

State of New Mexico
Oil Conservation Division

Incident ID	nAPP2204733624
District RP	
Facility ID	
Application ID	

Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☒ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Camille Bryant

Title: Remediation Supervisor

Signature: 

Date: 9/30/2022

email: cjbryant@paalp.com

Telephone: (575) 441-1099

OCD Only

Received by: Jocelyn Harimon

Date: 10/04/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet

Date: 1/27/2023

Printed Name: Robert Hamlet

Title: Environmental Specialist - Advanced

Incident ID	nAPP2204733624
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Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>35</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: *Each of the following items must be included in the report.*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Depth to water determination
- ☒ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141

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Printed Name: Camille Bryant

Title: Remediation Supervisor

Signature:

Date:

email: cjbryant@paalp.comTelephone: (575) 441-1099**OCD Only**Received by: Jocelyn HarimonDate: 10/04/2022

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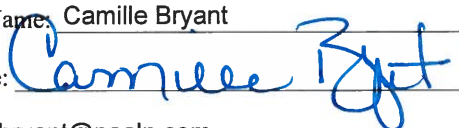
Closure

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Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☒ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
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- ☒ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☒ Description of remediation activities

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Printed Name: Camille Bryant Title: Remediation Supervisor
 Signature:  Date: 9/30/2022
 email: cjbryant@paalp.com Telephone: (575) 441-1099

OCD Only

Received by: Jocelyn Harimon Date: 10/04/2022

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Remediation Summary & Soil Closure Request

Plains Pipeline, LP

Astro Dog 6-Inch

Eddy County, New Mexico

Unit Letter "M", Section 35, Township 22 South, Range 28 East

Latitude 32.3424733 North, Longitude 104.062457 West

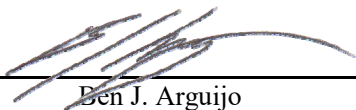
NMOCD Reference Numbers nAPP2204566669 & nAPP2204733624

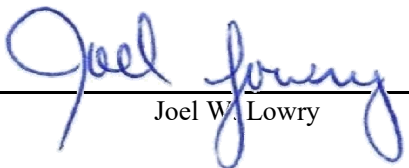
Prepared By:

Etech Environmental & Safety Solutions, Inc.

2507 79th Street, Unit A

Lubbock, Texas 79423


Ben J. Arguijo


Joel W. Lowry



Midland • San Antonio • Lubbock • Hobbs • Lafayette

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Appendix D - Laboratory Analytical Reports
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1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of Plains Pipeline, LP (Plains), has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the Astro Dog 6-Inch. On February 14, 2022, a contractor for an unaffiliated third-party inadvertently struck a 6-inch pipeline belonging to Plains while conducting pipelining activities in the area. Matador/San Mateo immediately submitted a "Notice of Release" (NOR) to the New Mexico Oil Conservation Division (NMOCD), and the release was assigned Incident ID nAPP2204566669. On February 16, 2022, Plains submitted its own NOR and "Release Notification" (Form C-141), and the release was assigned incident number nAPP2204733624.

The information provided in the Form C-141 is summarized below.

Location of Release Source				
Latitude:	32.3424733	Longitude:	-104.062457	
Provided GPS are in WGS84 format.				
Site Name: Astro Dog 6-Inch		Site Type: Pipeline		
Date Release Discovered: 2/14/2022		API # (if applicable): N/A		
Unit Letter	Section	Township	Range	County
"M"	35	22S	28E	Eddy
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Federal <input type="checkbox"/> Tribal <input type="checkbox"/> Private (Name _____)				
Nature and Volume of Release				
<input checked="" type="checkbox"/> Crude Oil	Volume Released (bbls) 12		Volume Recovered (bbls) 11	
<input type="checkbox"/> Produced Water	Volume Released (bbls)		Volume Recovered (bbls)	
	Is the concentration of total dissolved solids (TDS) in the produced water > 10,000 mg/L?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<input type="checkbox"/> Condensate	Volume Released (bbls)		Volume Recovered (bbls)	
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)		Volume Recovered (Mcf)	
<input type="checkbox"/> Other (describe)	Volume/Weight Released		Volume/Weight Recovered	
Cause of Release: 3rd Party Pipeline Strike. The release was limited to the open bellhole.				
Initial Response				
<input checked="" type="checkbox"/> The source of the release has been stopped.				
<input checked="" type="checkbox"/> The impacted area has been secured to protect human health and the environment.				
<input checked="" type="checkbox"/> Release materials have been contained via the use of berms or dikes, absorbent pad, or other containment devices				
<input checked="" type="checkbox"/> All free liquids and recoverable materials have been removed and managed appropriately.				

The NORs and previously submitted portions of the Form C-141 are available in the NMOCD Imaging System.

2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Astro Dog 6-Inch release site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	35'	
Did the release impact groundwater or surface water?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles, topographic maps, NMOSE and USGS databases, and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standards for the Astro Dog 6-Inch release site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
35'	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	600	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	100	100
	Gas Range Organics + Diesel Range Organics (GRO + DRO)	EPA SW-846 Method 8015M	N/A	N/A
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

* Measured in milligrams per kilogram (mg/kg)

† Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

‡ The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

4.0 REMEDIATION ACTIVITIES SUMMARY

On February 22, 2022, remediation activities commenced at the release site. Due to the nature of the impacted material (i.e., well-indurated bedrock, see the "Soil Profile Log" in Appendix B), it was determined that an excavator equipped with a hydraulic rock hammer would be required to further advance the excavation. In accordance with NMOCD regulatory guidelines, impacted material affected above the NMOCD Closure Criteria and NMOCD Reclamation Standards was excavated and stockpiled on-site, atop an impermeable liner, pending transfer to an NMOCD-approved surface waste facility for disposal. The floor and sidewalls of the excavation were advanced until field observations and/or test results suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards. Representative five-point composite confirmation soil samples were collected every 50 linear feet from the excavation sidewalls and every 200 square feet from the floor of the excavated area to be submitted for laboratory analysis.

On March 3, 2022, Etech collected six (6) confirmation soil samples (NSW #1, ESW #1, ESW #2, SSW #1, FL-1 @ 14', and FL-2 @ 12') from the sidewalls and floor of the excavated area. The soil samples were submitted to a certified, commercial laboratory (henceforth, "the laboratory") for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX and TPH concentrations were also below the laboratory method detection limit (MDL), with the exception of soil sample ESW #1, which exhibited a TPH concentration of 55.5 mg/kg. Chloride concentrations ranged from 18.8 mg/kg in soil sample NWS #1 to 357 mg/kg in soil sample FL-2 @ 12'. Excavation of impacted material continued to the west.

On March 10, 2022, Etech collected six (6) confirmation soil samples (NW #2, SW #2, FL-3 @ 14', FL-4 @ 14', FL-5 @ 14.5', and FL-6 @ 14.5') from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX concentrations were also less than the laboratory MDL, with the exception of soil sample NW #2, which exhibited a BTEX concentration of 0.111 mg/kg. TPH concentrations ranged from less than the laboratory MDL in soil sample SW #2 to 999 mg/kg in soil sample FL-3 @ 14'. TPH concentrations exceeded the NMOCD Closure Criterion in each of the submitted soil samples, with the exception of soil sample SW #2. Chloride concentrations ranged from 28.6 mg/kg in soil sample NW #2 to 492 mg/kg in soil sample FL-3 @ 14'. Based on laboratory analytical results, the floor and sidewalls of the excavated area were further advanced in the areas characterized by soil samples FL-3 @ 14', FL-4 @ 14', FL-5 @ 14.5', FL-6 @ 14.5' and NW #2. Excavation of impacted material also continued to the west.

On March 23, 2022, Etech collected six (6) confirmation soil samples (NSW #2b, NSW #3, SSW #3, FL-3b @ 16', FL-4b @ 16', and FL-5b @ 14') from the sidewalls and floor of the newly excavated area. The soil samples were submitted to the laboratory for analysis of TPH. Soil samples NSW #3 and SSW #3 were also analyzed for BTEX and chloride. Laboratory analytical results indicated the BTEX and chloride concentrations in soil samples NSW #3 and SSW #3 were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards. BTEX concentrations were also less than the laboratory MDL. TPH concentrations ranged from less than the laboratory MDL in soil samples SSW #3, FL-3b @ 16', and FL-5b @ 14' to 886 mg/kg in soil sample NSW #2b. TPH concentrations exceeded the NMOCD Closure Criterion in soil samples NSW #2b, NSW #3, and FL-4b @ 16'. Chloride concentrations were 55.3 mg/kg in soil sample NSW #3 and 76.5 mg/kg in soil sample SSW #3. Based on laboratory analytical results, the excavation was further advanced in the area characterized by soil sample FL-4b @ 16'. Further advancement of the north sidewall in the area characterized by soil samples NSW #2b and NSW #3 was limited due to safety and environmental concerns associated with continued use of the hydraulic rock hammer in such close proximity to an active, 16-inch, high-pressure gas pipeline adjacent to the excavation.

