 | | |
| 4-Feb | SideWiell-SW | 2 | SLA4020404SWSWC | ļ | 5.0 | 8.0 | 13.0 | 0.468 | 0.020 | 0.057 | 0.111 | 0.269 | | ļ |
| 4-Feb | SideWall-NE | - | SLAKG20404NESWC | ļ | 5.0 | 19.2 | 24.2 | 0.142 | 0.020 | 0 029 | 0.027 | 0.076 | | |
| é-Feb | SideWall-SE | 2 | SLA40204046EGWC | <u> </u> | \$.7 | 4.6 | 12.4 | 0,484 | 0.020 | C.032 | 9.108 | 0 304 | | |
| 4-Feb | Bottomt wie-N | 5 | SLAI020404N8HC-3 | | 9.7 | 483.0 | 212.1922 | 1,048 | 0.020 | 0.043 | 9.274 | 0.671 | 34,7 | 30.6 |
| 4-9eb | Bosomhole S | > | SLA402040458HC-3 | ļ | \$31,0 | 1240.0 | 12210 | 0,484 | 0 020 | C.067 | 9.118 | G 288 | 28.0 | 111.0 |
| | | | | | | | | | ļ | | | | | |
| 25-F#5 | Bottomician S | 5 | SLA4022604T1-5 | L | 13.3 | 2130.0 | - gigi.s | | L | | Į | | | |
| 25-Feb | Dottorshipke-3 | 7 | SLA4022504T3-7 | ļ | 5.0 | 1510.6 | 2. 1621.0 | | | | L | | | |
| 25-Feb | Elotion stole-S | \$0 | SLA4022504T1-10 | <u> </u> | 5.0 | 2406,0 | CONTRACTO | | I | | L | | | |
| 25-Feb | Bottom-tele-SM | 5 | R: A4022504T2-5 | | 13.9 | 2230.0 | 1 | | | | | | | |
| 25-Fab | BettamHole-SM | 7 | SLA402250473-7 | | 5.0 | 1640.0 | | | | | | | | |
| 25 Feb | BottomHole-SN | 10 | SLA402250472-10 | | 5.0 | 8 15. C | | | | | | | | |
| 25 Feb | BotionHale M | \$ | 82,A4022534T3-5 | | 5.0 | 648. 0 | | | | | | | | |
| 25 Feb | BottomHole-M | ? | SI, A402250473-7 | | 5.0 | 774.0 | - 7 m. | | | | | | | i |
| 25.Fab | Bottom/sole-M | 10 | SLA402250473-10 | | 5.0 | 2.5 | 7,5 | | | |] | | | |
| 25 Feb | Bottomitoie-NN | 7 | SLA4022504T4-7 | | 95.1 | \$52.0 | | | [| | | | | |
| 25.Feb | BottomHole-NM | 50 | SLA4022564T4-10 | | 50 | 729.0 | 1000 | | 1 | | | | | |
| 25-Feb | BottomHole-N | 7 | St. 4402250475-7 | | 50 | 185.0 | 1 | | T | | | | | |
| 25-Feb | Settom-tole-N | 10 | 3LA4022504T5-10 | | 5.0 | 135.0 | 1.00 | | | | | | | |
| 25-F#b | DotternHole-NE | 2 | BLA402250418-2 | 1 | 5.0 | 72.0 | 77.0 | | 1 | | | | | l |
| 25-Feb | SuttornHole NE | 5 | SLA4022504 T6-5 | 1 | 50 | 17.1 | 38.1 | | <u> </u> | | | | | |
| 21-Feb | bollomnoko NE | 7 | SI #4022504T8-7 | | 5.0 | 66.9 | 70,8 | | 1 | | | | | |
| | | | | | | | | | | | | | | |
| | | | | 1 | | | | | | | | | | |

BTEX = Sear of CoC's (Detection Limits = 0.02 mg/Kg to 0.4 mg/Kg to late! Xrienes) Note: Reported antection limits are considered "da minimus" values and are inducted in the TPH and BTEX summations.



• Page 2



1. OWNER OF WELL

| Name: Plains Work Phone: |
|--|
| Contact: Home Phone: |
| Address: 333 Clay Street Suite 1600 |
| City <u>Houston</u> , State: <u>Texas</u> Zip <u>77002</u> |
| 2. LOCATION OF WELL (A, B, C, or D required, E or F if known) |
| A. 1/4 1/4 Section: Township: Range: N.M.P.M. in . . Monument N.M. Lea County. B. X = feet, Y = feet, N.M. Coordinate System Zone in the Grant. |
| U.S.G.S. Quad Map C. Latitude: 32d 32m 31N Longitude: 103 d 15 m 41w D. East (m), North (m), UTM Zone 13, NAD (27 or 83) E. Tract No. , Map No. of the Hydrographic Survey F. Lot No. , Block No. of Unit/Tract of the |
| G. Other: |
| 3. DRILLING CONTRACTOR |
| License Number: WD1478 Name: Straub Corporation Agent: Edward Bryan Home Phone: |
| Mailing Address: P.O. Box 192 |
| City: Stanton State: TX Zip: 79782 |
| 4. DRILLING RECORD |
| Drilling began <u>unknown</u> Completed: <u>unknown</u> ; Type tools: <u>Air Rotary Drilling Rig;</u> Size of hole <u>unknown</u> in.; Total depth of well <u>unknown</u> Completed well is:(shallow, artesian); |
| File Number: Trn Number: |
| Form: wr-20 page 1 of 4 |

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield From To in feet water-bearing formation (GPM)

6. RECORD OF CASING

| Diameter (inches) | Pounds per ft. | Threads per in. | Depth Top | in Feet Bottom | Length (feet) | Type of Shoe | Perforations From To |
|----------------------|-------------------|-----------------|--------------|-------------------|------------------|--------------|-------------------------|
| | | | | | | | |

7. RECORD OF MUDDING AND CEMENTING

| Depth in Fe | eet | Hole | Sacks | Cubic Feet | Method of Placement |
|-------------|-----|----------|--------|------------|---------------------|
| From | То | Diameter | of mud | | |

8. PLUGGING RECORD

| Plugging C Address: <u>P</u> Plugging M | Contractor: .O. Box 19 fethod: <u>Po</u> | Straub Corporation 22, Stanton, Texas 79782 uring Bentonite Holeplug/Cement Grout | |
|---|--|---|-----|
| Date Well. | Plugged : | 6-28-05 | |
| Plugging a | pproved by | <i>y</i> : | |
| | | State Engineer Representative | *** |
| No. Depth in Feet | | Cubic Feet of Cement | |
| 0` | 2 | .25 Cement | |
| 2 | 15 | 3 bags of hole plug | |
| File Numb | er: | Trn Number: | |

Form: wr-20 page 2 of 4

| 9. LOG OF HO | LE | |
|---------------|-----------|--|
| Depth in Feet | Thickness | Color and Type of Material Encountered |
| From To in fe | et | |
| 0 3 | | Tan fine sand- caliche – clay layer. |
| 3 8 | | Tan silty sand $-$ clay |
| <u>8 9</u> | | Tan fine sand – sand stone |
| <u>9 10</u> | | Red fine sand |
| 10 14 | | Tan fine sand - clay |
| 14 15 | | Red fine sand |
| <u>TD 15</u> | | |
| File Number: | | Trn Number: |
| | | Form: wr-20 page 3 of 4 |

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

| | ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، ، |
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| The undersigned hereby certifies that, to the best of his | knowledge and |
| belief the foregoing is a true and correct record of the a | hove described |
| Lala | ~ ~ · • · · · • · · · · · · · · · · · · |
| noie. | |
| Edward Bryan | <u>6-28-05</u> |
| Driller (mm/dd/year) | |
| Dimer (minud year) | |
| | n die ein wie die verde zweize die die zie die zie die bij die |
| FOR STATE ENGINEER USE ONLY | |
| Qued FIVE FSE Lies | · Location No |
| Quad; r w L; r S L; Use | ; Location ino. |
| File Number: Trn Number: | |
| Form wr.20 r | page 4 of 4 |
| FOILL WI-20 P | 2650 T 01 T |

1. OWNER OF WELL

| Name: Plains | Work Phone: |
|---|--|
| Contact: Home Phon | ie: |
| Address: 333 Clay Street Suite 1600 | |
| | |
| City Houston, State: Texas | Zip <u>77002</u> |
| | |
| LOCATION OF WELL (A, B, C, or D re | equired, E or F if known) |
| | |
| A1/41/41/4 Section: To | ownship: Range: N.M.P.M. |
| n Monument N.M. Lea County | <u>Y.</u> |
| 3. $X = feet, Y =$ | feet, N.M. Coordinate System |
| Zone in the | Grant. |
| J.S.G.S. Quad Map | |
| C. Latitude: <u>32</u> d <u>32</u> m <u>31N</u> I | Longitude: <u>103</u> d <u>15</u> m <u>41w</u> |
| D. East (m), North | (m), UTM Zone 13, NAD (27 or 83) |
| E. Tract No, Map No of the | Hydrographic Survey |
| Lot No, Block No of Unit/T | fract of the |
| Subdivision recorde | ed in County. |
| 3. Other: | |
| H. Give State Engineer File Number if existir | ng well: |
| . On land owned by (required): | |
| | |
| 3. DRILLING CONTRACTOR | |
| | |
| License Number: WD1478 | |
| Name: Straub Corporation | Work Phone: <u>432-756-3489</u> |
| Agent: Edward Bryan Home Pl | hone: |
| | |
| Mailing Address: P.O. Box 192 | |
| | |
| City: Stanton | State: TX Zip: 79782 |
| | |
| 4. DRILLING RECORD | |
| | • |
| Drilling began unknown Completed: unknown | own ; Type tools: Air Rotary Drilling Rig: |
| | () () () () () () () () () () () () () (|

Size of hole <u>unknown</u> in.; Total depth of well <u>unknown</u> Size of hole <u>unknown</u> in.; I biai deput of well <u>unknown</u>; Completed well is: _______(shallow, artesian); Depth to water upon completion of well: ______ft. File Number: ______Trn Number: ______ Form: wr-20 page 1 of 4

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield From To in feet water-bearing formation (GPM)

......

6. RECORD OF CASING

| Diameter (inches) | Pounds per ft. | Threads per in. | Depth Top | in Feet Bottom | Length (feet) | Type of Shoe | Perforations From To |
|----------------------|-------------------|-----------------|--------------|-------------------|------------------|--------------|-------------------------|
| | | | | | | | |

7. RECORD OF MUDDING AND CEMENTING

| Depth in I | Feet | Hole | Sacks | Cubic Feet | Method of Placement |
|------------|------|----------|--------|------------|---------------------|
| From | То | Diameter | of mud | | |

8. PLUGGING RECORD

| Plugging C | ontractor: S | Straub Corporation | |
|------------------|-------------------|--------------------------------------|--|
| Address: P | .O. Box 192 | 2, Stanton, Texas 79782 | |
| Plugging N | fethod: Pou | ring Bentonite Holeplug/Cement Grout | |
| Date Well | Plugged : | 6-28-05 | |
| Plugging a | pproved by: | | |
| | | State Engineer Representative | |
| No. Depth Top | in Feet Bottom | Cubic Feet of Cement | |
| 0 | 2 | .25 Cement | |
| 2 | 15 | 3 bags of hole plug | |
| File Numb | er: | Trn Number: | |

Form: wr-20 page 2 of 4

Atkins Gathering # 4, SB-2

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

9. LOG OF HOLE

| Depth | in Feet | Thickness | Color and Type of Material Encountered |
|-------|---------|-----------|--|
| From | To in f | feet | |
| 0 | 7 | | Tan fine sand - caliche- clay layers |
| 7 | 11 | | Tan silty sand – sandstone loose |
| 11 | 12 | | Red fine sand |
| 12 | 15 | | Tan fine sand – sandstone layers |
| | | | |

File Number: _____ Trn Number: _____

Form: wr-20 page 3 of 4

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

| The undersigned hereby certifies that, to the best of his knowledge and | |
|---|--|
| belief, the foregoing is a true and correct record of the above described | |
| hole. | |
| Edward Bryan 6-28-05 | |
| Driller (mm/dd/vear) | |
| | |
| FOR STATE ENGINEER LISE ONLY | |
| FOR STATE ENGINEER USE ONLT | |
| Quad; FwL; FSL; Use; Location No | |
| File Number: I'm Number: | |
| Form: wr-20 page 4 of 4 | |

Atkins Gathering # 4, SB-3

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

| 1. OWNER OF WELL |
|--|
| Name: Plains Work Phone: |
| Contact: Home Phone: |
| Address: 333 Clav Street Suite 1600 |
| |
| City Houston, State: Texas Zip 77002 |
| 2. LOCATION OF WELL (A, B, C, or D required, E or F if known) |
| A1/41/4 Section:Township:Range:N.M.P.M. |
| B. $X = $ feet, $Y = $ feet, N.M. Coordinate System |
| Zone in the Grant. |
| U.S.G.S. Ouad Map |
| C. Latitude: 32d 32m 31N Longitude: 103 d 15 m 41w |
| D. East (m), North (m), UTM Zone 13, NAD (27 or 83) |
| E. Tract No. , Map No. of the Hydrographic Survey |
| F. Lot No. , Block No. of Unit/Tract of the |
| Subdivision recorded in County. |
| G. Other: |
| H. Give State Engineer File Number if existing well: |
| I. On land owned by (required): |
| 3. DRILLING CONTRACTOR |
| License Number: WD1478 |
| Name: Straub Corporation Work Phone: 432-756-3489 |
| Agent: Edward Bryan Home Phone: |
| Mailing Address: P.O. Box 192 |
| City: Stanton State: TX Zip: 79782 |
| 4. DRILLING RECORD |
| Drilling began <u>unknown</u> Completed: <u>unknown</u> ; Type tools: <u>Air Rotary Drilling Rig;</u> Size of hole <u>unknown</u> in.; Total depth of well <u>unknown</u> Completed well is: <u>(shallow, artesian);</u> Depth to water upon completion of well: <u>ft.</u> File Number: <u>Trn Number</u> |

Form: wr-20 page 1 of 4

| 5. PRINCIPA | 5. PRINCIPAL WATER-BEARING STRATA | | | | | | | |
|---|--|---|----------------------------------|---------------------------|------------------|--------------|-------------------------|--|
| Depth in Feet From To in fe | Thicknes et water-l | s Description bearing form | on of Estimation (Gl | mated Yiel PM) | d | | | |
| | | | | | | | | |
| 6. RECORD | OF CAS | ING | | | | | | |
| Diameter (inches) | Pounds per ft. | Threads per in. | Depth Top | in Feet Bottom | Length (feet) | Type of Shoe | Perforations From To | |
| 7. RECORD Depth in Feet | OF MUI | DDING AN Hole | – D CEME Sack | E NTING cs Cubi | c Feet | Metho | d of Placement | |
| | | | | | | | | |
| 8. PLUGGIN | G RECO | ORD | | | | | | |
| Plugging Con Address: <u>P.O</u> Plugging Met Date Well Ph | tractor: <u>S</u> Box 192 hod: <u>Pou</u> igged : | traub Corpo <u>Stanton, T</u> ring Benton <u>6-28-05</u> | oration exas 797 ite Holep | /82 lug/Cemer | nt Grout | | | |
| Plugging app | roved by: | State E | ngineer R | epresentat | ive | | | |
| No. Depth in Top I | Feet Bottom | Cubic F | feet of Ce | ment | | | | |
| <u> 0 </u> | <u>2</u> 15 | <u>.25 Ce</u> 3 bags (| ment of hole pl | lug | | | | |
| File Number: | | 1 | îm Numb Fo | er: orm: wr-20 | page 2 of | <u> </u> | | |

9. LOG OF HOLE

| Feet Thickness | Color and Type of Material Encountered |
|----------------|---|
| To in feet | |
| 3 | Red fine sand |
| 12 | Tan fine sand – caliche- clay layers |
| 15 | Tan fine sand |
| 15 | |
| | Feet Thickness To in feet 3 12 15 15 |

File Number: _____ Trn Number: ____

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Form: wr-20 page 3 of 4

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

| ······································ | |
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| The undersigned hereby certifies that to the best | of his knowledge and |
| halisf the foregoing is a true and correct record of | f the should described |
| bener, the foregoing is a true and correct record o | i me above described |
| hole. | |
| Edward Bryan | <u>6-28-05</u> |
| Driller (mm/dd/year) | |
| | |
| FOR STATE ENGINEER USE ONLY | |
| FUR STATE ENGINEER USE UNLY | . |
| Quad; FWL; FSL; Use | ; Location No |
| File Number: Trn Number: | |
| Form: v | vr-20 page 4 of 4 |
| • | |