On March 24, 2022, Etech collected one (1) confirmation soil sample (FL-6b @ 17') from the floor of the newly excavated area. The soil sample was submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated the TPH concentration was below the NMOCD Closure Criterion, NMOCD Reclamation Standard, and laboratory MDL. Excavation of impacted material continued to the west.

On April 1, 2022, Etech collected one (1) confirmation soil sample (FL-4c @ 17') from the floor of the newly excavated area. The soil sample was submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated the TPH concentration was 93.4 mg/kg and below the NMOCD Closure Criterion and NMOCD Reclamation Standard. Excavation of impacted material continued to the west.

On April 8, 2022, Etech advanced an investigative trench (NT) to the north of the high-pressure gas line, in the area characterized by soil samples NSW #2b and NSW #3. The trench was advanced to a total depth of approximately 20 feet below ground surface (bgs). During the advancement of the investigative trench, soil samples were collected and field-screened for the presence of volatile organic compounds (VOCs) utilizing olfactory/visual senses. Based on field observations, three (3) delineation soil samples (NT-10', NT-15', and NT-20') were submitted to the laboratory for analysis of BTEX and TPH. Laboratory analytical results indicated BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory MDL in each of the submitted soil samples. Based on laboratory analytical results, horizontal delineation had been achieved, and impacted soil did not extend beyond the high-pressure gas line to the north.

On April 27, 2022, Etech collected three (3) confirmation soil samples (SWSW, FL-7 16-18', and FL-10 @ 18') from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX concentrations ranged from less than the laboratory MDL in soil samples SWSW and FL-10 @ 18' to 0.0132 mg/kg in soil sample FL-7 16-18'. TPH concentrations ranged from less than the laboratory MDL in soil sample FL-7 16-18' to 1,840 mg/kg in soil sample SWSW, which exceeded the NMOCD Closure Criterion. Chloride concentrations ranged from 47.0 mg/kg in soil sample SWSW to 372 mg/kg in soil sample FL-10 @ 18'. Based on laboratory analytical results, the sidewall of the excavated area was further advanced in the area characterized by soil sample SWSW. Excavation of impacted material also continued to the west.

On May 10, 2022, Etech collected three (3) confirmation soil samples (FL-5b, FL-8, and FL-9) from the floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride. Laboratory analytical results indicated BTEX and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standards in each of the submitted soil samples. BTEX concentrations ranged from less than the laboratory MDL in soil sample FL-9 to 0.0105 mg/kg in soil sample FL-8. TPH concentrations ranged from 70.4 mg/kg in soil sample FL-5b to 1,680 mg/kg in soil sample FL-8. TPH concentrations exceeded the NMOCD Closure Criterion in soil samples FL-8 and FL-9. Chloride concentrations ranged from 96.1 mg/kg in soil sample FL-8 to 132 mg/kg in soil sample FL-9. Based on laboratory analytical results, the floor of the excavated area was further advanced in the area characterized by soil samples FL-8 and FL-9. Excavation of impacted material also continued to the west.

On May 11, 2022, representatives of Plains, the NMOCD, and the BLM met to discuss the remediation site and determine a path forward to regulatory closure. During the meeting, it was determined that the removal of hydrocarbon-impacted soil from the north sidewall, beneath the high-pressure gas line, posed a significant safety risk and was impracticable. Since the impacted areas were limited to two (2) small, porous lenses between 12 and 14 feet bgs and did not extend beyond the high-pressure gas line to the north, saturating the affected areas with a 30% hydrogen peroxide solution might be sufficient to mitigate the contamination.

On May 12, 2022, Etech collected two (2) confirmation soil samples (SWSWb and WSW #1) from the sidewalls of the excavated area. The soil samples were submitted to the laboratory for analysis of TPH. Soil sample WSW #1 was also analyzed for concentrations of BTEX and chloride. Laboratory analytical results indicated BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory MDL in each of the submitted soil samples. The chloride concentration in soil sample WSW #1 was 964 mg/kg, which exceeded the NMOCD Closure Criterion. Based on laboratory analytical results, the sidewall of the excavated area was further advanced in the area characterized by soil sample WSW #1. Excavation of impacted soil also continued to the west.

On May 20, 2022, Etech treated the impacted areas in the north sidewall proximate to the high-pressure gas line (characterized by soil samples NSW #2b and NSW #3) by saturating them with a 30% hydrogen peroxide solution. In addition, Etech collected six (6) confirmation soil samples (WSW #1b, WSW #2, FL-8b, FL-9b, FL-11, and FL-12) from the sidewalls and floor of the excavated area. The soil samples were submitted to the laboratory for analysis of BTEX, TPH, and/or chloride. Laboratory analytical results indicated BTEX and TPH concentrations were below the applicable NMOCD Closure Criteria, NMOCD Reclamation Standards, and laboratory MDL in each of the submitted soil samples, with the exception of soil sample FL-11, which exhibited a TPH concentration of 79.9 mg/kg. Chloride concentrations ranged from 78.0 mg/kg in soil sample WSW #2 to 124 mg/kg in soil sample WSW #1b.

On June 3, 2022, Etech collected one (1) soil sample (6/3 NSW) from the treated areas characterized by soil samples NSW #2b and NSW #3. The soil sample was submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated the TPH concentration was 1,440 mg/kg, which exceeded the NMOCD Closure Criterion. Following sample collection, the affected area was saturated with a 30% hydrogen peroxide solution in an effort to mitigate hydrocarbon impacts.

On June 6, 2022, Etech collected one (1) sample (6/6 NSW) from the treated areas characterized by soil samples NSW #2b and NSW #3. The soil sample was submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated the TPH concentration was 1,630 mg/kg, which exceeded the NMOCD Closure Criterion. Following sample collection, the affected area was saturated with a 30% hydrogen peroxide solution in an effort to mitigate hydrocarbon impacts.

On June 8, 2022, Etech collected one (1) sample (6/8 NSW) from the treated areas characterized by soil samples NSW #2b and NSW #3. The soil sample was submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated the TPH concentration was 784 mg/kg, which exceeded the NMOCD Closure Criterion. Following sample collection, the affected area was saturated with a 30% hydrogen peroxide solution in an effort to mitigate hydrocarbon impacts.

On June 9, 2022, Etech collected one (1) sample (6/9 NSW) from the treated areas characterized by soil samples NSW #2b and NSW #3. The soil sample was submitted to the laboratory for analysis of TPH. Laboratory analytical results indicated the TPH concentration was 382 mg/kg, which exceeded the NMOCD Closure Criterion.

On June 14, 2022, based on the limited area of impact remaining in-situ, an Information Packet and backfill request was prepared and submitted to the NMOCD and BLM detailing laboratory analytical results and remediation activities conducted to date. The backfill request was subsequently approved by both agencies.

The final dimensions of the excavated area were approximately 90 feet in length, 42 to 62 feet in width, and 14 to 20 feet in depth. During the course of remediation activities, Etech transported approximately 5,928 cubic yards of impacted soil to an NMOCD-permitted surface waste facility for disposal and imported approximately 5,834 cubic yards of locally sourced, non-impacted material to the site for use as backfill.

Soil sample locations and the extents of the excavated and treated areas are depicted in Figure 3, "Site & Sample Location Map". Soil chemistry data is summarized in Table 1. A soil profile log is provided in Appendix B. General photographs of the release site are provided in Appendix C. Laboratory analytical reports are provided in Appendix D. Copies of all regulatory correspondence are provided in Appendix E.

5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving NMOCD and BLM approval, the excavated area was backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area was contoured and compacted to achieve erosion control, stability, and preservation of surface water flow to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with an agency- and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the site.

6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with the NMOCD and BLM. Impacted soil affected above the NMOCD Closure Criteria and NMOCD Reclamation Standard was excavated and transported to an NMOCD-permitted surface waste facility for disposal. The floor and sidewalls of the excavated area were advanced until laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the NMOCD Closure Criteria. Laboratory analytical results from excavation confirmation soil samples indicated BTEX, TPH, and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted soil samples, with the exceptions of the TPH concentrations in soil samples NSW #2b and NSW #3. Further excavation of impacted rock in the areas characterized by soil samples NSW #2b and NSW #3 was precluded due to safety concerns associated with their close proximity to an active, 16-inch, high-pressure gas pipeline and the resilient nature of the rock.