1. OWNER OF WELL

| Name: Plains | Work Phone: |
|---|--|
| Contact: Home Ph | ione: |
| Address: 333 Clay Street Suite 1600 | |
| · | |
| City <u>Houston</u> , State: <u>Texas</u> | Zip <u>77002</u> |
| A LOCATION OF WELL (A. P. C | neguined E on Eiflingenn) |
| 2. LUCATION OF WELL (A, B, C, OF L | required, E or F ii known) |
| A. 1/4 1/4 1/4 Section: | Township: Range: N.M.P.M. |
| in . Monument N.M. Lea Cou | inty. |
| B. $\overline{X} = $ feet, $\overline{Y} = $ | feet, N.M. Coordinate System |
| Zone in the | Grant. |
| U.S.G.S. Quad Map | |
| C. Latitude: <u>32</u> d <u>32</u> m <u>31N</u> | Longitude: <u>103 d 15 m 41w</u> |
| D. East (m), North | (m), UTM Zone 13, NAD (27 or 83) |
| E. Tract No, Map No of the | Hydrographic Survey |
| F. Lot No, Block No of Uni | t/Tract of the |
| Subdivision reco | rded in County. |
| G. Other: | |
| H. Give State Engineer File Number if exist | sting well: |
| I. On land owned by (required): | |
| 2 DBH I INC CONTRACTOR | |
| 3. DRILLING CONTRACTOR | |
| License Number: WD1478 | |
| Name: Straub Corporation | Work Phone: 432-756-3489 |
| Agent: Edward Bryan Home | Phone: |
| | |
| Mailing Address: P.O. Box 192 | |
| 0 | |
| City: Stanton | State: TX Zip: 79782 |
| - | |
| 4. DRILLING RECORD | |
| | |
| Drilling began unknown Completed: un | known ; Type tools: Air Rotary Drilling Rig; |
| Size of holeunknown in.; Total deput | h of well <u>unknown</u> |
| Completed well is: (sl | hallow, artesian): |

filow, artesian);

Form: wr-20 page 1 of 4

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield From To in feet water-bearing formation (GPM)

-----_____ 6. RECORD OF CASING Diameter Depth in Feet Length Type of Shoe Perforations Pounds Threads per in. (inches) per ft. Top Bottom (feet) From To 7. RECORD OF MUDDING AND CEMENTING Depth in Feet Hole Sacks Cubic Feet Method of Placement From To Diameter of mud ____ 8. PLUGGING RECORD Plugging Contractor: Straub Corporation Address: P.O. Box 192, Stanton, Texas 79782 Plugging Method: Pouring Bentonite Holeplug/Cement Grout Date Well Plugged : 6-29-05 Plugging approved by: State Engineer Representative No. Depth in Feet Cubic Feet of Cement Top Bottom 0 2 .25 Cement . 2 20 4 bags of hole plug File Number: _____ Trn Number: ____ Form: wr-20 page 2 of 4

9. LOG OF HOLE

| Depth in | Feet Thickness | Color and Type of Material Encountered |
|----------|----------------|--|
| From | To in feet | |
| 0 | 3 | Red fine sand |
| 3 | 18 | Tan silty sand – caliche – clay layers |
| 18 | 19 | Red fine sand with clay |
| 19 | 20 | Red fine sand with clay |
| TD | 20 | |

File Number: _____ Trn Number: _____ Form: wr-20 page 3 of 4

| Atkins | Gathering | # | 4, | SB-4 |
|--------|-----------|---|----|------|
|--------|-----------|---|----|------|

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

| The undersigned hereby certifies that, to the best of his knowledge and |
|---|
| belief, the foregoing is a true and correct record of the above described |
| hole. |
| Edward Brvan 6-29-05 |
| Driller (mm/dd/year) |
| |
| FOR STATE ENGRIEED LISE ONLY |
| FOR STATE ENGINEER USE UNLT |
| Quad; FWL; FSL; Use; Location No |
| File Number: Trn Number: |
| Form: wr-20 page 4 of 4 |

1. OWNER OF WELL

| Name: Plains | Work Phone: |
|---|--|
| Contact: Home F | Phone: |
| Address: 333 Clay Street Suite 1600 | |
| City <u>Houston</u> , State: <u>Texas</u> | Zip <u>77002</u> |
| 2. LOCATION OF WELL (A, B, C, or | D required, E or F if known) |
| A1/41/4 Section: | _ Township: Range: N.M.P.M. |
| in Monument N.M. Lea Co | unty. |
| B. $X = feet, Y =$ | feet, N.M. Coordinate System |
| Zone in the | Grant. |
| U.S.G.S. Quad Map | |
| C. Latitude: $32d 32m 31N$ | Longitude: <u>103</u> <u>d 15</u> m <u>41w</u> |
| D. East (m), North | (m), UTM Zone 13, NAD (27 or 83) |
| E. Tract No, Map No of th | e Hydrographic Survey |
| F. Lot No, Block No of Ur | nit/Tract of the |
| Subdivision rec | orded in County. |
| G. Other: | |
| H. Give State Engineer File Number if ex | isting well: |
| I. On land owned by (required): | |
| | |
| 3. DRILLING CONTRACTOR | |
| | |
| License Number: WD1478 | |
| Name: Straub Corporation | Work Phone: 432-756-3489 |
| Agent: Edward Bryan Hom | e Phone: |
| | |
| Mailing Address: P.O. Box 192 | |
| | |
| City: Stanton | State: <u>TX</u> Zip: <u>79782</u> |
| 4. DRILLING RECORD | |
| Drilling began <u>unknown</u> Completed: <u>u</u> Size of hole <u>unknown</u> in : Total det | nknown ; Type tools: <u>Air Rotary Drilling Rig;</u> |

Size of hole <u>unknown</u> in.; Total depth of well <u>unknown</u> Completed well is: ______ (shallow, artesian); Depth to water upon completion of well: ______ ft. File Number: ______ Trn Number: ______ Form: wr-20 page 1 of 4

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield From To in feet water-bearing formation (GPM)

6. RECORD OF CASING

| Diameter | Pounds | Threads | Depth | in Feet | Length | Type of Shoe | Perforations |
|----------|---------|---------|-------|---------|--------|--------------|--------------|
| (inches) | per ft. | per in. | Тор | Bottom | (feet) | | From To |

7. RECORD OF MUDDING AND CEMENTING

| Depth in Fe | et | Hole | Sacks | Cubic Feet | Method of Placement |
|-------------|----|----------|--------|------------|---------------------|
| From | То | Diameter | of mud | | |

8. PLUGGING RECORD

| Plugging C Address: <u>P</u> Plugging M Date Well | ontractor: .O. Box 19 1ethod: <u>Po</u> Plugged : | Straub Corporation 22. Stanton, Texas 79782 uring Bentonite Holeplug/Cement Grout 6-29-05 | |
|--|--|--|--|
| Plugging a | pproved by | y: | |
| | | State Engineer Representative | |
| No. Depth Top | in Feet Bottom | Cubic Feet of Cement | |
| 0 | 2 | .25 Cement | |
| 2 | 2 24 5 bags of hole plug | | |
| File Numb | er: | Trn Number: | |

Form: wr-20 page 2 of 4

| OF HOLE | |
|----------------|---|
| Feet Thickness | Color and Type of Material Encountered |
| To in feet | |
| 4 | Tan fine sand – claiche – clay layers |
| 9 | Tan silty sand – clay |
| 11 | Tan fine sand – red sand – clay layers |
| 21 | Red fine sand |
| 23 | Tan silty sand – sandstone |
| 24 | Pink limestone |
| 24 | |
| | OF HOLE Feet Thickness To in feet 4 9 11 21 23 24 24 |

File Number: _____ Trn Number: _____ Form: wr-20 page 3 of 4

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

| The undersigned hereby certifies that, to the best of his knowledge and |
|---|
| belief, the foregoing is a true and correct record of the above described |
| hole. |
| Edward Bryan 6-29-05 |
| |
| Druler (mir/du/year) |
| *************************************** |
| FOR STATE ENGINEER USE ONLY |
| Ouad : FWL : FSL : Use : Location No. |
| File Number: |
| |
| rom: wr-20 page 4 of 4 |

1. OWNER OF WELL

| Name: Plains | Work Phone: | | | |
|---|---|--|--|--|
| ontact: Home Phone: | | | | |
| Address: 333 Clay Street Suite 1600 | | | | |
| City Houston State: Texas Zit | 0 77002 | | | |
| | - <u> </u> | | | |
| 2. LOCATION OF WELL (A, B, C, or D requ | uired, E or F if known) | | | |
| A1/41/41/4 Section: Towr | nship: Range: N.M.P.M. | | | |
| in Monument N.M. Lea County. | | | | |
| B. X = feet, Y = | feet, N.M. Coordinate System | | | |
| Zone in the | Grant. | | | |
| U.S.G.S. Quad Map | | | | |
| C. Latitude: $32d 32m 31N$ Lor | $\frac{103}{100}$ d $\frac{15}{100}$ m $\frac{41}{100}$ | | | |
| D. East (m), North (m) |), UIM Zone 13, NAD $(27 \text{ or } 83)$ | | | |
| E. I ract No, Map No of the | Hydrographic Survey | | | |
| r. Lot No, Block No of Unit/ I fac | of the | | | |
| G Other: | County. | | | |
| H. Give State Engineer File Number if existing y | vell• | | | |
| I On land owned by (required): | | | | |
| n on and owned by (required). | | | | |
| 3. DRILLING CONTRACTOR | | | | |
| License Number: WD1478 | | | | |
| Name: Straub Corporation | Work Phone: <u>432-756-3489</u> | | | |
| Agent: Edward Bryan Home Phon | e: | | | |
| Mailing Address: P.O. Box 192 | | | | |
| City: <u>Stanton</u> | State: <u>TX</u> Zip: <u>79782</u> | | | |
| 4. DRILLING RECORD | | | | |
| Drilling began unknown Completed: unknown | n; Type tools: Air Rotary Drilling Rig: | | | |
| Size of hole <u>unknown</u> in.; Total depth of w | vell unknown | | | |

Drilling began <u>unknown</u> Completed: <u>unknown</u>; Type tools: <u>Air Rotary Drilling Ri</u> Size of hole <u>unknown</u> in.; Total depth of well <u>unknown</u> Completed well is: <u>(shallow, artesian);</u> Depth to water upon completion of well: <u>ft.</u> File Number: <u>Trn Number:</u> Form: wr-20 page 1 of 4

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield From To in feet water-bearing formation (GPM)

6. RECORD OF CASING

| Diameter (inches) | Pounds per ft. | Threads per in. | Depth Top | in Feet Bottom | Length (feet) | Type of Shoe | Perforations From To | |
|----------------------|-------------------|-----------------|--------------|-------------------|------------------|--------------|-------------------------|--|
| | | | | | | | | |

7. RECORD OF MUDDING AND CEMENTING

| Depth in l | Feet | Hole | Sacks | Cubic Feet | Method of Placement |
|------------|------|----------|--------|------------|---------------------|
| From | То | Diameter | of mud | | |

8. PLUGGING RECORD

| Plugging Cor | ntractor: | Straub Corporation | |
|--------------|-----------|---------------------------------------|--|
| Address: P.O | . Box 19 | 2, Stanton, Texas 79782 | |
| Plugging Me | thod: Pou | uring Bentonite Holeplug/Cement Grout | |
| Date Well Ph | ugged : | 6-28-05 | |
| Plugging app | roved by | ·· | |
| | | State Engineer Representative | |
| No. Depth in | Feet | Cubic Feet of Cement | |
| Top | Bottom | | |
| 0 | 2 | .25 Cement | |
| 2 | 20 | 4 bags of hole plug | |
| File Number: | : | Trn Number: | |

Form: wr-20 page 2 of 4

9. LOG OF HOLE

| Depth | in Feet | Thickness | Color and Type of Material Encountered |
|---------|---------|--|--|
| From | To in f | eet | |
| 0 | 3 | | Red fine sand |
| 3 | 6 | | Tan fine sand – caliche- clay layers |
| 6 | 11 | | Tan fine sand- caliche |
| 11 | 20 | | Tan fine sand – caliche |
| TD | 20 | | |
| File Ni | ımber: | an a | Trn Number: |
| | | | Form. wi-20 page 5 of 4 |

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

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| The undersigned hereby certifies that, to the best of hi | s knowledge and |
| belief, the foregoing is a true and correct record of the | above described |
| hole. | |
| Edward Bryan | 6-28-05 |
| Deiller (mm/dd/weer) | <u> </u> |
| Dimer (milvou year) | |
| | |
| FOR STATE ENGINEER USE ONLY | |
| Quad ; FWL ; FSL ; Use | ; Location No. |
| File Number: Trn Number: | |
| Exam | and of t |
| Form: wr-20 | u page 4 01 4 |

1. OWNER OF WELL

| Name: Plains Work Phone: |
|--|
| Contact: Home Phone: |
| Address: 333 Clay Street Suite 1600 |
| |
| City Houston, State: Texas Zip 77002 |
| 2. LOCATION OF WELL (A, B, C, or D required, E or F if known) |
| A. 1/4 1/4 1/4 Section: Township: Range: N.M.P.M. |
| in . Monument N.M. Lea County. |
| B. X = feet, Y = feet, N.M. Coordinate System |
| Zone in the Grant. |
| U.S.G.S. Quad Map |
| C. Latitude: 32d 32m 31N Longitude: 103 d 15 m 41w |
| D. East (m), North (m), UTM Zone 13, NAD (27 or 83) |
| E. Tract No. , Map No. of the Hydrographic Survey |
| F. Lot No of Unit/Tract of the |
| Subdivision recorded in County. |
| G. Other: |
| H. Give State Engineer File Number if existing well: |
| I. On land owned by (required): |
| 3. DRILLING CONTRACTOR |
| License Number: WD1478 |
| Name: Straub Corporation Work Phone: 432-756-3489 |
| Agent: Edward Bryan Home Phone: |
| |
| Mailing Address: P.O. Box 192 |
| City: State: TX Zip: 79782 |
| 4. DRILLING RECORD |
| |
| Drilling began unknown Completed: unknown ; Type tools: Air Rotary Drilling Rig; |
| Size of noie <u>unknown</u> in.; I otal depth of well <u>unknown</u> |
| Completed well is: (shallow, artesian); |
| Depin to water upon completion of well: II. |
| rue number: im number: |
| rorm: wr-20 page 1 of 4 |

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield From To in feet water-bearing formation (GPM)

____ _____ 6. RECORD OF CASING Depth in Feet Length Type of Shoe Perforations Diameter Pounds Threads From To (inches) per ft. per in. Top Bottom (feet) 7. RECORD OF MUDDING AND CEMENTING Depth in Feet Hole Sacks Cubic Feet Method of Placement From To Diameter of mud _____ ____ -----8. PLUGGING RECORD Plugging Contractor: Straub Corporation Address: P.O. Box 192, Stanton, Texas 79782 Plugging Method: Pouring Bentonite Holeplug/Cement Grout Date Well Plugged : 6-28-05 Plugging approved by: ____

State Engineer Representative

No. Depth in FeetCubic Feet of CementTopBottom022204 bags of hole plug

File Number: _____ Trn Number: _____ 70

Form: wr-20 page 2 of 4

NEW MEXICO OFFICE OF THE STATE ENGINEER WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

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| Nan kara mana | |
| The state of the s | |
| The undersigned hereby certifies that, to the best of h | lis knowledge and |
| belief, the foregoing is a true and correct record of th | e above described |
| hole. | |
| Edward Bruen | 6 30 06 |
| Euwalu Diyali | |
| Driller (mm/dd/year) | |
| | |
| FOR STATE ENGINEER USE ONLY | |
| Ouad : FWL : FSL : Use | : Location No. |
| File Number | |
| rhe Number. | |
| Form: wr-2 | 20 page 4 of 4 |
| | |

Analytical and Quality Control Report

James Ornelas CRA-Midland 2135 South Loop 250 West Midland, TX 79703

Report Date: July 7, 2005

Work Order: 5070120

Project Location:5 Mi S of MonumentProject Name:Akins SweetProject Number:039137

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 |
| 67076 | BH-3 4'-5' | soil | 2005-06-28 | 10:00 | 2005-07-01 |
| 67077 | BH-3 9'-10' | soil | 2005-06-28 | 10:21 | 2005-07-01 |
| 67078 | BH-3 14'-15' | soil | 2005-06-28 | 10:31 | 2005-07-01 |
| 67079 | BH-2 4'-5' | soil | 2005-06-28 | 10:58 | 2005-07-01 |
| 67080 | BH-2 9'-10' | soil | 2005-06-28 | 11:07 | 2005-07-01 |
| 67081 | BH-2 14'-15' | soil | 2005-06-28 | 11:14 | 2005-07-01 |
| 67082 | BH-1 4'-5' | soil | 2005-06-28 | 13:50 | 2005-07-01 |
| 67083 | BH-1 9'-10' | soil | 2005-06-28 | 14:00 | 2005-07-01 |
| 67084 | BH-1 14'-15' | soil | 2005-06-28 | 14:12 | 2005-07-01 |
| 67085 | BH-6 4'-5' | soil | 2005-06-28 | 16:39 | 2005-07-01 |
| 67088 | BH-6 19-20' | soil | 2005-06-28 | 17:11 | 2005-07-01 |
| 67089 | BH-7 4-5' | soil | 2005-06-28 | 17:36 | 2005-07-01 |
| 67092 | BH-7 19-20' | soil | 2005-06-28 | 18:03 | 2005-07-01 |

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 23 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blain Lefturch

Dr. Blair Leftwich, Director

Analytical Report

Sample: 67076 - BH-3 4'-5'

| Analysis: | BTEX | | Analytical N | fethod: | S 8021B | | Prep Method | | |
|-------------------|-------------------|---------------------|----------------|---------|------------|--------|--------------|------------|--|
| QC Batch: | 19359 | | Date Analyzed: | | 2005-07-01 | | Analyzed By: | | |
| Prep Batch: 17014 | | Sample Preparation: | | | 2005-07-01 | | Prepared By: | | |
| | | | RL. | | | | | | |
| Parameter | Flag | | Result | | Units | Di | lution | RL | |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| Ethylbenzene | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| | | | | | | Spike | Percent | Recovery | |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotolu | ene (TFT) | | 0.784 | mg/Kg | g 10 | 0.100 | 78 | 74.5 - 114 | |
| 4-Bromofluo | robenzene (4-BFB) | | 0.790 | mg/Kg | g 10 | 0.100 | 79 | 36.6 - 112 | |