In accordance with the NMOCD and BLM, the impacted areas characterized by soil samples NSW #2b and NSW #3 were repeatedly treated with a 30% hydrogen peroxide solution and resampled until laboratory analytical results indicated hydrocarbon impacts had been mitigated to the extent practicable.

Based on laboratory analytical results and field activities conducted to date, Etech recommends Plains provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the Astro Dog 6-Inch release site.

7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Plains Pipeline, LP. Use of the information contained in this report is prohibited without the consent of Etech and/or Plains Pipeline, LP.

8.0 DISTRIBUTION

Plains Pipeline, LP

*1106 Griffith Drive
Midland, Texas 79706*

Matador Resources Company

*5400 LBJ Freeway, Suite 1500
Dallas, TX 75240*

New Mexico Energy, Minerals and Natural Resources Department

*Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210*

United States Department of the Interior

*Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220*

(Electronic Submission)

Figure 1

Topographic Map

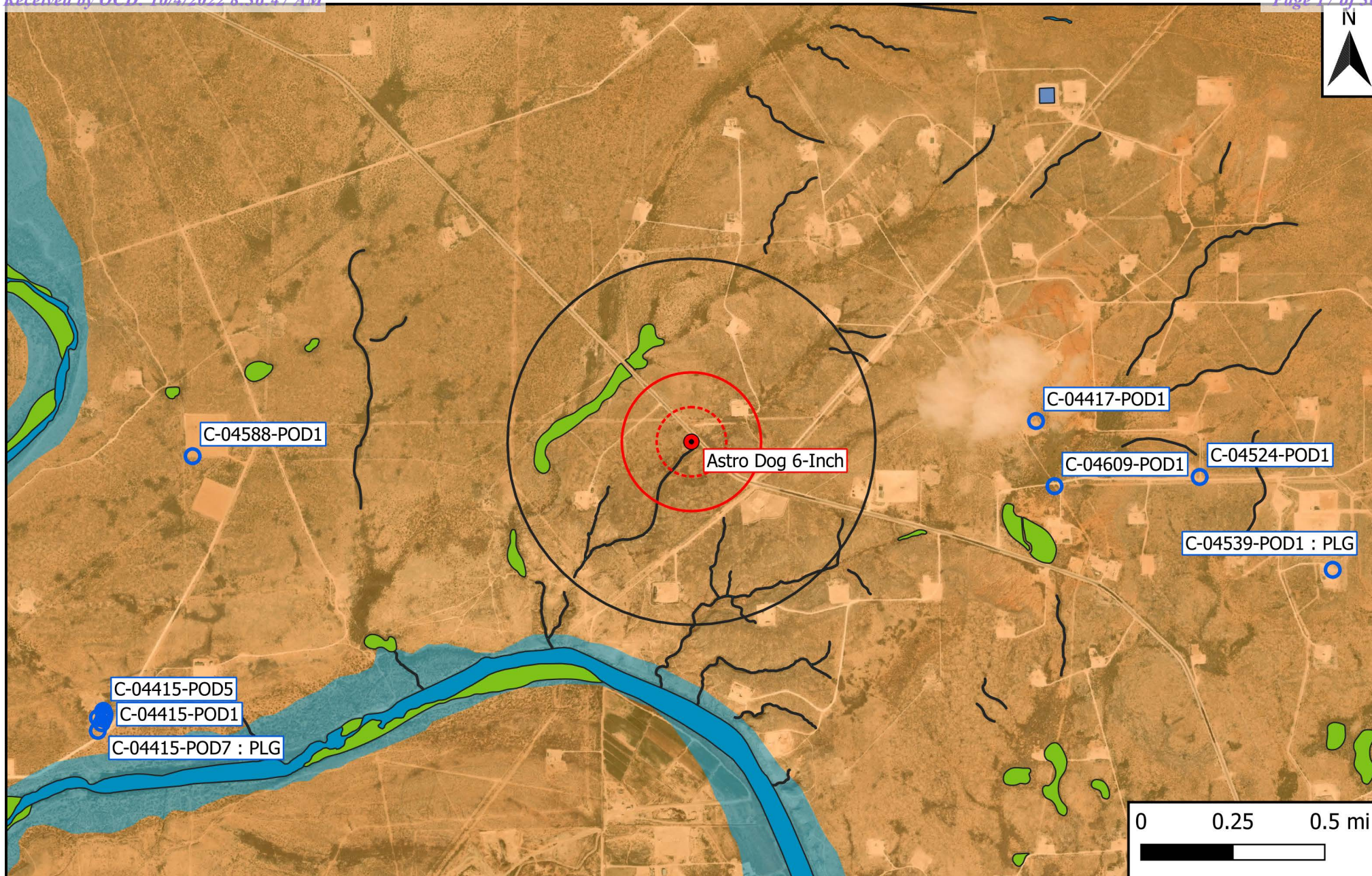


eTECH 
Environmental & Safety Solutions, Inc.

Date: 7/18/22

Figure 2

Site Characterization Map



Legend

- | | | |
|------------------------------|---------------------------------|--------------------|
| ● Site Location | 100-Year Floodplain | 500-Ft Radius |
| ○ Well - NMOSE | Emergent/Forested Wetlands | 1,000-Ft Radius |
| ○ Well - USGS | Freshwater Pond/Lake | 0.5-Mi Radius |
| ○ Well - Exploratory/Monitor | Karst Potential (Low/Med./High) | Municipal Boundary |
| — Potash Mine Workings | Riverine | |

Figure 2

Site Characterization Map
 Plains All American
 Astro Dog 6-Inch
 GPS: 32.3424733, -104.062457
 Eddy County



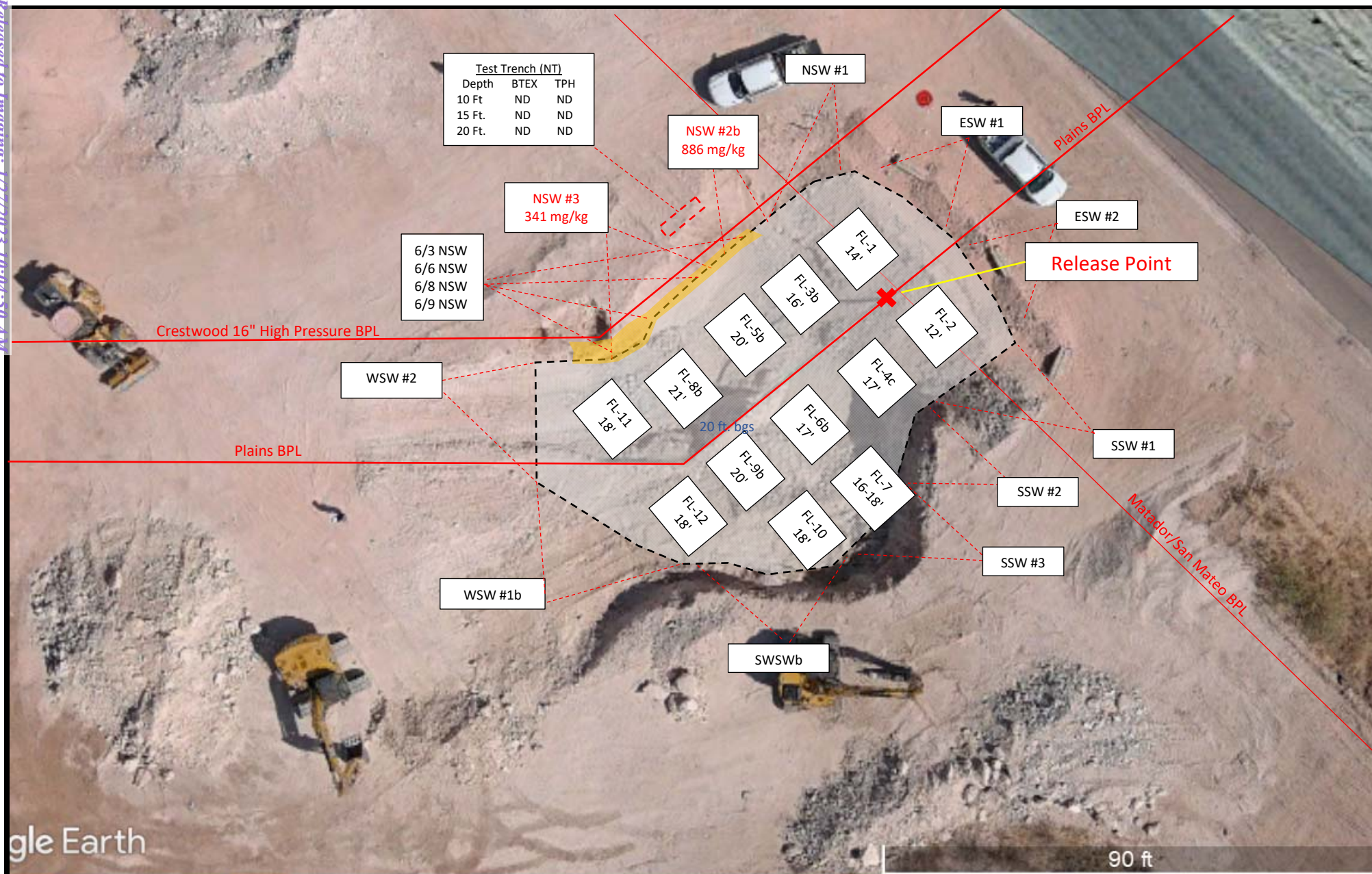
Drafted: bja

Checked: jwl

Date: 7/18/22

Figure 3

Site & Sample Location Map



Legend:



Excavated Area



Treated Area



Buried Pipeline



Release Point



SSW #1 Sample Location

Figure 3

Site & Sample Location Map
 Plains All American
 Astro Dog 6-Inch
 GPS: 32.3424, -104.06245
 Eddy County



Revised: bja

Revised: jwl

Date:

8/31/22

Table 1
Concentrations of BTEX, TPH & Chloride in Soil

Table 1 Concentrations of BTEX, TPH & Chloride in Soil Plains Pipeline, LP Astro Dog 6-Inch NMOCD Reference #'s: nAPP2204566669 & nAPP2204733624											
NMOCD Closure Criteria				10	50	N/A	N/A	N/A	N/A	100	600
NMOCD Reclamation Standard				10	50	N/A	N/A	N/A	N/A	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
Delineation Samples											
NT-10'	4/8/2022	10	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	-
NT-15'	4/8/2022	15	In-Situ	<0.00199	<0.00398	<50.0	<50.0	<50.0	<50.0	<50.0	-
NT-20'	4/8/2022	20	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	-
Excavation Samples											
NSW #1	3/3/2022	0-14	In-Situ	<0.00198	<0.00396	<49.9	<49.9	<49.9	<49.9	<49.9	18.8
NW #2	3/10/2022	0-14	Excavated	<0.00199	0.111	<49.9	810	810	100	910	28.6
NSW #2b	3/23/2022	0-16	Treated	-	-	<49.9	772	772	114	886	-
NSW #3	3/23/2022	0-21	Treated	<0.00201	<0.00402	<49.8	341	341	<49.8	341	55.3
6/3 NSW	6/3/2022	12-16	Treated	-	-	<50.0	1,440	1,440	<50.0	1,440	-
6/6 NSW	6/6/2022	12-16	Treated	-	-	<50.0	1,630	1,630	<50.0	1,630	-
6/8 NSW	6/8/2022	12-16	Treated	-	-	<50.0	637	637	67.0	784	-
6/9 NSW	6/9/2022	12-16	Treated	-	-	<49.9	382	382	<49.9	382	-
ESW #1	3/3/2022	0-14	In-Situ	<0.00200	<0.00400	<49.9	55.5	55.5	<49.9	55.5	208
ESW #2	3/3/2022	0-12	In-Situ	<0.00200	<0.00399	<49.8	<49.8	<49.8	<49.8	<49.8	99.8
SSW #1	3/3/2022	0-12	In-Situ	<0.00198	<0.00397	<50.0	<50.0	<50.0	<50.0	<50.0	273
SW #2	3/10/2022	0-18	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	446
SSW #3	3/23/2022	0-18	In-Situ	<0.00200	<0.00401	<49.8	<49.8	<49.8	<49.8	<49.8	76.5
SWSW	4/27/2022	0-18	Excavated	<0.00199	<0.00398	869	973	1,840	<49.9	1,840	47.0
SWSWb	5/12/2022	0-18	In-Situ	-	-	<50.0	<50.0	<50.0	<50.0	<50.0	-
WSW #1	5/12/2022	0-18	Excavated	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	964
WSW #1b	5/20/2022	0-18	In-Situ	-	-	-	-	-	-	-	124
WSW #2	5/20/2022	0-18	In-Situ	<0.00199	<0.00398	<49.9	<49.9	<49.9	<49.9	<49.9	78.0
FL-1 @ 14'	3/3/2022	14	In-Situ	<0.00200	<0.00399	<50.0	<50.0	<50.0	<50.0	<50.0	328
FL-2 @ 12'	3/3/2022	12	In-Situ	<0.00202	<0.00404	<50.0	<50.0	<50.0	<50.0	<50.0	357
FL-3 @ 14'	3/10/2022	14	Excavated	<0.00200	<0.00399	<50.0	870	870	129	999	492
FL-3b @ 16'	3/23/2022	16	In-Situ	-	-	<49.7	<49.7	<49.7	<49.7	<49.7	-
FL-4 @ 14'	3/10/2022	14	Excavated	<0.00199	<0.00398	<49.9	131	131	<49.9	131	391
FL-4b @ 16'	3/23/2022	16	Excavated	-	-	<50.0	155	155	<50.0	155	-
FL-4c @ 17'	4/1/2022	17	In-Situ	-	-	27.6	65.8	93.4	<15.0	93.4	-
FL-5 @ 14.5'	3/10/2022	14.5	Excavated	<0.00200	<0.00399	<50.0	227	227	<50.0	227	267
FL-5b @ 14'	3/23/2022	14	In-Situ	-	-	<49.9	<49.9	<49.9	<49.9	<49.9	-
FL-5b	5/10/2022	20	In-Situ	-	-	<49.9	70.4	70.4	<49.9	70.4	-
FL-6 @ 14.5'	3/10/2022	14.5	Excavated	<0.00200	<0.00399	<49.9	274	274	<49.9	274	246
FL-6b @ 17'	3/24/2022	17	In-Situ	-	-	<50.0	<50.0	<50.0	<50.0	<50.0	-
FL-7 16-18'	4/27/2022	16-18	In-Situ	<0.00200	0.0132	<50.0	<50.0	<50.0	<50.0	<50.0	196
FL-8	5/10/2022	17	Excavated	<0.00202	0.0105	<49.9	1,680	1,680	<49.9	1,680	96.1
FL-8b	5/20/2022	18-20	In-Situ	-	-	<50.0	<50.0	<50.0	<50.0	<50.0	-
FL-9	5/10/2022	17	Excavated	<0.00199	<0.00398	<49.9	341	341	<49.9	341	132
FL-9b	5/20/2022	18-20	In-Situ	-	-	<49.9	<49.9	<49.9	<49.9	<49.9	-
FL-10 @ 18'	4/27/2022	18	In-Situ	<0.00202	<0.00403	<50.0	50.4	50.4	<50.0	50.4	372

Dash (-): Sample not analyzed for that constituent.

Bold: NMOCD Closure Criteria exceedance.

Red: NMOCD Reclamation Standard exceedance.