Sample: 67076 - BH-3 4'-5'

| Analysis: QC Batch: Prep Batch: | TPH DRO 19386 17017 | | Analytica Date Ana Sample P | I Method:Mlyzed:20reparation:20 | Iod. 8015B 005-07-03 005-07-01 | | Prep Method: Analyzed By: Prepared By: | N/A DS DS |
|---------------------------------------|----------------------------------|-------|-----------------------------------|---------------------------------|--------------------------------------|------------------------|--|-----------------|
| Parameter | | Flag | RL Result | | Units | Dilution | | RL |
| DRO | | | <50.0 | | mg/Kg | 1 | | 50.0 |
| Surrogate | Flag | Resul | t Units | Dilutio | Spik on Amou | e Percen int Recove | it Rec ry Li | overy mits |
| n-Triacontan | e | 158 | 3 mg/Kg | 1 | 150 | 105 | 57.5 | - 139 |

Sample: 67076 - BH-3 4'-5'

| Analysis: QC Batch: | TPH GRO 19354 | | Analytical Date Anal | Method: yzed: | S 8015B 2005-07-01 | | Prep Method Analyzed By | | |
|------------------------|-------------------|------|-------------------------|------------------|-----------------------|--------|----------------------------|----------|--|
| Prep Batch: | 17014 | | Sample Pr | eparation: | 2005-07-01 | | Prepared I | By: | |
| | | | RL | | | | | | |
| Parameter | Flag | | Result | | Units | Di | lution | RL | |
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 | |
| | | | | | | Spike | Percent | Recovery | |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotolu | ene (TFT) | | 0.865 | mg/Kg | 10 | 0.100 | 86 | 10 - 160 | |
| 4-Bromofluo | robenzene (4-BFB) | | 0.916 | mg/Kg | 10 | 0.100 | 92 | 10 - 174 | |

Sample: 67077 - BH-3 9'-10'

| Analysis: | BTEX | | Analytical N | Aethod: S | S 8021B | | Prep Met | hod: S 5035 |
|---------------|--------------------|------------|--------------|-------------------------|------------|---------|----------|------------------------------|
| QC Batch: | 19359 | | Date Analyz | xed: 2 | 2005-07-01 | | Analyzed | By: |
| Prep Batch: | 17014 | | Sample Prep | paration: 2 | 2005-07-01 | | Prepared | By: |
| | | | | | | | | |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | <u></u> | Pilution | RL |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | C. il. | Descent | Deserver |
| C | | T 1 | ID14 | TT | Dilution | Spike | Percent | Limita |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | |
| Trifluorotolu | iene (TFT) | | 0.936 | mg/Kg | 10 | 0.100 | 94 | 74.5 - 114 |
| 4-Bromofluc | probenzene (4-BFB) | | 0.921 | mg/Kg | 10 | 0.100 | 92 | 36.6 - 112 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 670 | 077 - BH-3 9'-10' | | | | | | | |
| Analysis: | TPH DRO | | Analytica | al Method: | Mod. 8015B | | Prep M | fethod: N/A |
| OC Batch | 19386 | | Date Ana | lyzed: | 2005-07-03 | | Analyz | zed By: DS |
| Pren Batch | 17017 | | Sample F | renaration [.] | 2005-07-01 | | Prenar | ed $\mathbf{B}\mathbf{v}$ DS |
| Trop Buton. | 1,01, | | Sumple I | ropuration. | 2002 07 01 | | Topu | u 25, 20 |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| | | | | | | | | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | D | ilution | Amount | Recovery | Limits |
| n-Triacontar | ne | 147 | mg/Kg | | | 150 | 98 | 57.5 - 139 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 67 | 077 - BH-3 9'-10' | | | | | | | |
| Analysis | TPH GRO | | Analytica | I Method | S 8015B | | Pren Met | hod: \$ 5035 |
| OC Batch | 10354 | | Date Anal | lyzed. | 2005-07-01 | | Analyzed | 1100. 55055 I By: |
| Dren Batch | 17014 | | Sample D | renaration: | 2005-07-01 | | Dranarad | By: |
| Thep Baten. | 17014 | | Sample I | cparation. | 2005-07-01 | | Tiepareu | Dy. |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units |] | Dilution | RL |
| GRO | <u>_</u> | | <1.00 | | mg/Kg | | 10 | 0.100 |
| | | | | | ~ ~ | | | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | uene (TFT) | | 1.05 | mg/Kg | 10 | 0.100 | 105 | 10 - 160 |
| 4-Bromofluo | probenzene (4-BFB) | | 1.06 | mg/Kg | 10 | 0.100 | 106 | 10 - 174 |

Sample: 67078 - BH-3 14'-15'

| Analysis: | BTEX | | Analytical M | fethod: | S 8021B | | Prep Method: | |
|---------------|---------------------------------------|--------|--------------|------------|--------------|--------|--------------|--------------|
| QC Batch: | 19359 | | Date Analyz | ed: | 2005-07-01 | | Analyzed | l By: |
| Prep Batch: | 17014 | | Sample Prep | paration: | 2005-07-01 | | Prepared | By: |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | I | Dilution | RL |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | 0.820 | mg/Kg | 10 | 0.100 | 82 | 74.5 - 114 |
| 4-Bromofluo | orobenzene (4-BFB) | | 0.835 | mg/Kg | 10 | 0.100 | 84 | 36.6 - 112 |
| Sample: 67(|)78 - RH-3 14'-15' | | | | | | | |
| Sumplet of | | | | | | | | |
| Analysis: | TPH DRO | | Analytica | I Method: | Mod. 8015B | | Prep N | Method: N/A |
| QC Batch: | 19386 | | Date Ana | lyzed: | 2005-07-03 | | Analy | zed By: DS |
| Prep Batch: | 17017 | | Sample P | reparation | : 2005-07-01 | | Prepar | red By: DS |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | D | ilution | Amount | Recovery | Limits |
| n-Triacontan | le | 157 | mg/Kg | | 1 | 150 | 105 | 57.5 - 139 |
| Sample: 67(|)78 - BH-3 14'-15' | | | | | | | |
| Analysis: | TPH GRO | | Analytical | Method: | S 8015B | | Prep Me | thod: S 5035 |
| QC Batch: | 19354 | | Date Anal | yzed: | 2005-07-01 | | Analyze | d By: |
| Prep Batch: | 17014 | | Sample Pr | eparation: | 2005-07-01 | | Prepared | By: |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| GRO | · · · · · · · · · · · · · · · · · · · | | <1.00 | | ma/Ka | | 10 | 0.100 |

| | | ~~~~~ | | ing/Kg | | 10 | 0.100 |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | 0.921 | mg/Kg | 10 | 0.100 | 92 | 10 - 160 |
| 4-Bromofluorobenzene (4-BFB) | | 0.943 | mg/Kg | 10 | 0.100 | 94 | 10 - 174 |

| Report Date: 039137 | : July 7, 2005 | | w | ork Order: Akins S | 5070120 weet | | Page N 5 Mi S | umber: 5 of 23 S of Monument |
|--|--|-------------|-----------------------------------|--------------------------------------|---|--------|--------------------------------|---|
| Sample: 670 |)79 - BH-2 4'-5' | | | | | | | |
| Analysis: | BTEX | | Analytical N | Method: | S 8021B | | Prep Me | thod: S 5035 |
| QC Batch: | 19359 | | Date Analyz | zed: | 2005-07-01 | | Analyzed | d By: |
| Prep Batch: | 17014 | | Sample Prep | paration: | 2005-07-01 | | Prepared | By: |
| | | | זס | | | | | |
| Parameter | Fl | σ | RESULT | | Units | г | Dilution | RL |
| Benzene | | •5 | <0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | <0.0100 | 1 | mg/Kg | | 10 | 0.00100 |
| Fthylbenzen | e | | <0.0100 | ł | mg/Kg | | 10 | 0.00100 |
| Xylene | • | | < 0.0100 | • | mg/Kg | | 10 | 0.00100 |
| ····· | | | | | | | Descent | D |
| 0 | | T -1 | Descrit | TT-:4- | Dilation | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | | Amount | Recovery | |
| | ene (IFI) | | 0.800 | mg/Kg | 10 | 0.100 | 80 | 74.5 - 114 |
| Analysis: QC Batch: Prep Batch: | TPH DRO 19386 17017 | | Analytica Date Ana Sample F | al Method: alyzed: Preparation | Mod. 8015E 2005-07-03 :: 2005-07-01 | 3 | Prep I Analy Prepa | Method: N/A zed By: DS red By: DS |
| | | | RL | | | | | |
| Parameter | Flag | ŗ | Result | | Units | | Dilution | RL |
| DRO | | , | <50.0 | | mg/Kg | | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | E | Dilution | Amount | Recovery | Limits |
| n-Triacontan | e | 130 | mg/Kg | | 1 | 150 | 87 | 57.5 - 139 |
| Sample: 67(Analysis: QC Batch: Prep Batch: | D79 - BH-2 4'-5' TPH GRO 19354 17014 | | Analytica Date Ana Sample P | l Method: lyzed: reparation: | S 8015B 2005-07-01 2005-07-01 | | Prep Me Analyze Preparec | thod: S 5035 d By: l By: |
| Parameter | Flag | 5 | RESULT | | Units | | Dilution | RL |

| <u>GRO</u> | | <1.00 | | mg/Kg | | 10 | 0.100 |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | 1.09 | mg/Kg | 10 | 0.100 | 109 | 10 - 160 |
| 4-Bromofluorobenzene (4-BFB) | | 0.890 | mg/Kg | 10 | 0.100 | 89 | 10 - 174 |

Sample: 67080 - BH-2 9'-10'

| Analysis: | BTEX | | Analytical M | Method: | S 8021B | | Prep Me | | |
|--------------------------|-------------------|------------|--------------|-------------|--------------|--------|-----------|---------------|--|
| QC Batch: Pren Batch: | 19559 | | Sample Prei | naration. | 2005-07-01 | | Preparec | l By: | |
| Ttep Batem. | 17014 | | Sumple Tre | purution. | 2003 07 01 | | . Topulot | - 29. | |
| | | | RL | | | | | | |
| Parameter |] | Flag | Result | t | Units |] | Dilution | RL | |
| Benzene | ······· | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Toluene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Ethylbenzen | e | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Xylene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| | | | | | | Snike | Percent | Recovery | |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotolu | ene (TFT) | 8 | 0.814 | mg/Kg | 10 | 0.100 | 81 | 74.5 - 114 | |
| 4-Bromofluo | robenzene (4-BFI | B) | 0.798 | mg/Kg | 10 | 0.100 | 80 | 36.6 - 112 | |
| | | | | | | | | | |
| Sample: 670 |)80 - BH-2 9'-10' | | | | | | | | |
| Analysis: | TPH DRO | | Analytic | al Method: | Mod. 8015I | 3 | Prep 1 | Method: N/A | |
| QC Batch: | 19386 | | Date Ana | alyzed: | 2005-07-03 | | Analy | yzed By: DS | |
| Prep Batch: | 17017 | | Sample I | Preparation | : 2005-07-01 | | Prepa | red By: DS | |
| | | | | | | | | | |
| n . | | | RL | | ** * | | Dilat | DI | |
| Parameter | F. | ag | Result | | Units | | Dilution | | |
| | | | <50.0 | | mg/Kg | | 1 | 50.0 | |
| | | | | | | Spike | Percent | Recovery | |
| Surrogate | Flag | Result | Units | D | vilution | Amount | Recovery | Limits | |
| n-Triacontan | e | 122 | mg/Kg | 1 | 1 | 150 | 82 | 57.5 - 139 | |
| | | | | | | | | | |
| | | | | | | | | | |
| Sample: 670 | 080 - BH-2 9'-10' | | | | | | | | |
| Analysis: | TPH GRO | | Analytica | d Method: | S 8015B | | Prep Me | ethod: S 5035 | |
| QC Batch: | 19354 | | Date Ana | lyzed: | 2005-07-01 | | Analyze | d By: | |
| Prep Batch: | 17014 | | Sample P | reparation: | 2005-07-01 | | Prepareo | d By: | |
| | | | RL | | | | | | |

| Parameter | Flag | | Result | | Units | Di | lution | RL |
|---------------------------|------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 |
| Surrogate | | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | | 0.904 | mg/Kg | 10 | 0.100 | 90 | 10 - 160 |
| 4-Bromofluorobenzene (4-B | SFB) | | 0.903 | mg/Kg | 10 | 0.100 | 90 | 10 - 174 |
Sample: 67081 - BH-2 14'-15'

| Analysis: | BTEX | | Analytical N | Aethod: | S 8021B | | Prep Me | thod: \$ 5035 |
|---------------|---------------------|--------|--------------|------------------------|------------|--------|----------|---------------|
| QC Batch: | 19359 | | Date Analyz | zed: 2 | 2005-07-01 | | Analyzed | d By: |
| Prep Batch: | 17014 | | Sample Prep | paration: 2 | 2005-07-01 | | Prepared | By: |
| | | | ~~~~ | | | | | |
| - | | | RL | | . | - | | |
| Parameter | Flag | | Result | | Units | | Dilution | <u></u> |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | Snike | Dercent | Pecoveru |
| Surrogata | | Flag | Recult | Unite | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TET) | Tiag | 0.061 | ma/Ka | 10 | 0.100 | | 74.5 114 |
| 1 Dromofluo | rohonzono (A PEP) | | 0.901 | mg/Kg | 10 | 0.100 | 90 | 74.5 - 114 |
| | robelizelie (4-BFB) | | 0.938 | mg/Kg | 10 | 0.100 | 94 | 50.0 - 112 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 670 |)81 - BH-2 14'-15' | | | | | | | |
| Analysis | | | Analytic | Methody | Mod 2015B | | Dren | Method: N/A |
| Allalysis. | 10286 | | | luzodi | 2005 07 02 | • | Analy | and Buy DS |
| QC Balcii: | 17017 | | Date Alla | ilyzeu: Deservation | 2005-07-03 | | Anary | red Pure DS |
| Рер Баюн: | 1/01/ | | Sample P | reparation | 2003-07-01 | | riepa | ieu by. DS |
| | | | RI | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RI. |
| DRO | 1108 | | < 50.0 | | mg/Kg | | 1 | 50.0 |
| | | · | | | | | * | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | D | ilution | Amount | Recovery | Limits |
| n-Triacontan | e | 136 | mg/Kg | · · · · · · · · · · · | 1 | 150 | 91 | 57.5 - 139 |
| <u> </u> | | | | | | | | |
| | | | | | | | | |
| Samuelas (7) | 01 DTI 9 14, 15, | | | | | | | |
| Sample: 0/ | ю1 - DП-2 14 -15° | | | | | | | |
| Analysis: | TPH GRO | | Analytica | l Method: | S 8015B | | Prep Me | thod: S 5035 |
| OC Batch: | 19354 | | Date Anal | lvzed: | 2005-07-01 | | Analyze | d Bv: |
| Prep Batch: | 17014 | | Sample P | reparation: | 2005-07-01 | | Prepared | Bv: |
| | | | | | | | | · J · |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| GRO | ` | | <1.00 | | mg/Kg | | 10 | 0.100 |
| | | | | | <u> </u> | | | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | 1.08 | mg/Kg | 10 | 0.100 | 108 | 10 - 160 |
| 4-Bromofluo | orobenzene (4-BFB) | | 1.06 | mg/Kg | 10 | 0.100 | 106 | 10 - 174 |