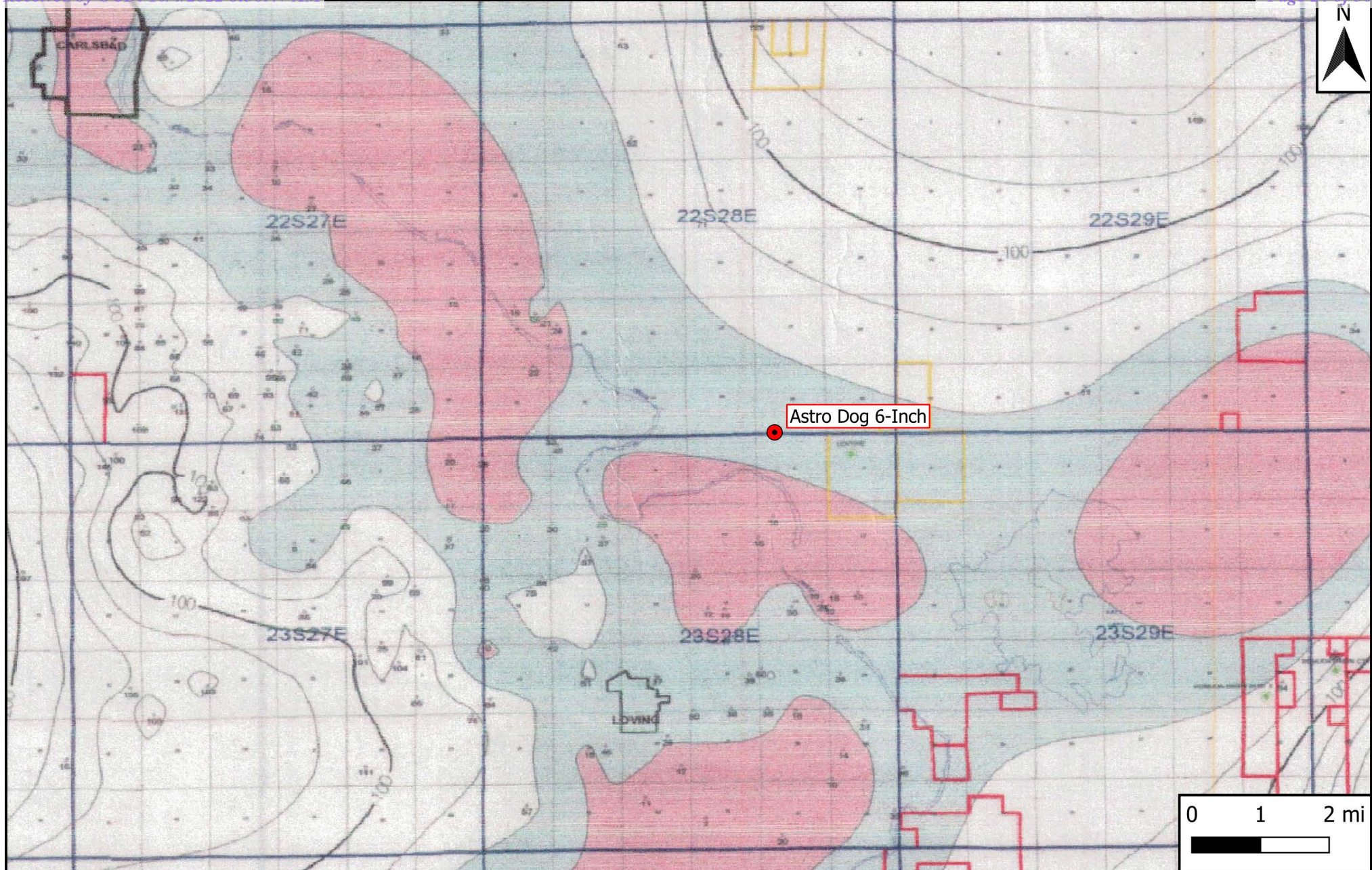
Table 1 Concentrations of BTEX, TPH & Chloride in Soil Plains Pipeline, LP Astro Dog 6-Inch NMOCD Reference #'s: nAPP2204566669 & nAPP2204733624											
NMOCD Closure Criteria				10	50	N/A	N/A	N/A	N/A	100	600
NMOCD Reclamation Standard				10	50	N/A	N/A	N/A	N/A	100	600
Sample ID	Date	Depth (Feet)	Soil Status	SW 846 8021B		SW 846 8015M Ext.					4500 Cl
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
FL-11	5/20/2022	18-20	In-Situ	<0.00200	<0.00399	<49.9	79.9	79.9	<49.9	79.9	93.3
FL-12	5/20/2022	18-20	In-Situ	<0.00202	<0.00404	<49.9	<49.9	<49.9	<49.9	<49.9	105

Dash (-): Sample not analyzed for that constituent.

Bold: NMOCD Closure Criteria exceedance.**Red:** NMOCD Reclamation Standard exceedance.

Appendix A

Depth to Groundwater Information



Legend

- Site Location

Figure 4

Inferred Depth to Groundwater Trend Map
 Plains All American
 Astro Dog 6-Inch
 GPS: 32.3424733, -104.062457
 Eddy County



Drafted: bja

Checked: jwl

Date: 7/18/22



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)



























(R=POD has been replaced,
O=orphaned,
C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

		POD	Q Q Q										Water				
POD Number	Code	Sub-basin	County	64	16	4	Sec	Tws	Rng	X	Y	Distance	Depth	Well	Depth	Water	Column
C_04417 POD1		CUB	ED	4	3	3	36	22S	28E	589736	3578874		1511	55			
C_04609 POD1		CUB	ED	2	1	1	01	23S	28E	589816	3578589		1601	51			
C_00512 CLW198323	O	CUB	ED	4	1	1	11	23S	28E	588167	3576806*		1978	100			
C_00512 S		CUB	ED	4	1	1	11	23S	28E	588167	3576806*		1978	100			
C_00512		CUB	ED	4	1	1	11	23S	28E	588188	3576775		2008	175	15	160	
C_00512 EXPL	O	CUB	ED			1	11	23S	28E	588272	3576703*		2080	200	16	184	
C_04588 POD1		CUB	ED	2	2	2	04	23S	28E	586043	3578720		2184	50			
C_04524 POD1		CUB	ED	1	1	2	01	23S	28E	590452	3578629		2230	55			
C_04216 POD2		CUB	ED	1	4	1	11	23S	28E	588465	3576555		2240	20	10	10	
C_04216 POD3		CUB	ED	1	4	1	11	23S	28E	588501	3576556		2244	23	13	10	
C_04216 POD1		CUB	ED	2	4	1	11	23S	28E	588488	3576534		2264	20	10	10	
C_00109		CUB	ED	1	3	3	04	23S	27E	588486	3576531		2266	168	120	48	
C_04216 POD4		CUB	ED	2	4	1	11	23S	28E	588499	3576513		2286	20	10	10	
C_00608		C	ED	3	3	1	11	23S	28E	587970	3576401*		2396	200			
C_04418 POD1		CUB	ED	4	2	1	12	23S	28E	590104	3576851		2693	55			
C_00315		CUB	ED	3	1	3	11	23S	28E	587973	3575995*		2800	100	45	55	
C_04415 POD5		CUB	ED	4	1	4	04	23S	28E	585652	3577605		2831	10			
C_04415 POD6		CUB	ED	4	1	4	04	23S	28E	585652	3577605		2831	10			
C_04415 POD1		CUB	ED	4	1	4	04	23S	28E	585657	3577591		2832	25	20	5	
C_04415 POD8		CUB	ED	4	1	4	04	23S	28E	585656	3577583		2837	27	23	4	
C_04415 POD2		CUB	ED	4	1	4	04	23S	28E	585653	3577570		2845	12			
C_04415 POD3		CUB	ED	4	1	4	04	23S	28E	585645	3577552		2860	11			
C_04539 POD1		CUB	ED	2	4	2	01	23S	28E	591034	3578223		2862	55			
C_04415 POD4		CUB	ED	3	1	4	04	23S	28E	585628	3577575		2865	11			
C_04415 POD7		CUB	ED	3	1	4	04	23S	28E	585628	3577518		2890	55	38	17	
C_00800		C	ED		4	2	09	23S	28E	586050	3576479*		3170	200	30	170	

Average Depth to Water: **29 feet**

Minimum Depth: **10 feet**

Maximum Depth: **120 feet**

Record Count: 26

UTMNAD83 Radius Search (in meters):

Easting (X): 588226.89

Northing (Y): 3578783.49

Radius: 3218.7

*UTM location was derived from PLSS - see Help



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 00512 CLW198323	4	1	1	11	23S	28E	588167	3576806*
Driller License:		Driller Company:							
Driller Name:		J. F. KIMMELL							
Drill Start Date:		Drill Finish Date:		12/31/1946		Plug Date:			
Log File Date:		PCW Rcv Date:				Source:			
Pump Type:		Pipe Discharge Size:				Estimated Yield: 200 GPM			
Casing Size: 16.00		Depth Well:		100 feet		Depth Water:			

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.


2/16/22 9:51 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)							
		(quarters are smallest to largest)		(NAD83 UTM in meters)					
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	00512 EXPL			1	11	23S	28E	588272	3576703*
									
<hr/>									
Driller License: 24		Driller Company: BRININSTOOL, M.D.							
Driller Name: BRININSTOOL, M.D.									
Drill Start Date: 07/12/1971		Drill Finish Date: 07/17/1971		Plug Date:					
Log File Date: 10/15/1971		PCW Rev Date:		Source: Shallow					
Pump Type:		Pipe Discharge Size:		Estimated Yield:					
Casing Size:		Depth Well: 200 feet		Depth Water: 16 feet					
<hr/>									
Water Bearing Stratifications:		Top	Bottom	Description					
		16	35	Shallow Alluvium/Basin Fill					
<hr/>									

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/16/22 8:36 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)						(NAD83 UTM in meters)	
Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	C 00512 S	4	1	1	11	23S	28E	588167	3576806*
<hr/>									
Driller License:					Driller Company:				
Driller Name: KIMMELL									
Drill Start Date: 12/31/1946					Drill Finish Date: 12/31/1946		Plug Date:		
Log File Date:					PCW Rcv Date: 10/22/1976		Source: Shallow		
Pump Type: TURBIN					Pipe Discharge Size: 3"		Estimated Yield:		
Casing Size: 16.00					Depth Well: 100 feet		Depth Water:		

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/16/22 8:35 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
 (quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
NA	C 04417 POD1	4	3	3	36	22S	28E	589736	3578874

Driller License: 1789 **Driller Company:** HRL COMPLIANCE SOLUTIONS, INC

Driller Name: MARK MUMBY

Drill Start Date: 03/31/2020 **Drill Finish Date:** 03/31/2020 **Plug Date:**

Log File Date: 05/26/2020 **PCW Rev Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** 55 feet **Depth Water:**

Casing Perforations: **Top Bottom**
 45 55

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/16/22 8:29 AM

POINT OF DIVERSION SUMMARY



New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
C	00512	4	1	1	11	23S	28E	588188	3576775



Driller License: 24 **Driller Company:** BRININSTOOL, M.D.

Driller Name: BRININSTOOL, M.D.

Drill Start Date: 05/04/1975	Drill Finish Date: 05/20/1975	Plug Date:
Log File Date: 05/11/1976	PCW Rev Date: 10/22/1976	Source: Shallow
Pump Type: TURBIN	Pipe Discharge Size: 4"	Estimated Yield: 300 GPM
Casing Size: 16.00	Depth Well: 175 feet	Depth Water: 15 feet

Water Bearing Stratifications:	Top	Bottom	Description
	15	28	Shallow Alluvium/Basin Fill

Casing Perforations:	Top	Bottom
	15	90

Meter Number: 5520	Meter Make: MCCROMETER
Meter Serial Number: 02-4-1040	Meter Multiplier: 100.0000
Number of Dials: 6	Meter Type: Diversion
Unit of Measure: Gallons	Return Flow Percent:
Usage Multiplier:	Reading Frequency:

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
03/27/2002	2002	0	A	tw		0
05/07/2002	2002	391	A	tw		0.120
06/12/2002	2002	1914	A	tw		0.467
09/03/2002	2002	3920	A	tw		0.616
01/13/2003	2002	4253	A	tw		0.102
04/02/2003	2003	4451	A	tw		0.061
06/04/2003	2003	4729	A	tw		0.085
08/02/2003	2003	4932	A	tw		0.062
10/27/2003	2003	4932	A	tw		0
01/07/2004	2003	4932	A	tw		0
04/27/2004	2004	4932	A	tw		0
07/15/2004	2004	5085	A	tw		0.047
10/20/2004	2004	649	R	tw	Meter Rollover	305.527
01/03/2005	2004	649	A	tw		0
03/01/2005	2005	649	A	tw		0
07/06/2005	2005	675	A	tw		0.008
10/19/2005	2005	675	A	tw		0
01/05/2006	2005	675	A	tw		0
04/06/2006	2006	676	A	tw		0
07/06/2006	2006	676	A	tw		0

01/09/2007	2007	676	A	tw	0
01/03/2008	2007	55046	A	tw	16.686
04/24/2008	2008	85512	A	tw	9.350
07/17/2008	2008	98411	A	tw	3.959
10/02/2008	2008	103913	A	tw	1.689
01/15/2009	2008	104404	A	tw	0.151
04/22/2009	2009	123664	A	tw	5.911
08/04/2009	2009	142056	A	tw	5.644
01/06/2010	2009	160768	A	tw	5.743
06/02/2010	2010	160899	A	tw	0.040
01/12/2011	2010	160899	A	tw	0
01/23/2012	2011	170841	A	tw	3.051
03/12/2012	2012	170841	A	tw	0
07/24/2012	2012	171317	A	tw	0.146
02/13/2013	2012	171504	A	tw	0.057
11/05/2013	2013	172273	A	tw	0.236
07/22/2014	2014	172369	A	tw	0.029
02/24/2016	2015	172706	A	tw	0.103
08/11/2016	2016	178853	A	tw	1.886
12/27/2016	2016	172959	C	tw	Meter Reading Correction -1.809
07/18/2017	2017	173150	A	tw	0.059
01/08/2018	2017	173271	A	tw	0.037

x
****YTD Meter Amounts: Year Amount**

2002	1.305
2003	0.208
2004	305.574
2005	0.008
2006	0
2007	16.686
2008	15.149
2009	17.298
2010	0.040
2011	3.051
2012	0.203
2013	0.236
2014	0.029
2015	0.103
2016	0.077
2017	0.096

x

Meter Number:	15518	Meter Make:	MASTER
Meter Serial Number:	2680127	Meter Multiplier:	100.0000
Number of Dials:	6	Meter Type:	Diversion
Unit of Measure:	Gallons	Return Flow Percent:	
Usage Multiplier:		Reading Frequency:	

x

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr Comment	Mtr Amount Online
02/02/2012	2012	17	A	RPT	0

04/03/2012	2012	2594	A	RPT	0.791
------------	------	------	---	-----	-------

x

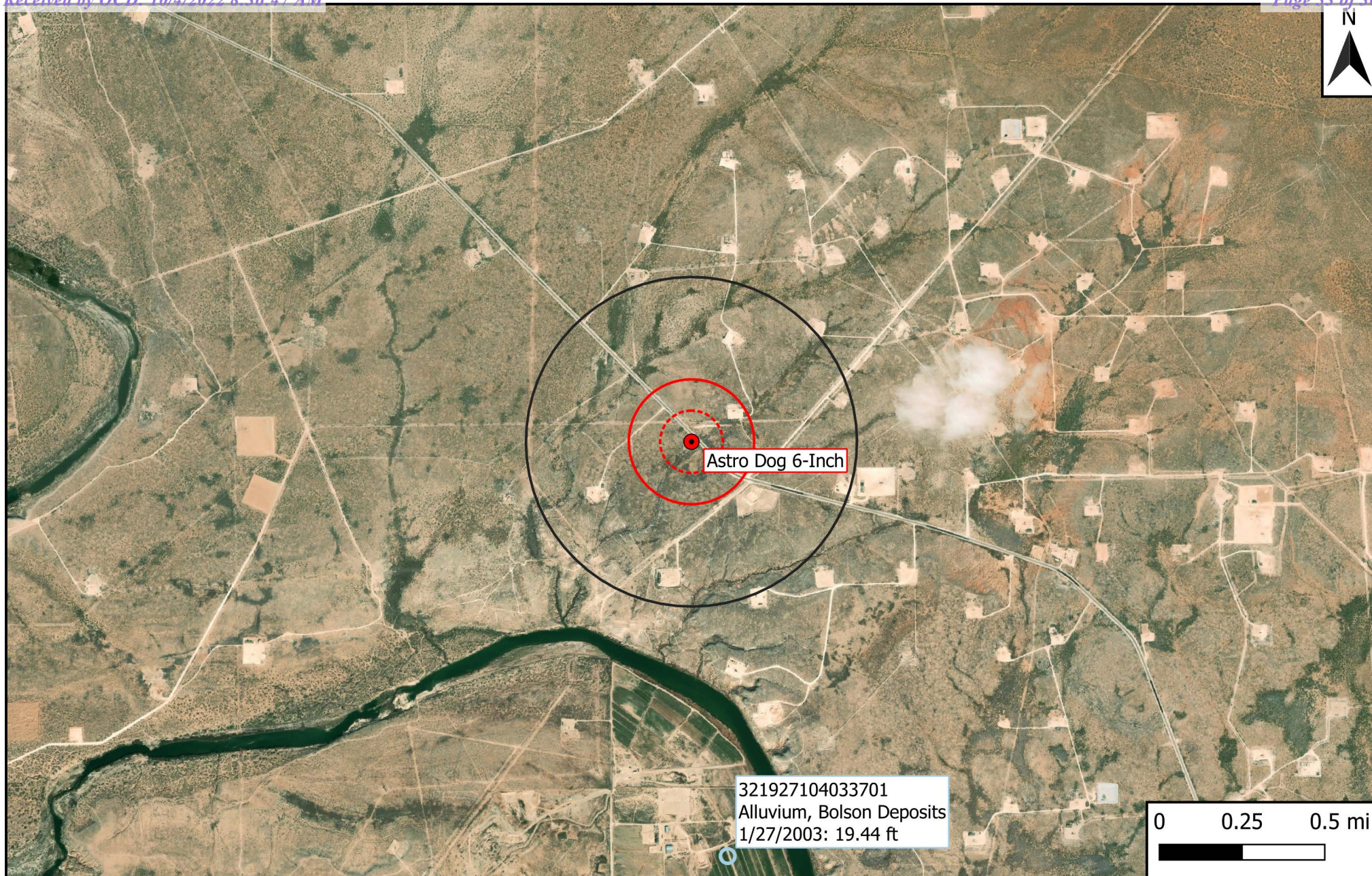
**YTD Meter Amounts:	Year	Amount
	2012	0.791

x

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

2/16/22 8:36 AM

POINT OF DIVERSION SUMMARY



Legend

- Site Location
- Well - USGS
- ⊞ 500-Ft Radius
- ⊞ 1,000-Ft Radius
- ⊞ 0.5-Mi Radius