| Sample: 67082 - BH-1 4'-5' Analysis: BTEX QC Batch. Analytical Method: S 8021 B Prep Method: S 5035 Analyzed By: Prep Batch: 17014 Sample Preparation: 2005-07-01 Analyzed By: Parameter Flag Result Units Dilution RL Benzene <0.0100 mg/Kg 10 0.00100 Ehylene <0.0100 mg/Kg 10 0.00100 Ehylene <0.0100 mg/Kg 10 0.00100 Ehylene <0.0100 mg/Kg 10 0.00100 Sylene <0.0100 mg/Kg 10 0.00100 Surrogate Flag Result Units Dilution Amount Recovery Limits Tiffuorotolucene (TFT) Grag Result Units Dilution 78 36.6 - 112 Sample: 67082 - BH-1 4'-5' Analyteal Method: Mod. 8015B Prep Method: N/A QC Batch: 17017 Sample Preparation: 2005-07-03 Analyteal By: DS Parameter Flag Result Units | Report Date: Ju 039137 | uly 7, 2005 | | W | ork Order: Akins Sv | 5070120 weet | Page Number: 8 of 2 5 Mi S of Monume | | | |
|---|---------------------------|-----------------|---------|--------------|------------------------|-----------------|---|----------|--------------|--|
| Analysis: BTEX Date Analyzed: 2005-07-01 2005-07-01 Prep Method: \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | Sample: 67082 | 2 - BH-1 4'-5' | | | | | | | | |
| QC Batch: 19359 Date Analyzed: 2005-07-01 Analyzed By: Prep Batch: 17014 Sample Preparation: 2005-07-01 Prepared By: Parameter Flag Result Units Dilution RL Benzene <0.0100 mg/Kg 10 0.00100 Ethylbenzene <0.0100 mg/Kg 10 0.00100 Surrogate Flag Result Units Dilution Amount Surrogate Flag Result Units Dilution Amount Recovery Limits Surrogate Flag Result Units Dilution Amount Recovery Limits Surrogate Flag Result Units Dilution 78 66 - 112 Sample: 67082 - BH-1 4'-5' Analyzed Mod. 8015B Prep Method: N/A QC Batch: 19386 Date Analyzed: 2005-07-01 Prepared By: DS Prep Batch: 17017 Sample Preparation: 2005-07-01 | Analysis: E | BTEX | | Analytical N | Method: | S 8021B | | Prep Me | thod: S 5035 | |
| Sample Prep Batch: 17014 Sample Preparation: 2005-07-01 Prepared By: RL RL RL Dilution RL Benzene <0.0100 mg/Kg 10 0.00100 Toluene <0.0100 mg/Kg 10 0.00100 Syltene <0.0100 mg/Kg 10 0.00100 Surrogate Flag Result Units Dilution Amount Recovery Limits Trifluorotolene (LFT) 0.785 mg/Kg 10 0.100 79 74.5 - 114 Astromofluorobenzene (4-BFB) 0.777 mg/Kg 10 0.100 79 74.5 - 114 CB atch: 17017 Sample Preparation: 2005-07-03 Analyzed By: DS Sample: 67082 - BH-1 4'-5' Sample Preparation: 2005-07-01 Prep Method: N/A CB atch: 17017 Sample Preparation: 2005-07-01 Prepared By: DS Surrogate Flag Result Units Dilution RL | QC Batch: 1 | 9359 | | Date Analyz | zed: | 2005-07-01 | | Analyze | d By: | |
| RL BarameterFlagResultUnitsDilutionRL benzeneBenzene<0.0100 | Prep Batch: 1 | 7014 | | Sample Prep | paration: | 2005-07-01 | | Prepared | l By: | |
| Parameter Flag Result Units Dilution RL Benzene <0.0100 | | | | RL | | | | | | |
| Benzene < 0.0100 mg/Kg 10 0.00100 Diblene < 0.0100 | Parameter | Flag | | Result | | Units | Ľ | Dilution | RL | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| Ethylbenzene <0.0100 mg/Kg 10 0.00100 Xylene <0.0100 | Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| Xylene<0.0100mg/Kg100.00100SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTrifluorotoluene (TFT)0.786mg/Kg100.1007974.5 - 1144-Bromofluorobenzene (4-BFB)0.777mg/Kg100.1007836.6 - 112Sample: 67082 - BH-1 4'-5'Analysis:TPH DROAnalytical Method:Mod. 8015BPrep Method:N/AQC Batch:19386Date Analyzed:2005-07-03Analyzed By:DSPrep Batch:17017Sample Preparation:2005-07-01Prepared By:DSParameterFlagResultUnitsDilutionRLDRO<50.0 | Ethylbenzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 | |
| SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTifluorotoluene (TFT)0.776mg/Kg100.1007974.5 - 1144-Bromofluorobenzene (4-BFB)0.777mg/Kg100.1007836.6 - 112Sample: 67082 - BH-1 4'-5'Analysis: TPH DROAnalysis: TPH DROQ Analytical Method: Mod. 8015BPrep Method: N/AQC Batch: 19386Date Analyzed: 2005-07-03Analyzed By: DSPrep Batch: 17017Sample Preparation: 2005-07-01Prepared By: DSParameterFlagResultUnitsDilutionRLDRO<50.0 | Xylene | | | <0.0100 | | mg/Kg | | 10 | 0.00100 | |
| SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTrifluorotoluene (TFT)0.786mg/Kg100.1007974.5 · 1144 Bromofluorobenzene (4-BFB)0.777mg/Kg100.1007836.6 · 112Sample: 67082 - BH-1 4'-5'Analysis: TPH DROAnalytical Method:Mod. 8015BPrep Method:N/AQC Batch: 19386Date Analyzed:2005-07-03Analyzed By:DSPrep Batch:17017Sample Preparation:2005-07-01Prepared By:DSResultUnitsDilutionRLDRO<50.0 | | | | | | | Spike | Percent | Recovery | |
| Trifluorotoluene (IF1) 0.786 mg/Kg 10 0.100 79 74.5 - 114 Sample: 67082 - BH-1 4'-5' 0.777 mg/Kg 10 0.100 78 36.6 - 112 Sample: 67082 - BH-1 4'-5' Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A QC Batch: 19386 Date Analyzed: 2005-07-03 Analyzed By: DS Prep Batch: 17017 Sample Preparation: 2005-07-01 Prepared By: DS Parameter Flag Result Units Dilution RL DRO <50.0 | Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| 4-Bromotiuorobenzene (4-BFB) 0.777 mg/Kg10 0.100 7836.6 - 112Sample: 67082 - BH-1 4'-5'Analysis: TPH DRO QC Batch: 19386Analyzed Method: Date Analyzed: 2005-07-03 Sample Preparation: 2005-07-01Prep Method: Prepared By: DSParameterFlagResultUnitsDilutionRLROO<50.0 | Trifluorotoluen | e (TFT) | | 0.786 | mg/Kg | 10 | 0.100 | 79 | 74.5 - 114 | |
| Sample: 67082 - BH-1 4'-5'Analysis:TPH DRO QC Batch:Analytical Method:Mod. 8015B 2005-07-03 2005-07-01Prep Method:N/A Analyzed By:QC Batch:19386 Prep Batch:17017Sample Preparation:2005-07-01Prepared By:DSParameterFlag ResultResultUnitsDilutionRL SpikeDRO<50.0 | 4-Bromonuoro | benzene (4-BFB) | <u></u> | 0.777 | mg/Kg | 10 | 0.100 | /8 | 30.0 - 112 | |
| Analysis:TPH DRO QC Batch:Analytical Method:Mod. 8015B 2005-07-03Prep Method:N/A Analyzed By:DS DS Prep Batch:PrameterFlagResultUnitsDilutionRL 2005DRO<50.0 | Sample: 67082 | 2 - BH-1 4'-5' | | | | | | | | |
| QC Batch:19386 Prep Batch:Date Analyzed:2005-07-03 Sample Preparation:Analyzed By:DS Prepared By:DSParameterFlagResultUnitsDilutionRLDRO<50.0 mg/Kg 150.0SurrogateFlagResultUnitsDilutionRecoveryNarotationInftDilutionAmalyzedSpikePercentRecoverySurrogateFlagResultUnitsDilutionAmountRecoveryLimitsSample:67082 - BH-1 4'-5'Analytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:ParameterFlagResultUnitsDilutionRLParameterFlagResultUnitsDilutionRLGRO<1.00mg/Kg100.1008810 - 100SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTriffuorotoluene (TFT)0.885mg/Kg100.1008810 - 160GRO6.878mg/Kg100.1008810 - 160 | Analysis: 7 | TPH DRO | | Analytica | al Method: | Mod. 8015B | | Prep l | Method: N/A | |
| Prep Batch:17017Sample Preparation:2005-07-01Prepared By:DSParameterFlagResultUnitsDilutionRLDRO < 50.0 mg/Kg1 50.0 SurrogateFlagResultUnitsDilutionAmountRecoveryLimits116mg/Kg1 150 77 $57.5 - 139$ Sample:67082 - BH-1 4'-5'Analysis:TPH GROAnalytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLRLGRO <1.00 mg/Kg100.100SurrogateFlagResultUnitsDilutionRLGRO <1.00 mg/Kg100.1008810 - 1604-Bromofluorobenzene (4-BFB)0.878mg/Kg100.1008810 - 174 | QC Batch: 1 | 9386 | | Date Ana | alyzed: | 2005-07-03 | | Analy | zed By: DS | |
| ParameterFlagResultUnitsDilutionRLDRO < 50.0 mg/Kg1 50.0 SurrogateFlagResultUnitsDilutionAmountRecoverySurrogateFlagResultUnitsDilutionAmountRecoveryn-Triacontane116mg/Kg1 150 77 $57.5 - 139$ Sample: 67082 - BH-1 4'-5'Analysis:TPH GROAnalytical Method:\$ 8015BPrep Method:\$ 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | Prep Batch: 1 | 7017 | | Sample F | Preparation | : 2005-07-01 | | Prepa | red By: DS | |
| ParameterFlagResultUnitsDilutionRLDRO<50.0 | | | | RL | | | | | | |
| DRO<50.0mg/Kg150.0SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsn-Triacontane116mg/Kg11507757.5 - 139Sample: 67082 - BH-1 4'-5'Analysis: TPH GROAnalytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | Parameter | Flag | | Result | | Units | | Dilution | RL | |
| SurrogateFlagResultUnitsDilutionAmountPercentRecoveryLimitsn-Triacontane116mg/Kg11507757.5 - 139Sample: 67082 - BH-1 4'-5'Analysis:TPH GROAnalytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 | |
| SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsn-Triacontane116mg/Kg11507757.5 - 139Sample: 67082 - BH-1 4'-5'Analysis:TPH GROAnalytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | | | | | | | Spike | Percent | Recovery | |
| n-Triacontane116mg/Kg11507757.5 - 139Sample: 67082 - BH-1 4'-5'Analysis:TPH GROAnalytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | Surrogate | Flag | Result | Units | D | vilution | Amount | Recovery | Limits | |
| Sample: 67082 - BH-1 4'-5'Analysis:TPH GROAnalytical Method:\$ 8015BPrep Method:\$ 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | n-Triacontane | | 116 | mg/Kg | | 1 | 150 | 77 | 57.5 - 139 | |
| Analysis:TPH GROAnalytical Method:S 8015BPrep Method:S 5035QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLParameterFlagResultUnitsDilutionRLGRO<1.00 | Sample: 67082 | 2 - BH-1 4'-5' | | | | | | | | |
| QC Batch:19354Date Analyzed:2005-07-01Analyzed By:Prep Batch:17014Sample Preparation:2005-07-01Prepared By:ParameterFlagResultUnitsDilutionRLGRO<1.00 | Analysis: 7 | TPH GRO | | Analytica | l Method: | S 8015B | | Prep Me | thod: S 5035 | |
| Prep Batch:17014Sample Preparation:2005-07-01Prepared By:RLRLDilutionRLParameterFlagResultUnitsDilutionRLGRO<1.00 | QC Batch: 1 | 9354 | | Date Ana | lyzed: | 2005-07-01 | | Analyze | d By: | |
| RL ParameterRL FlagUnitsDilutionRLGRO<1.00 | Prep Batch: 1 | 17014 | | Sample P | reparation: | 2005-07-01 | | Preparec | l By: | |
| ParameterFlagResultUnitsDilutionRLGRO<1.00 | | | | RL | | | | | | |
| GRO<1.00mg/Kg100.100SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTrifluorotoluene (TFT)0.885mg/Kg100.1008810 - 1604-Bromofluorobenzene (4-BFB)0.878mg/Kg100.1008810 - 174 | Parameter | Flag | | Result | | Units | | Dilution | RL | |
| SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTrifluorotoluene (TFT)0.885mg/Kg100.1008810 - 1604-Bromofluorobenzene (4-BFB)0.878mg/Kg100.1008810 - 174 | GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 | |
| SurrogateFlagResultUnitsDilutionAmountRecoveryLimitsTrifluorotoluene (TFT)0.885mg/Kg100.1008810 - 1604-Bromofluorobenzene (4-BFB)0.878mg/Kg100.1008810 - 174 | | | | | | | Spike | Percent | Recovery | |
| Trifluorotoluene (TFT)0.885mg/Kg100.1008810 - 1604-Bromofluorobenzene (4-BFB)0.878mg/Kg100.1008810 - 174 | Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| 4-Bromofluorobenzene (4-BFB) 0.878 mg/Kg 10 0.100 88 10 - 174 | Trifluorotoluen | e (TFT) | | 0.885 | mg/Kg | 10 | 0.100 | 88 | 10 - 160 | |
| | 4-Bromofluoro | benzene (4-BFB) | | 0.878 | mg/Kg | 10 | 0.100 | 88 | 10 - 174 | |

L

Sample: 67083 - BH-1 9'-10'

| Analysis: | BTEX | | Analytical N | Aethod: | S 8021B | | Prep Met | hod: S 5035 |
|--------------|---------------------------------------|--------|--------------|-----------------------|------------|--------------|----------|-----------------|
| QC Batch: | 19359 | | Date Analyz | zed: 2 | 2005-07-01 | | Analyzed | By: |
| Prep Batch: | 17014 | | Sample Prep | paration: 2 | 2005-07-01 | | Prepared | By: |
| | | | | | | | | |
| _ | | | RL | | | _ | | |
| Parameter | Flag | | Result | | Units | L | Vilution | RL |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | <0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | · · · · · · · · · · · · · · · · · · · | | < 0.0100 | | mg/Kg | ······ | 10 | 0.00100 |
| | | | | | | Spiles | Dancont | Decoueru |
| Sumogete | | Flor | Decult | Linita | Dilution | Spike | Percent | Limito |
| Triffugrate | | Flag | A Sult | Units | | Alloulit | Recovery | 74.5 114 |
| | ene (IFI) | | 0.872 | mg/Kg | 10 | 0.100 | 87 95 | 74.5 - 114 |
| 4-Bromonuc | robenzene (4-BFB) | | 0.853 | mg/Kg | 10 | 0.100 | 85 | 30.0 - 112 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 670 |)83 - BH-1 9'-10' | | | | | | | |
| Analysis. | TPH DRO | | Analytics | al Method. | Mod 8015B | 1 | Pren M | lethod: N/A |
| Analysis. | IVSIS: IPH DRU Patabi 10386 | | Date Ana | alvzed | 2005 07 03 | • | Analyz | red By: DS |
| Dren Batch | Datch: 19300 | | Sample E | nyzeu. Fenaration: | 2005-07-03 | | Drepar | ad By: DS |
| Ttep Daten. | 17017 | | Sample | reparation. | 2005-07-01 | | Tiepar | Cuby. D3 |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | ŭ | | <50.0 | | mg/Kg | | 1 | 50.0 |
| ···· | | | | | | | · · | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | D | ilution | Amount | Recovery | Limits |
| n-Triacontan | e | 129 | mg/Kg | | 1 | 150 | 86 | 57.5 - 139 |
| | | | | | | | | · · · · |
| | | | | | | | | |
| Sample: 670 |)83 - BH-1 9'-10' | | | | | | | |
| • | | | | | | | | |
| Analysis: | TPH GRO | | Analytica | l Method: | S 8015B | | Prep Met | hod: S 5035 |
| QC Batch: | 19354 | | Date Ana | lyzed: | 2005-07-01 | | Analyzed | l By: |
| Prep Batch: | 17014 | | Sample P | reparation: | 2005-07-01 | | Prepared | By: |
| | | | | | | | | |
| _ | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 |
| | | | | | | Caller | Descent | Deserver |
| Sumorata | | Ela a | Deault | T Tanàna | D!1.4: | Бріке | Percent | Recovery |
| Triffugrate | iono (TET) | riag | | Units | Dilution | Amount | | |
| A Bromofius | robenzene (4 DED) | | 0.980 | mg/Kg | 10 | 0.100 | 98 07 | 10 - 160 |
| | | | 0.902 | 1116/126 | 10 | 0.100 | סע | 10 - 174 |

Trifluorotoluene (TFT)

4-Bromofluorobenzene (4-BFB)

Sample: 67084 - BH-1 14'-15'

| Analysis: | BTEX | | Analytical N | Method: | S 8021B | | Prep Met | hod: S 5035 |
|---------------|--|------------|--------------|---------------------|--------------|--------|-----------|-------------------|
| QC Batch: | 19359 | | Date Analy: | zed: | 2005-07-01 | | Analyzed | l By: |
| Prep Batch: | 17014 | | Sample Pre | paration: | 2005-07-01 | | Prepared | By: |
| | | | RL | | | | | |
| Parameter | Fla | ag | Result | | Units | Γ | Dilution | RL |
| Benzene | ····; ·· · · · · · · · · · · · · · · · | <u> </u> | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| | ······ | | | | | a 11 | | ~ |
| _ | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | iene (TFT) | | 0.963 | mg/Kg | 10 | 0.100 | 96 | 74.5 - 114 |
| 4-Bromofluc | probenzene (4-BFB) | | 0.943 | mg/Kg | 10 | 0.100 | 94 | 36.6 - 112 |
| | | | | | | | | |
| Sample: 670 | 084 - BH-1 14'-15' | | | | | | | |
| Analysis | TPH DRO | | Analytic | al Method. | Mod 8015B | | Prep N | Aethod N/A |
| OC Batch | 19386 | | Date An | alvzed [.] | 2005-07-03 | | Analy | zed By: DS |
| Pren Batch | 17017 | | Sample I | Preparation | · 2005-07-01 | | Prenar | red By : DS |
| 1.0p 2.000 | | | Sample 1 | | 2000 01 01 | | 110-14 | <i>cu 2)</i> . 20 |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| | | | | | | Spile | Doroont | Decovery |
| Surrogata | Flag | Pacult | Linite | П | vilution | Amount | Percent | Limita |
| n-Triacontan | 1 lag | | ma/Ka | D | 1 | 150 | | 57.5 120 |
| | | 141 | iiig/Kg | , | 1 | 150 | 01 | 57.5 - 159 |
| Sample: 670 | 084 - BH-1 14'-15' | | | | | | | |
| Analysis | TPH GRO | | Analytica | I Method: | S 8015B | | Pren Met | thod: \$ 5035 |
| OC Batch | 19354 | | Date Ana | lvzed. | 2005-07-01 | | Δ nalvzec | 1 Rv. |
| Pren Batch | 17014 | | Sample P | renaration. | 2005-07-01 | | Prenared | By: |
| Trep Daten. | 17014 | | Sample I | reparation. | 2005-07-01 | | riepareu | By. |
| | | | RL | | | | | |
| Parameter | Flag | , <u> </u> | Result | | Units | | Dilution | RL |
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 |
| 6 | | _ | | . | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |

mg/Kg

mg/Kg

10

10

0.100

0.100

107

106

10 - 160

10 - 174

1.07

1.06

| Report Date: 039137 | : July 7, 2005 | | | | ork Order: Akins Sy | 5070120 weet | Page Number: 11 c 5 Mi S of Monu | | | | |
|------------------------|-----------------|------|--------|--------------|------------------------|-----------------|-------------------------------------|----------|--------------|--|--|
| Sample: 670 | 985 - BH-6 4' | -5' | | | | | | | | | |
| Analysis: | BTEX | | | Analytical I | Method: | S 8021B | | Prep Met | hod: S 5035 | | |
| QC Batch: | 19359 | | | Date Analy: | zed: | 2005-07-01 | | Analyzed | l By: | | |
| Prep Batch: | 17014 | | | Sample Pre | paration: | 2005-07-01 | | Prepared | By: | | |
| | | | | RL | | | | | | | |
| Parameter | | Flag | | Result | t | Units | D | ilution | RL | | |
| Benzene | | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | | |
| Toluene | | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | | |
| Ethylbenzen | e | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | | |
| Xylene | | · | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | | |
| | | | | | | | Spike | Percent | Recovery | | |
| Surrogate | | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | | |
| Trifluorotolu | ene (TFT) | | | 0.944 | mg/Kg | 10 | 0.100 | 94 | 74.5 - 114 | | |
| 4-Bromofluo | robenzene (4- | BFB) | | 0.962 | mg/Kg | 10 | 0.100 | 96 | 36.6 - 112 | | |
| Sample: 670 |)85 - BH-6 4' | -5' | | | | | | | | | |
| Analysis: | nalysis TPH DRO | | | Analytic | al Method: | Mod. 8015B | | Prep N | Aethod: N/A | | |
| OC Batch: | 19386 | | | Date Ana | alyzed: | 2005-07-03 | | Analy | zed By: DS | | |
| Prep Batch: | 17017 | | | Sample I | Preparation | n: 2005-07-01 | | Prepar | ed By: DS | | |
| | | | | RL | | | | | | | |
| Parameter | | Flag | | Result | | Units | | Dilution | RL | | |
| DRO | | | | <50.0 | | mg/Kg | | 1 | 50.0 | | |
| | | | | | | | Spike | Percent | Recovery | | |
| Surrogate | Fla | Ig | Result | Units | I | Dilution | Amount | Recovery | Limits | | |
| n-Triacontan | e | | 128 | mg/Kg | | 1 | 150 | 86 | 57.5 - 139 | | |
| Sample: 670 |)85 - BH-6 4' | -5' | | | | | | | | | |
| Analysis: | TPH GRO | | | Analytica | I Method: | S 8015B | | Prep Met | thod: S 5035 | | |
| QC Batch: | 19354 | | | Date Ana | lyzed: | 2005-07-01 | | Analyzed | i By: | | |
| Prep Batch: | 17014 | | | Sample P | reparation | 2005-07-01 | | Prepared | By: | | |
| Danam - + | | 171 | | RL | | T Y - '4 - | - | | | | |
| rarameter | | riag | | | | | | | | | |
| GKU | | | | <1.00 | | mg/Kg | | 10 | 0.100 | | |
| Surrogate | | | Flag | Pecult | Linita | Dilution | Spike | Percent | Recovery | | |
| Trifluorotolu | ene (TFT) | | Tiag | <u> </u> | ma/Ka | | <u>0 100</u> | 105 | | | |
| 4-Bromofluo | robenzene (4. | BFR | | 1.05 | mg/Kg | , 10 , 10 | 0.100 | 105 | 10 - 100 | | |
| | aouchzene (4 | | | 1.00 | ng/r.g | <u>, iv</u> | 0.100 | 100 | 10-1/4 | | |

• •

 $(1,2,3,3) \in \mathbb{R}^{2n}$

Sample: 67088 - BH-6 19-20'

| Analysis: | BTEX | | Analytical N | Method: | S 8021B | Prep Method: S 5035 | | |
|--------------------|-------------------------------|--------|--------------|-----------------------|------------|---------------------|----------|---------------|
| QC Batch: | 19359 | | Date Analyz | zed: | 2005-07-01 | | Analyze | d By: |
| Prep Batch: | 17014 | | Sample Prep | paration: | 2005-07-01 | | Preparec | l By: |
| | | | | | | | | |
| | | - | RL | , | | - | | ~~ |
| Parameter | | Flag | Result | | Units | <u> </u> | Dilution | RL. |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | Smilto | Descent | Decovery |
| Curren and a | | Elec | Decult | T Turitan | Dilution | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | |
| | ene (IFI) | • | 0.873 | mg/Kg | 10 | 0.100 | 87 | 74.5 - 114 |
| 4-Bromonuo | robenzene (4-BFE | 3) | 0.851 | mg/Kg | 10 | 0.100 | 85 | 36.6 - 112 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 670 | 988 - BH-6 19-20' | • | | | | | | |
| Amaluaia | | | Ampletta | al Mathad. | Mad 0016D | | Duran | |
| Analysis: | 1029C | | Analytica | al Method: | MOG. 8015B | Ì | Prep | Method: N/A |
| QC Batch: | 19380 | | Date Ana | ilyzea: | 2005-07-03 | | Analy | zed By: DS |
| Prep Batch: | 1/01/ | | Sample F | reparation: | 2005-07-01 | | Prepa | red By: DS |
| | | | DI | | | | | |
| Parameter | F | 20 | RL Pecult | | Unite | | Dilution | DI |
| | 1.1 | ag | <50.0 | | | | | <u> </u> |
| | | | < 30.0 | | ing/Kg | | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | D | ilution | Amount | Recovery | Limits |
| n-Triacontan | e | 120 | mg/Kg | | 1 | 150 | 80 | 57 5 - 139 |
| | | | | | | | | 0110 100 |
| | | | | | | | | |
| | 00 DII < 10 00 | | | | | | | |
| Sample: 670 | 188 - BH-6 19-20 ⁷ | | | | | | | |
| Analysis: | TPH GRO | | Analytica | l Method [.] | S 8015B | | Pren Me | thod: \$ 5035 |
| OC Batch | 19354 | | Date Ana | lvzed. | 2005-07-01 | | Analyze | d Rv |
| Pren Batch | 17014 | | Sample P | renaration. | 2005-07-01 | | Prenarec | l By: |
| Trop Duton. | 17011 | | Sumple I | epurution. | 2005-07-01 | | Першел | i by. |
| | | | RL | | | | | |
| Parameter | Fl | ag | Result | | Units | | Dilution | RI. |
| GRO | | | <1.00 | | mg/Kg | W 7 | 10 | 0 100 |
| | | | | | | | | 0.100 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | 0.975 | mg/Kg | 10 | 0.100 | 98 | 10 - 160 |
| 4 Data and a floor | robenzene (A_BEE | 3) | 0.958 | mo/Ko | 10 | 0.100 | 96 | 10 - 174 |

Sample: 67089 - BH-7 4-5'

| Analysis: QC Batch: Prep Batch: | BTEX 19359 17014 | | Analytical M Date Analyz Sample Prep | Method: zed: paration: | S 8021B 2005-07-01 2005-07-01 | | Prep Method: Analyzed By: Prepared By: | | |
|---------------------------------------|------------------------|---|--|------------------------------|-------------------------------------|-----------------|--|--------------------|--|
| | | | RL | | | | | | |
| Parameter | | Flag | Result | | Units |] | Dilution | RL | |
| Benzene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Toluene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Ethylbenzen | e | | < 0.0100 | 1 | mg/Kg | | 10 | 0.00100 | |
| Xylene | | | < 0.0100 | } | mg/Kg | | 10 | 0.00100 | |
| Surrogate | | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits | |
| Trifluorotolu | ene (TFT) | 1.008 | 1.08 | mg/Kg | 10 | 0.100 | 108 | 74.5 - 114 | |
| 4-Bromofluo | orobenzene (4-B | FB) | 1.06 | mg/Kg | 10 | 0.100 | 106 | 36.6 - 112 | |
| Sample: 670 |)89 - BH-7 4-5' | | | | | | | | |
| Analysis: | TPH DRO | | Analytica | al Method: | Mod. 8015 | 3 | Pren | Method: N/A | |
| OC Batch: | 19386 | | Date Ana | alvzed: | 2005-07-03 | - | Analy | zed By: DS | |
| Prep Batch: | 17017 | | Sample F | reparation | n: 2005-07-01 | | Prepa | red By: DS | |
| | | | זס | | | | | | |
| Parameter | | Flag | Result | | Units | | Dilution | RL | |
| DRO | | 1145 | <50.0 | | mg/Kg | | 1 | 50.0 | |
| <u> </u> | | ,, _, | | <u> </u> | | | | | |
| - | _ | | | _ | | Spike | Percent | Recovery | |
| Surrogate | Flag | Result | Units | L | Dilution | Amount | Recovery | Limits | |
| n-Irlacontar | | 121 | mg/Kg | | l | 150 | 80 | 57.5 - 139 | |
| Sample: 670 | 089 - BH-7 4-5 | , | | | | | | | |
| Analysis: | TPH GRO | | Analytica | I Method: | S 8015B | | Prep Me | thod: S 5035 | |
| QC Batch: | 19354 | | Date Ana | lyzed: | 2005-07-01 | | Analyze | d By: | |
| Prep Batch: | 17014 | | Sample P | reparation | : 2005-07-01 | | Preparec | By: | |
| | | | RL | | | | | | |
| Parameter | | Flag | Result | | Units | | Dilution | RL | |

| GRO | | <1.00 | | mg/Kg | | 10 | 0.100 |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotoluene (TFT) | | 1.20 | mg/Kg | 10 | 0.100 | 120 | 10 - 160 |
| 4-Bromofluorobenzene (4-BFB) | | 1.19 | mg/Kg | 10 | 0.100 | 119 | 10 - 174 |

Sample: 67092 - BH-7 19-20'

| Analysis: | BTEX | | Analytical M | lethod: S | 5 8021B | | hod: S 5035 | |
|-------------------|-------------------|--------|--------------|-------------|-------------|----------|-------------|---|
| OC Batch: | 19379 | | Date Analyze | ed: 2 | 2005-07-01 | | Analyzed | l By: MT |
| Prep Batch: | 17023 | | Sample Prepa | aration: 2 | 2005-07-01 | | Prepared | By: |
| | | | | | | | | |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | <u> </u> | Dilution | RL |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzene | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | Smilto | Demoent | Decovery |
| S | | Floo | Decult | Limita | Dilution | Amount | Percent | Limits |
| Surrogate | | Flag | 1 05 | Units | | | 105 | 74.5 114 |
| | ene (IFI) | | 1.05 | mg/Kg | 10 | 0.100 | 105 | 74.5 - 114 |
| <u>4-втопопио</u> | NODENZENE (4-DFD) | | 1.10 | mg/Kg | 10 | 0.100 | 110 | 30.0 - 112 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 670 |)92 - BH-7 19-20' | | | | | | | |
| Analysis | חפת עפד | | Analytica | l Method | Mod 8015B | 2 | Pren M | Method: N/A |
| Analysis. | 10386 | | Date Anal | lvzed: | 2005-07-03 | • | Analy | zed By: DS |
| Pren Batch | 17017 | | Sample P | renaration. | 2005-07-01 | | Prena | red $\mathbf{B}\mathbf{y}$: $\mathbf{D}\mathbf{S}$ |
| Trep Daten. | 17017 | | Sumple I | eparation. | 2005 07 01 | | Tiopu | |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| | | | | | | | ········ | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | Di | ilution | Amount | Recovery | Limits |
| n-Triacontan | ie | 114 | mg/Kg | | 1 | 150 | 76 | 57.5 - 139 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 670 | 092 - BH-7 19-20' | | | | | | | |
| - | | | | | | | | |
| Analysis: | TPH GRO | | Analytical | Method: | S 8015B | | Prep Me | thod: S 5035 |
| QC Batch: | 19382 | | Date Analy | yzed: | 2005-07-01 | | Analyze | d By: MT |
| Prep Batch: | 17023 | | Sample Pro | eparation: | 2005-07-01 | | Prepared | l By: |
| | | | | | | | | |
| | ~ | | RL | | TT . | | D11 /1 | P . |
| Parameter | Flag | | Result | | Units | | Dilution | KL |
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 |

| | (1100 | · · · · | | | | |
|------|--------|-----------------------------|---|---|---|---|
| Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| | 1.01 | mg/Kg | 10 | 0.100 | 101 | 10 - 160 |
| | 1.08 | mg/Kg | 10 | 0.100 | 108 | 10 - 174 |
| | Flag | Flag Result 1.01 1.08 | Flag Result Units 1.01 mg/Kg 1.08 mg/Kg | FlagResultUnitsDilution1.01mg/Kg101.08mg/Kg10 | FlagResultUnitsDilutionAmount1.01mg/Kg100.1001.08mg/Kg100.100 | FlagResultUnitsDilutionAmountRecovery1.01mg/Kg100.1001011.08mg/Kg100.100108 |

Method Blank (1) QC Batch: 19354

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|-------------------------------------|------|--------|-----------------------------|--|-----------------|---------------------|--------------------|--|
| Parameter | Flag | | MDL Result | | Unit | 5 | RL | |
| GRO | | 2.11 | | | mg/Kg | | 0.1 | |
| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits | |
| Trifluorotoluene (TFT) | | 0.916 | mg/Kg | 10 | 0.100 | 92 | 81.8 - 109 | |
| 4-Bromofluorobenzene (4-BFB) | | 0.902 | mg/Kg | 10 | 0.100 | 90 | 50.7 - 113 | |

Method Blank (1) QC Batch: 19359

| | | | MDI | L | | | |
|------------------------------|-----------|---------|----------------------|----------|--------|----------|------------|
| Parameter | Flag | | Resu | lt - | Unit | S | RL |
| Benzene | | | < 0.0033 | 3 | mg/K | 0.001 | |
| Toluene | | | <0.00353 <0.00339 | | | g | 0.001 |
| Ethylbenzene | | | | | | mg/Kg | |
| Xylene | | <0.0103 | | | mg/Kg | | 0.001 |
| | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | · · · · · | 0.824 | mg/Kg | 10 | 0.100 | 82 | 74.5 - 114 |
| 4-Bromofluorobenzene (4-BFB) | | 0.801 | mg/Kg | 10 | 0.100 | 80 | 36.6 - 112 |

Method Blank (1) QC Batch: 19379

| | | | MD | L | | | |
|------------------------------|---------------------------------------|--------|----------|----------|--------|----------|------------|
| Parameter | Flag | | Resu | lt | Unit | s | RL |
| Benzene | · · · · · · · · · · · · · · · · · · · | | < 0.0033 | 3 | mg/K | g | 0.001 |
| Benzene | | | < 0.0033 | 3 | mg/K | g | 0.001 |
| Toluene | | | < 0.0035 | 3 | mg/K | g | 0.001 |
| Toluene | | | < 0.0035 | 3 | mg/K | g | 0.001 |
| Ethylbenzene | | | < 0.0033 | 9 | mg/K | g | 0.001 |
| Ethylbenzene | | | < 0.0033 | 9 | mg/K | g | 0.001 |
| Xylene | | | < 0.010 | 3 | mg/K | ğ | 0.001 |
| Xylene | | | < 0.010 | 3 | mg/K | g | 0.001 |
| | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | 0.911 | mg/Kg | 10 | 0.100 | 91 | 74.5 - 114 |
| Trifluorotoluene (TFT) | | 0.911 | mg/Kg | 10 | 0.100 | 91 | 74.5 - 114 |
| 4-Bromofluorobenzene (4-BFB) | | 0.895 | mg/Kg | 10 | 0.100 | 90 | 36.6 - 112 |
| 4-Bromofluorobenzene (4-BFB) | | 0.895 | mg/Kg | 10 | 0.100 | 90 | 36.6 - 112 |

Method Blank (1) QC Batch: 19382

| | | MDL | | |
|-----------|------|--------|-------|-----|
| Parameter | Flag | Result | Units | RL |
| GRO | | 2.00 | mg/Kg | 0.1 |

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| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT) | | 0.894 | mg/Kg | 10 | 0.100 | 89 | 81.8 - 109 |
| 4-Bromofluorobenzene (4-BFB) | | 0.870 | mg/Kg | 10 | 0.100 | 87 | 50.7 - 113 |

Method Blank (1) QC Batch: 19386

| | | | | MDL | | | |
|---------------|------|--------|-------|----------|--------|----------|------------|
| Parameter | | Flag | | Result | τ | Jnits | RL |
| DRO | ···· | | | <5.35 | m | 50 | |
| | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Triacontane | | 137 | mg/Kg | 1 | 150 | 91 | 57.5 - 139 |

Laboratory Control Spike (LCS-1) QC Batch: 19354

| | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|-------|--------|--------|-------|------|--------|---------|------|-----|----------|-------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| GRO | 9.45 | 11.0 | mg/Kg | 10 | 1.00 | < 0.381 | 94 | 15 | 72 - 124 | 21 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.897 | 1.01 | mg/Kg | 10 | 0.100 | 90 | 101 | 80.4 - 113 |
| 4-Bromofluorobenzene (4-BFB) | 0.976 | 0.981 | mg/Kg | 10 | 0.100 | 98 | 98 | 72.2 - 119 |

Laboratory Control Spike (LCS-1) QC Batch: 19359

| | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|--------------|--------|--------|-------|------|--------|----------|------|-----|------------|-------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| Benzene | 0.898 | 0.904 | mg/Kg | 10 | 0.100 | < 0.0333 | 90 | 1 | 79.8 - 114 | 20 |
| Toluene | 0.883 | 0.883 | mg/Kg | 10 | 0.100 | < 0.0353 | 88 | 0 | 79.7 - 115 | 20 |
| Ethylbenzene | 0.845 | 0.851 | mg/Kg | 10 | 0.100 | < 0.0339 | 84 | 1 | 78.7 - 116 | 20 |
| Xylene | 2.51 | 2.53 | mg/Kg | 10 | 0.300 | < 0.103 | 84 | 1 | 78.7 - 118 | 20 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.794 | 0.819 | mg/Kg | 10 | 0.100 | 79 | 82 | 76.6 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 0.813 | 0.830 | mg/Kg | 10 | 0.100 | 81 | 83 | 72 - 111 |

Laboratory Control Spike (LCS-1) QC Batch: 19379

continued ...