Figure 5
USGS Well Proximity Map
Plains All American
Astro Dog 6-Inch
GPS: 32.3424733, -104.062457
Eddy County



Drafted: bja

Checked: jwl

Date: 7/18/22



23S.28E.11.114421

IMPORTANT

[Inventory Page](#)

Monitoring location 321927104033701 is associated with a WELL in EDDY COUNTY, NEW MEXICO. Water data back to 1947 are available online.

☐ 1 year ☐ 10 years

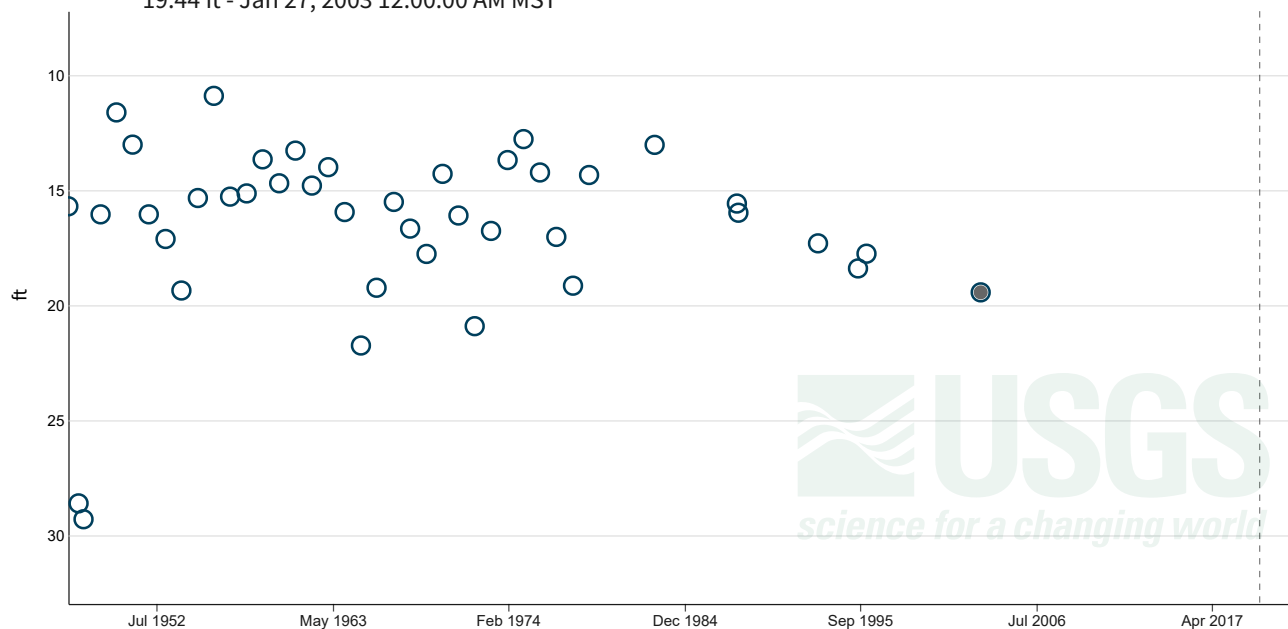
☒ Period of record

Change time span

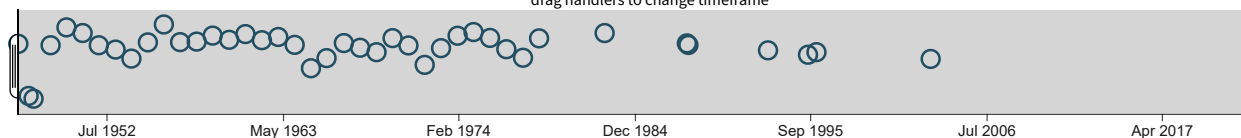
 Retrieve data

Depth to water level, ft below land surface

19.44 ft - Jan 27, 2003 12:00:00 AM MST



drag handlers to change timeframe

Field visit: ☐ Approved

Questions or Comments

☐ Compare to last year

☒ Display median

IMPORTANT Data may be provisional - [learn more](#)

Select data to graph

1947-02-07 to 2003-01-27 ^

☒ **Depth to water level, ft below land surface**

1947-02-07 to 2003-01-27 v

☐ **Groundwater level above NAVD 1988, ft**

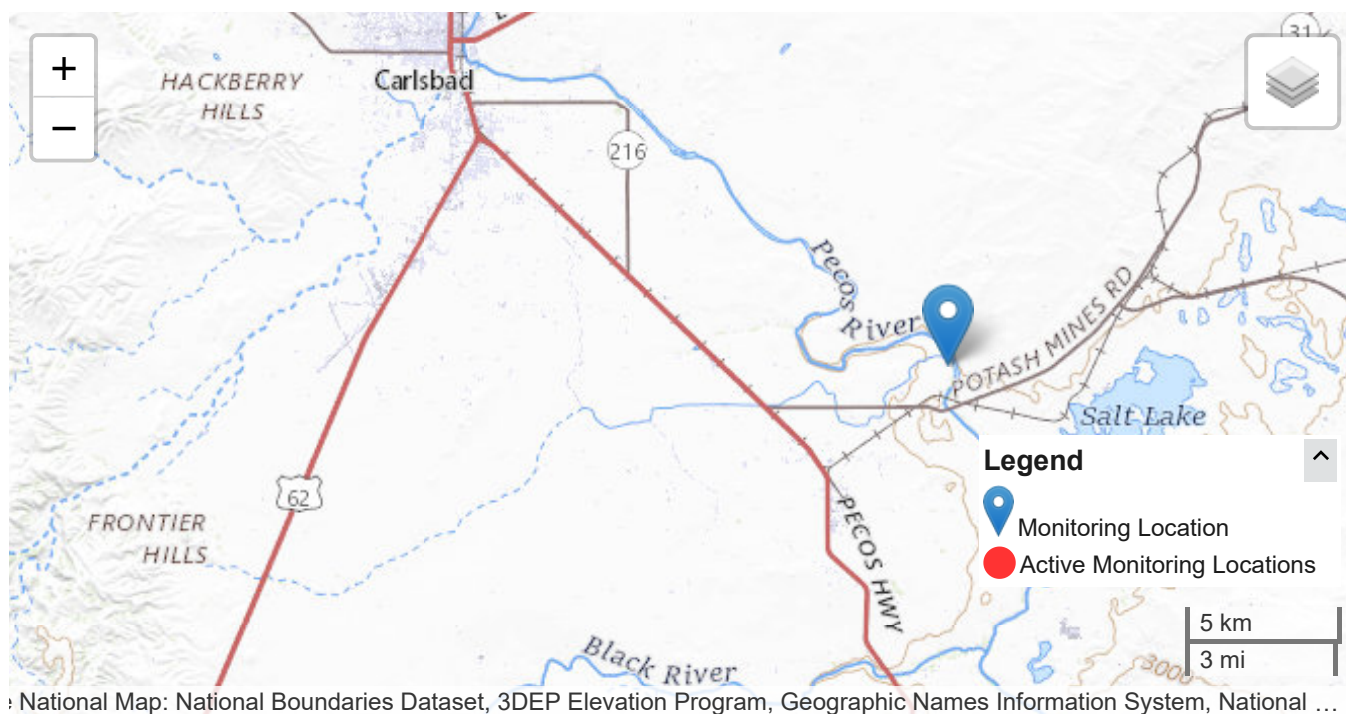
1947-02-07 to 2003-01-27 v

☐ **Groundwater level above NGVD 1929, feet**
Hydrograph data table(s)

+

Groundwater Data **BETA**

+



Interested in understanding how to access the upstream/downstream data? [Learn about the Network-Linked Data Index \(NLDI\)](#).