Work Order: 5070120 Akins Sweet

control spikes continued ...

| | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|--------------|--------|--------|----------|------|--------|----------|----------------|-----|------------|--------------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| 7 | LCS | LCSD | T In ite | Dil | Spike | Matrix | Dee | | Rec. | RPD Limit |
| Param | Result | Result | Units | Dii. | Amount | Result | Rec. | RPD | Limit | Linit |
| Benzene | 0.978 | 0.984 | mg/Kg | 10 | 0.100 | < 0.0333 | 98 | 1 | 79.8 - 114 | 20 |
| Benzene | 0.978 | 0.984 | mg/Kg | 10 | 0.100 | < 0.0333 | 98 | 1 | 79.8 - 114 | 20 |
| Toluene | 0.980 | 0.986 | mg/Kg | 10 | 0.100 | < 0.0353 | 98 | 1 | 79.7 - 115 | 20 |
| Toluene | 0.980 | 0.986 | mg/Kg | 10 | 0.100 | < 0.0353 | 9 8 | 1 | 79.7 - 115 | 20 |
| Ethylbenzene | 0.986 | 0.996 | mg/Kg | 10 | 0.100 | < 0.0339 | 99 | 1 | 78.7 - 116 | 20 |
| Ethylbenzene | 0.986 | 0.996 | mg/Kg | 10 | 0.100 | < 0.0339 | 99 | 1 | 78.7 - 116 | 20 |
| Xylene | 2.91 | 2.94 | mg/Kg | 10 | 0.300 | < 0.103 | 97 | 1 | 78.7 - 118 | 20 |
| Xylene | 2.91 | 2.94 | mg/Kg | 10 | 0.300 | < 0.103 | 97 | 1 | 78.7 - 118 | 20 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.923 | 0.926 | mg/Kg | 10 | 0.100 | 92 | 93 | 76.6 - 114 |
| Trifluorotoluene (TFT) | 0.923 | 0.926 | mg/Kg | 10 | 0.100 | 92 | 93 | 76.6 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 0.943 | 0.951 | mg/Kg | 10 | 0.100 | 94 | 95 | 72 - 111 |
| 4-Bromofluorobenzene (4-BFB) | 0.943 | 0.951 | mg/Kg | 10 | 0.100 | 94 | 95 | 72 - 111 |

Laboratory Control Spike (LCS-1) QC Batch: 19382

| | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|---------------|------------------|---------------|---------------|--------------|--------------|-------------|--------------|------|----------|------------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| GRO | 9.75 | 9.24 | mg/Kg | 10 | 1.00 | < 0.381 | 98 | 5 | 72 - 124 | 21 |
| Percent reco | very is based or | n the spike r | esult. RPD is | s based on t | he spike and | spike dupli | cate result. | | | |
| | | | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
| Surrogate | | | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotolu | ene (TFT) | | 0.950 | 0.855 | mg/Kg | 10 | 0.100 | 95 | 86 | 80.4 - 113 |

mg/Kg

10

0.100

0.944

96

94

72.2 - 119

Laboratory Control Spike (LCS-1) QC Batch: 19386

4-Bromofluorobenzene (4-BFB)

| _ | | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|-------|---|--------|--------|-------|------|--------|--------|------|-----|----------|-------|
| Param | | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| DRO | 1 | 227 | 197 | mg/Kg | 1 | 250 | < 5.35 | 91 | 14 | 84 - 118 | 20 |

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

0.958

| Surrogate | LCS Result | LCSD Result | Unite | Dil | Spike | LCS Rec | LCSD Rec | Rec. |
|---------------|---------------|----------------|-------|-----|-------|------------|-------------|------------|
| n-Triacontane | 127 | 128 | mg/Kg | 1 | 150 | <u>84</u> | 85 | 57.5 - 139 |

Matrix Spike (MS-1) QC Batch: 19359 Spiked Sample: 66963

¹LCSD analyte out of range. LCS shows extraction occured properly.

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| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|--------------|--------------|---------------|-------|------|-----------------|------------------|------|-----|---------------|--------------|
| Benzene | 0.773 | 0.684 | mg/Kg | 10 | 0.100 | < 0.0333 | 77 | 12 | 63.5 - 98.6 | 20 |
| Toluene | 0.775 | 0.686 | mg/Kg | 10 | 0.100 | < 0.0353 | 78 | 12 | 65.8 - 102 | 20 |
| Ethylbenzene | 0.776 | 0.691 | mg/Kg | 10 | 0.100 | < 0.0339 | 78 | 12 | 66.6 - 106 | 20 |
| Xylene | 2.31 | 2.05 | mg/Kg | 10 | 0.300 | <0.103 | 77 | 12 | 67.4 - 108 | 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 | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.755 | 0.674 | mg/Kg | 10 | 0.1 | 76 | 67 | 60.1 - 104 |
| 4-Bromofluorobenzene (4-BFB) | 0.763 | 0.685 | mg/Kg | 10 | 0.1 | 76 | 68 | 63.1 - 105 |

Matrix Spike (MS-1) QC Batch: 19379 Spiked Sample: 67086

| | | MS | MSD | | | Spike | Matrix | | | Rec. | RPD |
|--------------|----|--------|--------|-------|------|--------|----------|------|-----|-------------|-------|
| Param | | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| Benzene | 23 | 1.04 | 0.991 | mg/Kg | 10 | 0.100 | < 0.0333 | 104 | 5 | 63.5 - 98.6 | 20 |
| Toluene | 4 | 1.06 | 1.02 | mg/Kg | 10 | 0.100 | < 0.0353 | 106 | 4 | 65.8 - 102 | 20 |
| Ethylbenzene | 56 | 1.12 | 1.08 | mg/Kg | 10 | 0.100 | < 0.0339 | 112 | 4 | 66.6 - 106 | 20 |
| Xylene | 7 | 3.32 | 3.23 | mg/Kg | 10 | 0.300 | < 0.103 | 111 | 3 | 67.4 - 108 | 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 | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.986 | 0.992 | mg/Kg | 10 | 0.1 | 99 | 99 | 60.1 - 104 |
| 4-Bromofluorobenzene (4-BFB) | 0.987 | 1.00 | mg/Kg | 10 | 0.1 | 99 | 100 | 63.1 - 105 |

Matrix Spike (MS-1) QC Batch: 19382 Spiked Sample: 67086

| | MS | MSD | | | Spike | Matrix | | | Rec. | RPD |
|-------|--------|--------|-------|------|--------|---------|------|-----|----------|-------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| GRO | 9.80 | 10.3 | mg/Kg | 10 | 1.00 | < 0.381 | 98 | 5 | 10 - 182 | 19.6 |

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 | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.856 | 0.889 | mg/Kg | 10 | 0.1 | 86 | 89 | 10 - 160 |
| 4-Bromofluorobenzene (4-BFB) | 0.993 | 1.09 | mg/Kg | 10 | 0.1 | 99 | 109 | 10 - 174 |

Matrix Spike (MS-1)

QC Batch: 19386

Spiked Sample: 67081

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ³Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁴Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁵Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ⁷Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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|------------------------|--------------------|-------------------|---------------|-----------------------------|-----------------|--|----------|------------------|---------------|--------------|
| Param | MS Result | MSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
| DRO | 180 | 175 | mg/Kg | 1 | 250 | <5.35 | 72 | 3 | 70 - 13 | 20 |
| Percent recov | very is based or | n the spike resul | t. RPD is b | ased on th | ne spike and s | pike duplicate | result | | | |
| | | | MOD | | | G 11 | | MG | MOD | D |
| Summe moto | | MS Basult | MSD Becult | Limita | Dil | Spike | | MS Dec | MSD | Rec. |
| Surrogate | | Result | | Units | | Amount | | 70 Kec. | | 57.5 120 |
| n-Iriacontan | | | 122 | mg/Kg | 1 | 150 | | /8 | 01 | 57.5 - 159 |
| Standard (I | CV-1) QC 1 | Batch: 19354 | | | | | | | | |
| | | | ICVs | | ICVs | ICVs | | Percer | nt | |
| | | | True | | Found | Percent | | Recove | rv | Date |
| Param | Flag | Units | Conc. | | Conc. | Recovery | | Limit | S | Analyzed |
| GRO | | mg/L | 1.00 | | 0.970 | 97 | | 85 - 1 | 5 | 2005-07-01 |
| Standard (C | CCV-1) QC | Batch: 19354 | CCVs | | CCVs | CCVs | | Percer | nt | |
| | | | True | | Found | Percent | | Recove | ry | Date |
| Param | Flag | Units | Conc. | | Conc. | Recovery | | Limit | s | Analyzed |
| GRO | | mg/L | 1.00 | | 0.914 | 91 | | 85 - 11 | 5 | 2005-07-01 |
| Standard (C | C CV-2) QC | Batch: 19354 | CCVs True | | CCVs Found | CCVs Percent | | Percer Recove | nt ery | Date |
| Param | Flag | Units | Conc. | | Conc. | Recovery | | Limit | <u>s</u> | Analyzed |
| GRO | <u> </u> | mg/L | 1.00 | · · · · | 0.903 | 90 | | 85 - 1 | 15 | 2005-07-01 |
| Standard (I | CV-1) QC | Batch: 19359 | | | | | | | | |
| | | | IC T | CVs | ICVs | ICVs | 5 | Perce | ent | |
| Daram | Elaa | T Tan tan | | rue | Found | Percer | nt | Recov | /ery | Date |
| Param | Flag | | $\frac{c}{c}$ | $\frac{0 \text{ nc.}}{100}$ | | Recove | ery | Lim | 1LS | Analyzed |
| Toluere | | mg/Kg | ς U. | 100 | 0.0904 | 90 | | 60 - 50 85 | 115 115 | 2005-07-01 |
| Ethylhenzen | e | mg/Kg | , 0. , A | 100 | 0.0094 | 07 85 | | 0J - 1 85 - 1 | 115 | 2003-07-01 |
| Xvlene | 8 | mg/Kg | z 0. | .300 | 0.253 | 84 | | 85 - 1 | 115 | 2005-07-01 |
| Standard (C | C CV-3) QC | Batch: 19359 | C | CVs | CCVs | CCV | s | Perce | ent | |
| Param | Flag | Unite | | onc | Conc | Percei | il my | Kecov I im | ite | Date |
| Benzene | 11dg | mø/Ka | , <u> </u> | 100 | 0.0886 | <u></u> | лу | 25 25 | 115 | 2005-07-01 |
| Toluene | | mg/Kg | g 0. | .100 | 0.0870 | 87 | | 85 - | 115 | 2005-07-01 |
| | | | | | | | | | | continued |

⁸Xylene outside of control limits on CCV(ICV). CCV(ICV) component average is 87.8 which is within acceptable range. This is acceptable by Method 8000.

Report Date: July 7, 2005 039137

Work Order: 5070120 Akins Sweet

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standard continued ...

| | | | CCVs | CCVs | CCVs | Percent | |
|--------------|------|-------|-------|--------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Ethylbenzene | 9 | mg/Kg | 0.100 | 0.0839 | 84 | 85 - 115 | 2005-07-01 |
| Xylene | 10 | mg/Kg | 0.300 | 0.248 | 83 | 85 - 115 | 2005-07-01 |

~ ~ - - -

Standard (CCV-2) QC Batch: 19359

| | | | CCVs | CCVs | CCVs | Percent | |
|--------------|------|-------|-------|--------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | mg/Kg | 0.100 | 0.0889 | 89 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.0878 | 88 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0849 | 85 | 85 - 115 | 2005-07-01 |
| Xylene | 11 | mg/Kg | 0.300 | 0.250 | 83 | 85 - 115 | 2005-07-01 |

Standard (ICV-1) QC Batch: 19379

| | | | ICVs | ICVs | ICVs | Percent | |
|--------------|------|-------|-------|-------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | mg/Kg | 0.100 | 0.103 | 103 | 85 - 115 | 2005-07-01 |
| Benzene | | mg/Kg | 0.100 | 0.103 | 103 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.304 | 101 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.304 | 101 | 85 - 115 | 2005-07-01 |

Standard (CCV-1) QC Batch: 19379

| | | | CCVs | CCVs | CCVs | Percent | |
|--------------|------|-------|-------|--------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | mg/Kg | 0.100 | 0.0983 | 98 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.0986 | 99 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0988 | 99 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.292 | 97 | 85 - 115 | 2005-07-01 |

Standard (ICV-1) QC Batch: 19382

| Param | Flag | Units | ICVs True Conc. | ICVs Found Conc. | ICVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|-------|------|-------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| GRO | | mg/L | 1.00 | 0.903 | 90 | 85 - 115 | 2005-07-01 |

⁹Ethylbenzene outside of control limits on CCV(ICV). CCV(ICV) component average is 85.8 which is within acceptable range. This is acceptable by Method 8000.
¹⁰Xylene outside of control limits on CCV(ICV). CCV(ICV) component average is 85.8 which is within acceptable range. This is acceptable by Method 8000.
¹¹Xylene outside of control limits on CCV(ICV). CCV(ICV) component average is 86 which is within acceptable range. This is acceptable by Method 8000.

| Report Date: July 7, 2005 039137 | | | W | ork Order: 5070 Akins Sweet | Page Number: 21 of 23 5 Mi S of Monument | | |
|-------------------------------------|---------|-----------------|-------|--------------------------------|---|------------|------------|
| Standard | (CCV-1) | QC Batch: 19382 | | | | | |
| | | | CCVs | CCVs | CCVs | Percent | |
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | mg/L | 1.00 | 0.943 | 94 | 85 - 115 | 2005-07-01 |
| | | | | | | | |
| Standard | (ICV-1) | QC Batch: 19386 | | | | | |
| | | | ICVs | ICVs | ICVs | Percent | |
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | mg/Kg | 250 | 216 | 86 | 57.5 - 139 | 2005-07-03 |
| Standard | (CCV-1) | QC Batch: 19386 | | | | | |
| | | | CCVs | CCVs | CCVs | Percent | |
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | mg/Kg | 250 | 199 | 79 | 57.5 - 139 | 2005-07-03 |
| Standard | (CCV-2) | QC Batch: 19386 | | | | | |
| | | | CCVs | CCVs | CCVs | Percent | |
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | mg/Kg | 250 | 214 | 86 | 57.5 - 139 | 2005-07-03 |

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Report Date: July 7, 2005 039137 Work Order: 5070120 Akins Sweet



Analytical and Quality Control Report

| James Ornelas | Report Date: | July 13, 2005 |
|-------------------|--------------|---------------|
| CRA-Midland | Work Ordon | 5070121 |
| Midland, TX 79703 | work Order: | 3070121 |

Project Location:5 Mi S of MonumentProject Name:Akins SweetProject Number:039137

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 |
| 67093 | BH-5 4'-5' | soil | 2005-06-29 | 10:25 | 2005-07-01 |
| 67094 | BH-5 9'-10' | soil | 2005-06-29 | 10:35 | 2005-07-01 |
| 67095 | BH-5 14-15 | soil | 2005-06-29 | 10:43 | 2005-07-01 |
| 67096 | BH-5 19'-20' | soil | 2005-06-29 | 10:57 | 2005-07-01 |
| 67097 | BH-5 24-25' | soil | 2005-06-29 | 11:05 | 2005-07-01 |
| 67098 | BH-4 4-5 | soil | 2005-06-29 | 12:25 | 2005-07-01 |
| 67101 | BH-4 19-20 | soil | 2005-06-29 | 12:52 | 2005-07-01 |

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 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Blan

Dr. Blair Leftwich, Director

Analytical Report

Sample: 67093 - BH-5 4'-5'

| Analysis: | BTEX | | Analytical N | Method: | S 8021B | | Prep Me | thod: S 5035 |
|---------------|-------------------|------|--------------|-----------|------------|--------|----------|--------------|
| QC Batch: | 19379 | | Date Analy: | zed: | 2005-07-01 | | Analyze | d By: MT |
| Prep Batch: | 17023 | | Sample Pre | paration: | 2005-07-01 | | Prepared | By: |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | I | Dilution | RL |
| Benzene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | 1.08 | mg/K | g 10 | 0.100 | 108 | 74.5 - 114 |
| 4-Bromofluo | robenzene (4-BFB) | | 1.09 | mg/K | g 10 | 0.100 | 109 | 36.6 - 112 |

Sample: 67093 - BH-5 4'-5'

| Analysis: | TPH DRO | | Analytical Me | thod: Mod. 80 |)15B | Pre | p Method: N/A |
|--------------|---------|--------|---------------|-----------------|--------|----------|---------------|
| QC Batch: | 19386 | | Date Analyzed | d: 2005-07 | -03 | Ап | alyzed By: DS |
| Prep Batch: | 17017 | | Sample Prepar | ration: 2005-07 | -01 | Pre | pared By: DS |
| | | | RL | | | | |
| Parameter |] | Flag | Result | Uni | ts | Dilution | RL |
| DRO | | ····· | <50.0 | mg/K | g | 1 | 50.0 |
| | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| n-Triacontan | • | 122 | mg/Kg | 1 | 150 | 82 | 57.5 - 139 |

Sample: 67093 - BH-5 4'-5'

| Analysis: QC Batch: Prep Batch: | TPH GRO 19382 17023 | | | Analytical Date Anal Sample Pr | Method: yzed: eparation: | S 8015B 2005-07-01 2005-07-01 | | Prep Meth Analyzed Prepared I | od: S 5035 By: MT Sv: |
|---------------------------------------|--|------|------|--------------------------------------|--------------------------------|-------------------------------------|---------------------------------------|-------------------------------------|-----------------------------|
| Parameter | | Flag | | RL Result | | Units | Di | lution | RL |
| GRO | ······································ | | | <1.00 | ····· | mg/Kg | · · · · · · · · · · · · · · · · · · · | 10 | 0.100 |
| Surrogate | | | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolu | ene (TFT) | | | 1.06 | mg/Kg | 10 | 0.100 | 106 | 10 - 160 |
| 4-Bromofluo | robenzene (4-) | BFB) | | 1.06 | mg/Kg | 10 | 0.100 | 106 | 10 - 174 |

Sample: 67094 - BH-5 9'-10'

| Analysis: QC Batch: Prep Batch: | BTEX 19379 17023 | | Analytical M Date Analyz Sample Prep | Method: zed: paration: | S 8021B 2005-07-01 2005-07-01 | | Prep Meth Analyzed Prepared I | od: S 5035 By: MT 3y: |
|--|---|--------|--|-------------------------------------|--|-----------------|-------------------------------------|--------------------------------------|
| D | El- | _ | RL | | T I | r | viltio | זמ |
| Parameter | Flag | g | Result | " | Units | L | | KL |
| Teluene | | | <0.0100 | | mg/Kg | | 10 | 0.00100 |
| Fthylbenzen | a | | <0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xvlene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| <u>Aylene</u> | | | <0.0100 | | mg/ng | | 10 | 0.00100 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | 0.993 | mg/Kg | 10 | 0.100 | 99 | 74.5 - 114 |
| 4-Bromofluo | robenzene (4-BFB) | | 1.00 | mg/Kg | 10 | 0.100 | 100 | 36.6 - 112 |
| Sample: 670 Analysis: QC Batch: Prep Batch: | 9 4 - BH-5 9'-10' TPH DRO 19386 17017 | | Analytica Date Ana Sample P | al Method: ilyzed: reparation | Mod. 8015E 2005-07-03 : 2005-07-01 | | Prep M Analyz Prepare | ethod: N/A ed By: DS ed By: DS |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| Surrogate | Flag | Result | Units | D | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| | <u>e</u> | 125 | mg/Kg | **** | 1 | | 03 | 57.5 - 159 |
| Sample: 670 Analysis: QC Batch: Prep Batch: | 194 - BH-5 9'-10' TPH GRO 19382 17023 | | Analytical Date Anal Sample Pr RL | l Method: yzed: reparation: | S 8015B 2005-07-01 2005-07-01 | | Prep Meth Analyzed Prepared I | iod: S 5035 By: MT 3y: |
| Parameter | Flag | | Result | | Units |] | Dilution | RL |
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 |
| Surrogate | | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
| Trifluorotolu | ene (TFT) | | 0.972 | mg/Kg | 10 | 0.100 | 97 | 10 - 160 |
| 4-Bromofluo | robenzene (4-BFB) | | 0.971 | mg/Kg | 10 | 0.100 | 97 | 10 - 174 |

Sample: 67095 - BH-5 14-15

| Analysis: QC Batch: Prep Batch: | BTEX 19379 17023 | | Analytical M Date Analyz Sample Prep | Method: zed: paration: | S 8021B 2005-07-01 2005-07-01 | | Prep Me Analyze Prepareo | thod: S 5035 d By: MT l By: |
|---------------------------------------|------------------------|--------|--|------------------------------|-------------------------------------|--------|--------------------------------|-----------------------------------|
| | | | RL | | | | | |
| Parameter | Fla | g | Result | | Units |] | Dilution | RL |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzene | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | _ | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | 0.988 | mg/Kg | 10 | 0.100 | 99 | 74.5 - 114 |
| 4-Bromofluo | robenzene (4-BFB) | | 0.997 | mg/Kg | 10 | 0.100 | 100 | 36.6 - 112 |
| Sample: 670 | 995 - BH-5 14-15 | | | | | | | |
| Analysis: | TPH DRO | | Analytica | al Method: | Mod. 8015E | 3 | Prep | Method: N/A |
| OC Batch: | 19386 | | Date Ana | lyzed: | 2005-07-03 | | Analy | zed By: DS |
| Prep Batch: | 17017 | | Sample P | reparation | n: 2005-07-01 | | Prepa | red By: DS |
| | | | | | | | | |
| | | | RL | | | | N 11 | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | I | Dilution | Amount | Recovery | Limits |
| n-Triacontan | e | 117 | mg/Kg | | 1 | 150 | 78 | 57.5 - 139 |
| | | | | | | | | |

Sample: 67095 - BH-5 14-15

| Analysis:TPH GROQC Batch:19382Prep Batch:17023 | | | Analytical Method: Date Analyzed: Sample Preparation: | | S 8015B 2005-07-01 2005-07-01 | 8015B Prep M 005-07-01 Analyz 005-07-01 Prepare | | | |
|--|-----------------|------|---|--------|-------------------------------------|---|--------|----------|----------|
| | | | | RL | | | | | |
| Parameter | F | Flag | | Result | | Units | D | ilution | RL |
| GRO | | | | <1.00 | | mg/Kg | | 10 | 0.100 |
| | | | | | | | Spike | Percent | Recovery |
| Surrogate | | F | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | | | 0.968 | mg/Kg | 10 | 0.100 | 97 | 10 - 160 |
| 4-Bromofluo | robenzene (4-BF | B) | | 0.969 | mg/Kg | 10 | 0.100 | 97 | 10 - 174 |

Sample: 67096 - BH-5 19'-20'

| Analysis: QC Batch: Prep Batch: | BTEX 19379 17023 | | Analytical M Date Analyze Sample Prep | lethod: ed: aration: | S 8021B 2005-07-01 2005-07-01 | | Prep Me Analyze Preparec | thod: S 5035 d By: MT l By: |
|---------------------------------------|------------------------|--------|---|----------------------------|-------------------------------------|--------|--------------------------------|-----------------------------------|
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | J | Dilution | RL |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Surrogate | | Flag | Decult | Unite | Dilution | Spike | Percent | Recovery |
| Trifluorotolu | ene (TFT) | Tag | 0.904 | mg/Kg | 10 | | <u>90</u> | 74.5 - 114 |
| 4-Bromofluo | probenzene (4-BFB) | | 0.905 | mg/Kg | 10 | 0.100 | 90 | 36.6 - 112 |
| Sample: 670 | 096 - BH-5 19'-20' | | | | | | | |
| Analysis | חפת אפיז | | Analytica | Method | Mod 8015E | 2 | Dren | Method: N/A |
| OC Batch | 19386 | | Date Anal | lvzed: | 2005-07-03 | , | Analy | vzed By: DS |
| Prep Batch: | 17017 | | Sample P | reparation | : 2005-07-01 | | Prepa | red By: DS |
| - | | | ľ | • | | | • | 5 |
| | | | RL | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | l | 50.0 |
| 0 | | Derek | TT- 14 | D | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | | | nution | Amount | Recovery | |
| n-Irlacontan | | 129 | mg/Kg | | 1 | 150 | 80 | 57.5 - 139 |
| Sample: 67(| 096 - BH-5 19'-20' | | | | | | | |
| Analysis: | TPH GRO | | Analytical | Method: | S 8015B | | Prep Me | thod: S 5035 |
| QC Batch: | 19382 | | Date Analy | yzed: | 2005-07-01 | | Analyze | d By: MT |
| Prep Batch: | 17023 | | Sample Pro | eparation: | 2005-07-01 | | Preparec | i By: |
| | | | RI | | | | | |
| Parameter | Flag | | Result | | Units | | Dilution | RI. |
| GRO | 8 | | <1.00 | | mg/Kg | | 10 | 0.100 |

| Surrogate | Flag | Result | Units | Dilution | Spike Amount | Percent Recovery | Recovery Limits |
|------------------------------|------|--------|-------|----------|-----------------|---------------------|--------------------|
| Trifluorotoluene (TFT) | | 0.883 | mg/Kg | 10 | 0.100 | 88 | 10 - 160 |
| 4-Bromofluorobenzene (4-BFB) | | 0.882 | mg/Kg | 10 | 0.100 | 88 | 10 - 174 |

Sample: 67097 - BH-5 24-25'

| Analysis: | BTEX | | Analytical N | Method: | S 8021B | | Prep Met | hod: S 5035 |
|----------------------------|--|----------|-----------------|----------------|----------------|-----------------|----------------|---|
| QC Batch: | 19379 | | Date Analyz | zed: 2 | 2005-07-01 | | Analyzed | By: MT |
| Prep Batch: | 17023 | | Sample Prep | paration: 2 | 2005-07-01 | | Prepared | By: |
| | | | DI | | | | | |
| D | | | KL Downlin | | T T ! 4 | T | 1 | DI |
| Parameter | | Flag | Result | | Units | L | nution | |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | | | <0.0100 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ene (TFT) | <u>v</u> | 0.988 | mg/Kg | 10 | 0.100 | 99 | 74.5 - 114 |
| 4-Bromofluo | robenzene (4-BF | B) | 0.986 | mg/Kg | 10 | 0.100 | 99 | 36.6 - 112 |
| Sample: 67(|)97 - BH-5 24-25 | , | | | | | | |
| Sumptor of | | | | | | | | |
| Analysis: | TPH DRO | | Analytica | al Method: | Mod. 8015B | • | Prep M | fethod: N/A |
| QC Batch: | 19386 | | Date Ana | alyzed: | 2005-07-03 | | Analyz | zed By: DS |
| Prep Batch: | 17017 | | Sample F | Preparation: | 2005-07-01 | | Prepar | ed By: DS |
| | | | DI | | | | | |
| Doromotor | г | 7.00 | RL | | Unito | | Dilution | זס |
| | ſ | lag | <50.0 | | | | | <u> </u> |
| | | | < 30.0 | | mg/Kg | | 1 | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | D | ilution | Amount | Recovery | Limits |
| n-Triacontan | ie e | 123 | mg/Kg | | 1 | 150 | 82 | 57.5 - 139 |
| Sample: 67(| 097 - BH-5 24-25 | ;, | | | | | | |
| Analysis | TPH GRO | | Analytica | l Method: | S 8015B | | Pren Met | had: \$ 5035 |
| OC Batch | 10382 | | Date Ana | lyzed | 2005 07 01 | | A palwzed | $\mathbf{D}_{\mathbf{V}}$, \mathbf{MT} |
| Dren Batch | 17023 | | Sample D | reparation | 2005-07-01 | | Prepared | ру. МП Рис |
| riep Daten. | 17025 | | Sample F | reparation. | 2003-07-01 | | Frepareu | Бу. |
| | | | RL | | | | | |
| Parameter | F | lag | Result | | Units | J | Dilution | RL |
| GRO | | | <1.00 | | mg/Kg | | 10 | 0.100 |
| | ··· ·· · · · · · · · · · · · · · · · · | | | | | Snike | Percent | Recovery |
| | | | | | | opine | reicent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Surrogate Trifluorotolu | iene (TFT) | Flag | Result 0.966 | Units mg/Kg | Dilution 10 | Amount 0.100 | Recovery 97 | Limits 10 - 160 |

| Report Date: 039137 | : July 13, 200 | 5 | ···· | V | Vork Order Akins S | :: 5070121 Sweet | Page Number: 7 o 5 Mi S of Monur | | | |
|--------------------------|---------------------------------|----------|----------|---------------------------|-----------------------|---------------------|-------------------------------------|---------------------|--------------------|--|
| Sample: 670 |)98 - BH-4 4- | 5 | | | | | | | | |
| Analysis: | BTEX | | | Analytical I | Method: | S 8021B | | Prep Me | thod: S 5035 | |
| QC Batch: | 19379 | | | Date Analyzed: 2005-07-01 | | | | Analyzed | iBy: MT | |
| Prep Batch: | 17023 | | | Sample Pre | paration: | 2005-07-01 | | Prepared | By: | |
| | | | | RL | | | | | | |
| Parameter | | Flag | | Result | t | Units | E | Dilution | RL | |
| Benzene | | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Toluene | | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Ethylbenzen | e | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| Xylene | | | | < 0.0100 |) | mg/Kg | | 10 | 0.00100 | |
| | | | | | | | Spike | Percent | Recovery | |
| Surrogate | | | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotolu | ene (TFT) | | | 1.01 | mg/Kg | 10 | 0.100 | 101 | 74.5 - 114 | |
| 4-Bromofluo | robenzene (4- | BFB) | | 1.02 | mg/Kg | 10 | 0.100 | 102 | 36.6 - 112 | |
| Sample: 67(Analysis: |)98 - BH-4 4- TPH DRO | 5 | | Analytic | al Method: | : Mod. 8015B | | Prep I | Method: N/A | |
| QC Batch: | C Batch: 19386 | | Date Ana | alyzed: | 2005-07-03 | | Analy | zed By: DS | | |
| Prep Batch: | 17017 | | | Sample I | Preparatior | n: 2005-07-01 | | Prepa | red By: DS | |
| | | | | RL | | | | | | |
| Parameter | | Flag | | Result | | Units | | Dilution | RL | |
| DRO | | | | <50.0 | | mg/Kg | | 1 | 50.0 | |
| Surrogate | Fla | ıg | Result | Units | г | Dilution | Spike Amount | Percent Recovery | Recovery Limits | |
| n-Triacontan | e | <u> </u> | 121 | mg/Kg | [| 1 | 150 | 80 | 57.5 - 139 | |
| Sample: 67(|)98 - BH-4 4- TPH GRO | 5 | | Analytica | l Method: | S 8015B | | Pren Me | thod: \$ 5035 | |
| OC Batch: | 19382 | | | Date Ana | lvzed: | 2005-07-01 | | Analyze | d By: MT | |
| Prep Batch: | 17023 | | | Sample P | reparation | 2005-07-01 | | Prepared | By: | |
| | | | | RL | | | | | | |
| Parameter | | Flag | | Result | | Units | 1 | Dilution | RL | |
| GRO | | | | <1.00 | | mg/Kg | | 10 | 0.100 | |
| Sumocoto | | | Elag | Depult | TInita | Dilution | Spike | Percent | Recovery | |
| Triflucrotolu | ene (TET) | | riag | | | | | | | |
| 4-Bromofluo | $\frac{1\Gamma I}{1\Gamma I}$ | BER | | 0.994 | mg/Kg | 5 IU 7 10 | 0.100 | 97 00 | 10 - 100 | |
| | AUDENZENE (4- | | | 0.992 | mg/Kg | <u>, 10</u> | 0.100 | 77 | 10 - 174 | |

ð

Sample: 67101 - BH-4 19-20

| Analysis: | BTEX | | Analytical N | Method: | S 8021B | | Prep Meth | nod: S 5035 |
|---------------|---------------------------------------|--------|---------------------------------------|-------------|-------------|--------|-----------------|-------------------|
| QC Batch: | 19379 | | Date Analyz | zed: | 2005-07-01 | | Analyzed | By: MT |
| Prep Batch: | 17023 | | Sample Prep | paration: | 2005-07-01 | | Prepared 2 | By: |
| | | | | | | | | |
| _ | | | RL | | ** • | - | N 11 . 1 | 54 |
| Parameter | Fla | ag | Result | | Units | | Dilution | |
| Benzene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Toluene | | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Ethylbenzen | e | | < 0.0100 | | mg/Kg | | 10 | 0.00100 |
| Xylene | - <u></u> | | 0.0106 | | mg/Kg | | 10 | 0.00100 |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotolu | ana (TET) | 1 145 | <u>1 M</u> | ma/Ka | 10 | 0.100 | 104 | 74.5 - 114 |
| 4-Bromofluo | (11 1) | | 1.04 | mg/Kg | 10 | 0.100 | 104 | 36.6 - 112 |
| | TODELIZENC (4-DI D) | | 1.04 | mg/Kg | 10 | 0.100 | 104 | 50.0 - 112 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 671 | l01 - BH-4 19-20 | | | | | | | |
| Analysis | TPH DRO | | Analytica | al Method: | Mod. 8015F | 8 | Prep M | fethod: N/A |
| OC Batch | 19386 | | Date Ana | alvzed: | 2005-07-03 | | Analyz | red By: DS |
| Pren Batch | 17017 | | Sample F | Preparation | 2005-07-01 | | Prenar | ed By: DS |
| Trop Buton. | 1,01, | | 2 | | | | * ••••• | <i>cu 2)</i> . 20 |
| | | | RL | | | | | |
| Parameter | Flag | 5 | Result | | Units | | Dilution | RL |
| DRO | | | <50.0 | | mg/Kg | | 1 | 50.0 |
| | · · · · · · · · · · · · · · · · · · · | | · · · · · · · · · · · · · · · · · · · | | | | | |
| | | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | E | Dilution | Amount | Recovery | Limits |
| n-Triacontan | e | 123 | mg/Kg | | 1 | 150 | 82 | 57.5 - 139 |
| | | | | | | | | |
| | | | | | | | | |
| Sample: 671 | l01 - BH-4 19-20 | | | | | | | |
| • | | | | | | | | |
| Analysis: | TPH GRO | | Analytica | l Method: | S 8015B | | Prep Met | hod: S 5035 |
| QC Batch: | 19382 | | Date Ana | lyzed: | 2005-07-01 | | Analyzed | By: MT |
| Prep Batch: | 17023 | | Sample P | reparation: | 2005-07-01 | | Prepared | By: |
| | | | DI | , | | | | |
| Devenantes | El | | KL Bowlt | | T Tue to - | | Dilation | DI |
| rarameter | Flag | | result | | Units | | Dilution | <u>KL</u> |
| UKU | · | | <1.00 | | mg/Kg | | 10 | 0.100 |
| | | | | | | Snike | Percent | Recovery |
| Surrogate | | Flag | Result | Units | Dilution | Amount | Recoverv | Limits |
| | | 8 | | | | | | |

0.991

1.01

mg/Kg

mg/Kg

10

10

0.100

0.100

99

101

10 - 160

10 - 174

Method Blank (1) QC Batch: 19379

Trifluorotoluene (TFT)

4-Bromofluorobenzene (4-BFB)

| Report Date: | July | 13, 2005 |
|--------------|------|----------|
| 039137 | | |

36.6 - 112 36.6 - 112

| | | | MD | L | | | |
|------------------------|------|----------|----------|----------|--------|----------|------------|
| Parameter | Flag | | Resu | lt | Unit | S | RL |
| Benzene | | <u> </u> | < 0.0033 | 3 | mg/K | g | 0.001 |
| Benzene | | | < 0.0033 | 3 | mg/K | g | 0.001 |
| Toluene | | | < 0.0035 | 3 | mg/K | g | 0.001 |
| Toluene | | | < 0.0035 | 3 | mg/K | g | 0.001 |
| Ethylbenzene | | | < 0.0033 | 9 | mg/K | 0.001 | |
| Ethylbenzene | | | < 0.0033 | 9 | mg/K | g | 0.001 |
| Xylene | | | < 0.010 | 3 | mg/K | g | 0.001 |
| Xylene | | | < 0.010 | 3 | mg/K | g | 0.001 |
| | | | | | Spike | Percent | Recovery |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits |
| Trifluorotoluene (TFT) | | 0.911 | mg/Kg | 10 | 0.100 | 91 | 74.5 - 114 |
| Trifluorotoluene (TFT) | | 0.911 | mg/Kg | 10 | 0.100 | 91 | 74.5 - 114 |

mg/Kg

mg/Kg

10

10

0.100

0.100

90

90

0.895

0.895

Method Blank (1) QC Batch: 19382

4-Bromofluorobenzene (4-BFB)

4-Bromofluorobenzene (4-BFB)

| | | | MDL | | | | | |
|------------------------------|------|--------|--------|----------|--------|----------|------------|--|
| Parameter | Flag | | Result | | | Units | | |
| GRO | | | 2.00 | | mg/K | g | 0.1 | |
| | | | | | Spike | Percent | Recovery | |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| Trifluorotoluene (TFT) | | 0.894 | mg/Kg | 10 | 0.100 | 89 | 81.8 - 109 | |
| 4-Bromofluorobenzene (4-BFB) | | 0.870 | mg/Kg | 10 | 0.100 | 87 | 50.7 - 113 | |

Method Blank (1) QC Batch: 19386

| | | | | MDL | | | | |
|---------------|------|--------|-------|----------|--------|----------|------------|--|
| Parameter | | Flag | | Result | τ | Units | | |
| DRO | | | | <5.35 | m | mg/Kg | | |
| C | 7-11 | | ** *. | | Spike | Percent | Recovery | |
| Surrogate | Flag | Result | Units | Dilution | Amount | Recovery | Limits | |
| n-Triacontane | | 137 | mg/Kg | 1 | 150 | 91 | 57.5 - 139 | |

Laboratory Control Spike (LCS-1) QC Batch: 19379

| Param | LCS Result | LCSD Result | Units | Dil. | Spike Amount | Matrix Result | Rec. | RPD | Rec. Limit | RPD Limit |
|--------------|---------------|----------------|-------|------|-----------------|------------------|----------------|-----|---------------|--------------|
| Benzene | 0.978 | 0.984 | mg/Kg | 10 | 0.100 | < 0.0333 | 98 | 1 | 79.8 - 114 | 20 |
| Benzene | 0.978 | 0.984 | mg/Kg | 10 | 0.100 | < 0.0333 | 9 8 | 1 | 79.8 - 114 | 20 |
| Toluene | 0.980 | 0.986 | mg/Kg | 10 | 0.100 | < 0.0353 | 98 | 1 | 79.7 - 115 | 20 |
| Toluene | 0.980 | 0.986 | mg/Kg | 10 | 0.100 | < 0.0353 | 98 | 1 | 79.7 - 115 | 20 |
| Ethylbenzene | 0.986 | 0.996 | mg/Kg | 10 | 0.100 | < 0.0339 | 99 | 1 | 78.7 - 116 | 20 |

continued ...

control spikes continued ...

| | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|--------------|--------|--------|-------|------|--------|----------|------|-----|------------|-------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| Ethylbenzene | 0.986 | 0.996 | mg/Kg | 10 | 0.100 | < 0.0339 | 99 | 1 | 78.7 - 116 | 20 |
| Xylene | 2.91 | 2.94 | mg/Kg | 10 | 0.300 | < 0.103 | 97 | 1 | 78.7 - 118 | 20 |
| Xylene | 2.91 | 2.94 | mg/Kg | 10 | 0.300 | < 0.103 | 97 | 1 | 78.7 - 118 | 20 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.923 | 0.926 | mg/Kg | 10 | 0.100 | 92 | 93 | 76.6 - 114 |
| Trifluorotoluene (TFT) | 0.923 | 0.926 | mg/Kg | 10 | 0.100 | 92 | 93 | 76.6 - 114 |
| 4-Bromofluorobenzene (4-BFB) | 0.943 | 0.951 | mg/Kg | 10 | 0.100 | 94 | 95 | 72 - 111 |
| 4-Bromofluorobenzene (4-BFB) | 0.943 | 0.951 | mg/Kg | 10 | 0.100 | 94 | 95 | 72 - 111 |

Laboratory Control Spike (LCS-1) QC Batch: 19382

| | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|-------|--------|--------|-------|------|--------|---------|------|-----|----------|-------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| GRO | 9.75 | 9.24 | mg/Kg | 10 | 1.00 | < 0.381 | 98 | 5 | 72 - 124 | 21 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|------------------------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.950 | 0.855 | mg/Kg | 10 | 0.100 | 95 | 86 | 80.4 - 113 |
| 4-Bromofluorobenzene (4-BFB) | 0.958 | 0.944 | mg/Kg | 10 | 0.100 | 96 | 94 | 72.2 - 119 |

Laboratory Control Spike (LCS-1) QC Batch: 19386

| | | LCS | LCSD | | | Spike | Matrix | | | Rec. | RPD |
|-------|---|--------|--------|-------|------|--------|--------|------|-----|----------|-------|
| Param | | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| DRO | 1 | 227 | 197 | mg/Kg | 1 | 250 | <5.35 | 91 | 14 | 84 - 118 | 20 |

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

| | LCS | LCSD | | | Spike | LCS | LCSD | Rec. |
|---------------|--------|--------|-------|------|--------|------|------|------------|
| Surrogate | Result | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| n-Triacontane | 127 | 128 | mg/Kg | 1 | 150 | 84 | 85 | 57.5 - 139 |

Matrix Spike (MS-1)

QC Batch: 19379 Spiked Sample: 67086

| | | MS | MSD | | | Spike | Matrix | | | Rec. | RPD |
|---------|----|--------|--------|-------|------|--------|----------|------|-----|-------------|-------|
| Param | | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| Benzene | 23 | 1.04 | 0.991 | mg/Kg | 10 | 0.100 | < 0.0333 | 104 | 5 | 63.5 - 98.6 | 20 |
| Toluene | 4 | 1.06 | 1.02 | mg/Kg | 10 | 0.100 | < 0.0353 | 106 | 4 | 65.8 - 102 | 20 |

continued ...

²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹LCSD analyte out of range. LCS shows extraction occured properly.

³Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁴Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued

| | | MS | MSD | | | Spike | Matrix | | | Rec. | RPD |
|--------------|----|--------|--------|-------|------|--------|----------|------|-----|------------|-------|
| Param | | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| Ethylbenzene | 56 | 1.12 | 1.08 | mg/Kg | 10 | 0.100 | < 0.0339 | 112 | 4 | 66.6 - 106 | 20 |
| Xylene | 7 | 3.32 | 3.23 | mg/Kg | 10 | 0.300 | <0.103 | 111 | 3 | 67.4 - 108 | 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 | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.986 | 0.992 | mg/Kg | 10 | 0.1 | 99 | 99 | 60.1 - 104 |
| 4-Bromofluorobenzene (4-BFB) | 0.987 | 1.00 | mg/Kg | 10 | 0.1 | 99 | 100 | 63.1 - 105 |

Matrix Spike (MS-1) QC Batch: 19382 Spiked Sample: 67086

| | MS | MSD | | | Spike | Matrix | | | Rec. | RPD |
|-------|--------|--------|-------|------|--------|--------|------|-----|----------|-------|
| Param | Result | Result | Units | Dil. | Amount | Result | Rec. | RPD | Limit | Limit |
| GRO | 9.80 | 10.3 | mg/Kg | 10 | 1.00 | <0.381 | 98 | 5 | 10 - 182 | 19.6 |

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 | Result | Units | Dil. | Amount | Rec. | Rec. | Limit |
| Trifluorotoluene (TFT) | 0.856 | 0.889 | mg/Kg | 10 | 0.1 | 86 | 89 | 10 - 160 |
| 4-Bromofluorobenzene (4-BFB) | 0.993 | 1.09 | mg/Kg | 10 | 0.1 | 99 | 109 | 10 - 174 |

Standard (ICV-1) QC Batch: 19379

| | | | ICVs | ICVs | ICVs | Percent | |
|--------------|------|-------|-------|-------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | mg/Kg | 0.100 | 0.103 | 103 | 85 - 115 | 2005-07-01 |
| Benzene | | mg/Kg | 0.100 | 0.103 | 103 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.102 | 102 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.304 | 101 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.304 | 101 | 85 - 115 | 2005-07-01 |

Standard (CCV-1) QC Batch: 19379

| | | | CCVs | CCVs | CCVs | Percent | |
|--------------|------|-------|-------|--------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | mg/Kg | 0.100 | 0.0983 | 98 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.0986 | 99 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0988 | 99 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.292 | 97 | 85 - 115 | 2005-07-01 |

⁵Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁶Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁷Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

Report Date: July 13, 2005 039137

Standard (CCV-2) QC Batch: 19379

| | | | CCVs | CCVs | CCVs | Percent | |
|--------------|------|-------|-------|--------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| Benzene | | mg/Kg | 0.100 | 0.0928 | 93 | 85 - 115 | 2005-07-01 |
| Toluene | | mg/Kg | 0.100 | 0.0955 | 96 | 85 - 115 | 2005-07-01 |
| Ethylbenzene | | mg/Kg | 0.100 | 0.0933 | 93 | 85 - 115 | 2005-07-01 |
| Xylene | | mg/Kg | 0.300 | 0.280 | 93 | 85 - 115 | 2005-07-01 |

Standard (ICV-1) QC Batch: 19382

| | | | ICVs | ICVs | ICVs | Percent | |
|-------|------|-------|-------|-------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | mg/L | 1.00 | 0.903 | 90 | 85 - 115 | 2005-07-01 |

Standard (CCV-1) QC Batch: 19382

| | | | CCVs | CCVs | CCVs | Percent | |
|-------|------|-------|-------|-------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | mg/L | 1.00 | 0.943 | 94 | 85 - 115 | 2005-07-01 |

Standard (CCV-2) QC Batch: 19382

| | | | CCVs | CCVs | CCVs | Percent | |
|-------|------|-------|-------|-------|----------|----------|------------|
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| GRO | | mg/L | 1.00 | 1.09 | 109 | 85 - 115 | 2005-07-01 |

Standard (CCV-1) QC Batch: 19386

| Param | Flag | Units | CCVs True Conc. | CCVs Found Conc. | CCVs Percent Recovery | Percent Recovery Limits | Date Analyzed |
|----------|--------------------|----------------|-----------------------|------------------------|-----------------------------|-------------------------------|------------------|
| DRO | | mg/Kg | 250 | 199 | 79 | 57.5 - 139 | 2005-07-03 |
| Standard | (CCV-2) Q | C Batch: 19386 | | | | | |
| | | | CCVs | CCVs | CCVs | Percent | |
| | | | True | Found | Percent | Recovery | Date |
| Param | Flag | Units | Conc. | Conc. | Recovery | Limits | Analyzed |
| DRO | | mg/Kg | 250 | 214 | 86 | 57.5 - 139 | 2005-07-03 |

Standard (CCV-3) QC Batch: 19386

| Report Date: July 13, 2005 039137 | | | V | Vork Order: 5070 Akins Sweet | Page Number: 13 of 14 5 Mi S of Monument | | | |
|--------------------------------------|------------|-------|--------------|---------------------------------|---|---------------------|------------|--|
| | | | CCVs True | CCVs Found | CCVs Percent | Percent Recovery | Date | |
| Param | Flag Units | | Conc. | Conc. | Recovery | Limits | Analyzed | |
| DRO | | mg/Kg | 250 | 233 | 93 | 57.5 - 139 | 2005-07-03 | |

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Report Date: July 13, 2005 039137

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

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit Original Plus 1 Copy to Appropriate District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | 1 RCRA Exempt: Non-Exempt: | 4. Generator | | | | | |
|--|---|---------------------|--|--|--|--|--|
| | □ Verbal Approval Received: Yes No | 5. Originating Site | | | | | |
| | 2. Management Facility Destination | 6. Transporter | | | | | |
| | 3. Address of Facility Operator | 8. State | | | | | |
| | 7. Location of Material (Street Address or ULSTR) | | | | | | |
| | | | | | | | |

9. <u>Circle One</u>:

- A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job.
- B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved

All transporters must certify the wastes delivered are only those consigned for transport.

BRIEF DESCRIPTION OF MATERIAL:

| Estimated Volumecy | Known Volume (to be entered by the operator a | t the end of the haul)cy |
|---|---|--------------------------|
| SIGNATURE Waste Management Facility Auth | TITLE: | DATE: |
| TYPE OR PRINT NAME: | TELEPHON | E NO |
| E-MAIL ADDRESS | | |
| (This space for State Use) | | |
| APPROVED BY: | TITLE: | DATE: |
| APPROVED BY: | TITLE: | DATE: |

District I

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1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 1301 W. Grand Avenue, Artesia, NM 88210 <u>District III</u> 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

Release Notification and Corrective Action

Form C-141 Revised March 17, 1999

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

| OPERATOR | Initial Report | □ Final Report |
|--|---|--|
| Name of Company | Contact | |
| Link Energy LLC | Frank Hernandez | |
| Address | Telephone No. | |
| P.O. Box 1660 Midland, TX 79702 | (505) 631-3095 | |
| Facility Name | Facility Type | |
| Atkins 4" Gathering Pineline | Crude Oil Gathering Pipeline | |
| 0.1 | 6 | |
| Surface Owner Mineral Ow | ner | Lease No. |
| State of New Mexico NA | | NA |
| LOCATION | OF RELEASE | |
| Unit Letter Section Township Range Feet from | Feet from Longitude | Latitude County: |
| South Line | West Line | - NT220-221-22-244 |
| 28 205 37E 1700 | 1057 | N32° 32' 29.264" Lea |
| NATURE C | OF RELEASE | · · · · · · · · · · · · · · · · · · · |
| Type of Release | Volume of Release | Volume Recovered |
| Crude Oil Release and associated components | 50-bbl | 0 ьы |
| Source of Release | Date and Hour of Occurrence | Date and Hour of Discovery |
| 4" Steel Pipeline | 1/28/04 PM | 1/28/2004-PM |
| Was Immediate Notice Given? | If YES, To Whom? | |
| Yes No Not Required | Larry Johnson, NMOCD-Hobb | <u>95</u> |
| By Whom? | Date and Hour | |
| John Good - EPI | 1/29/04 8:10 AM | |
| Was a Watercourse Reached? | If YES, Volume Impacting the W | atercourse. |
| If a Waterpourse was Impacted Describe Fully * | | |
| NA | | |
| | | |
| Describe Cause of Problem and Remedial Action Taken.* | | |
| Internal pipeline corrosion | | |
| | | |
| Describe Area Affected and Cleanup Action Taken.* | | |
| 1,133-ft2 surface area affected; 50-bbl of product released, 0 | ecovered; RCRA Non-Exempt N | on-hazardous grossly |
| contaminated soil was excavated and transported to LINK's L | ea Station land farm by EPI. | |
| | | |
| I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not | he best of my knowledge and understa | nd that pursuant to NMOCD rules and for releases which may endanger public |
| health or the environment. The acceptance of a C-141 report by the NMOC | D marked as "Final Report" does not rel | ieve the operator of liability should the |
| operations have failed to adequately investigate and remediate contamina | tion that pose a threat to ground wate | er, surface water, human health or th |
| environment. In addition, NMOCD acceptance of a C-141 report does not a | elieve the operator of responsibility for | compliance with any other federal, state |
| or local laws and/or regulations. | | |
| Signature: Stank Abarant | OIL CONSERVA | ATION DIVISION |
| Printed Name: Frank Hernandez | Approved by District Supervisor | |
| Title: District Environmental Supv. | Approval Date: | Expiration Date: |
| E-Mail frank.hernandez@eott.com | Conditions of A | Frand . |
| Date: 1/30/04 Phone: (505) 631-3095 | -Conditions of Approval: | Attached |

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