Summary of All Available Data



Location Metadata



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Appendix B

Soil Profile Log



Soil Profile

Date:

8/17/22

Project: Astro Dog 6-Inch

Project Number: 15649

Latitude:

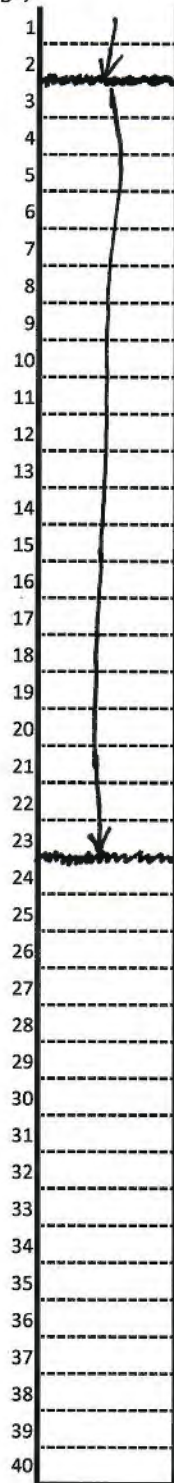
32.3424733

Longitude:

-104.062457

Depth (ft. bgs)

Description



Red topsoil

Well indurated bedrock

TD

Appendix C

Photographic Log

Photographic Log

Photo Number: 1	
Photo Direction: West	
Photo Description: View of the initial release.	

Photo Number: 2	
Photo Direction: West	
Photo Description: View of the affected pipeline and surface staining from the initial release.	

Photographic Log



Photo Number: 3	 <p>4/14/22, 11:13 AM 32.342528, -104.062424</p>
Photo Direction: Overhead/Bird's Eye	
Photo Description: Aerial view of the excavated area.	

Photo Number: 4	 <p>May 5, 2022 at 9:22:16 AM Refinery Rd Carlsbad NM 88220 United States 32.342574, -104.062344</p>
Photo Direction: West-Southwest	
Photo Description: View of the excavated area.	

Photographic Log



Photo Number: 5	 <p>5/23/22, 1:15 PM 32.342523,-104.062616</p>
Photo Direction: Southeast	
Photo Description: View of the excavated area.	

Photo Number: 6	 <p>May 20, 2022 32.342459,-104.062536</p>
Photo Direction: North	
Photo Description: View of the treated area.	

Photographic Log

Photo Number: 7	<div>July 14, 2022 32.342389,-104.062164</div> 
Photo Direction: Northwest	
Photo Description: View of the remediated area after backfilling.	

Photo Number: 8	<div>July 14, 2022 32.342506,-104.062284</div> 
Photo Direction: West	
Photo Description: View of the remediated area after backfilling.	

Photographic Log

Photo Number: 9	<div>July 14, 2022 32.342377,-104.062939</div> 
Photo Direction: East	
Photo Description: View of the remediated area after backfilling.	

Photo Number: 10	<div>July 14, 2022 32.342299,-104.062830</div> 
Photo Direction: East	
Photo Description: View of the remediated area after backfilling.	

Appendix D

Laboratory Analytical Reports



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-12054-1

Laboratory Sample Delivery Group: Rural Eddy
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
3/7/2022 10:13:18 AM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-12054-1
SDG: Rural Eddy

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Qualifiers

GC VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Job ID: 880-12054-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-12054-1

Receipt

The samples were received on 3/4/2022 12:13 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.1°C

GC VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: NSW #1

Lab Sample ID: 880-12054-1

Date Collected: 03/03/22 11:30

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:25	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:25	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:25	1
m-Xylene & p-Xylene	<0.00396	U	0.00396		mg/Kg		03/04/22 13:00	03/05/22 10:25	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:25	1
Xylenes, Total	<0.00396	U	0.00396		mg/Kg		03/04/22 13:00	03/05/22 10:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	03/04/22 13:00	03/05/22 10:25	1
1,4-Difluorobenzene (Surr)	97		70 - 130	03/04/22 13:00	03/05/22 10:25	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00396	U	0.00396		mg/Kg			03/06/22 20:58	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/06/22 20:29	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/04/22 13:00	03/05/22 19:15	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/04/22 13:00	03/05/22 19:15	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/22 13:00	03/05/22 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130	03/04/22 13:00	03/05/22 19:15	1
o-Terphenyl	97		70 - 130	03/04/22 13:00	03/05/22 19:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18.8		4.95		mg/Kg			03/04/22 19:17	1

Client Sample ID: SSW #1

Lab Sample ID: 880-12054-2

Date Collected: 03/03/22 11:45

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:46	1
Toluene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:46	1
Ethylbenzene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:46	1
m-Xylene & p-Xylene	<0.00397	U	0.00397		mg/Kg		03/04/22 13:00	03/05/22 10:46	1
o-Xylene	<0.00198	U	0.00198		mg/Kg		03/04/22 13:00	03/05/22 10:46	1
Xylenes, Total	<0.00397	U	0.00397		mg/Kg		03/04/22 13:00	03/05/22 10:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130	03/04/22 13:00	03/05/22 10:46	1
1,4-Difluorobenzene (Surr)	97		70 - 130	03/04/22 13:00	03/05/22 10:46	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: SSW #1

Lab Sample ID: 880-12054-2

Date Collected: 03/03/22 11:45

Matrix: Solid

Date Received: 03/04/22 12:13

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00397	U	0.00397		mg/Kg			03/06/22 20:58	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:29	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 19:36	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 19:36	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 19:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				03/04/22 13:00	03/05/22 19:36	1
o-Terphenyl	89		70 - 130				03/04/22 13:00	03/05/22 19:36	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	273		4.95		mg/Kg			03/04/22 19:26	1

Client Sample ID: ESW #1

Lab Sample ID: 880-12054-3

Date Collected: 03/03/22 12:00

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:06	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:06	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:06	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/04/22 13:00	03/05/22 11:06	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:06	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/04/22 13:00	03/05/22 11:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				03/04/22 13:00	03/05/22 11:06	1
1,4-Difluorobenzene (Surr)	95		70 - 130				03/04/22 13:00	03/05/22 11:06	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00400	U	0.00400		mg/Kg			03/06/22 20:58	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	55.5		49.9		mg/Kg			03/06/22 20:29	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/04/22 13:00	03/05/22 19:57	1
Diesel Range Organics (Over C10-C28)	55.5		49.9		mg/Kg		03/04/22 13:00	03/05/22 19:57	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: ESW #1

Lab Sample ID: 880-12054-3

Date Collected: 03/03/22 12:00

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/04/22 13:00	03/05/22 19:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				03/04/22 13:00	03/05/22 19:57	1
o-Terphenyl	92		70 - 130				03/04/22 13:00	03/05/22 19:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	208		4.96		mg/Kg			03/04/22 19:35	1

Client Sample ID: ESW #2

Lab Sample ID: 880-12054-4

Date Collected: 03/03/22 12:15

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:27	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:27	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:27	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/04/22 13:00	03/05/22 11:27	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:27	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/04/22 13:00	03/05/22 11:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130				03/04/22 13:00	03/05/22 11:27	1
1,4-Difluorobenzene (Surr)	99		70 - 130				03/04/22 13:00	03/05/22 11:27	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/06/22 20:58	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/06/22 20:29	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/04/22 13:00	03/05/22 20:19	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/04/22 13:00	03/05/22 20:19	1
OII Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/04/22 13:00	03/05/22 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130				03/04/22 13:00	03/05/22 20:19	1
o-Terphenyl	86		70 - 130				03/04/22 13:00	03/05/22 20:19	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	99.8		5.05		mg/Kg			03/05/22 19:21	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: FL-1 @ 14'

Lab Sample ID: 880-12054-5

Date Collected: 03/03/22 12:30

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:47	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:47	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:47	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/04/22 13:00	03/05/22 11:47	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/04/22 13:00	03/05/22 11:47	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/04/22 13:00	03/05/22 11:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	03/04/22 13:00	03/05/22 11:47	1
1,4-Difluorobenzene (Surr)	98		70 - 130	03/04/22 13:00	03/05/22 11:47	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/06/22 20:58	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:29	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 20:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 20:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 20:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130	03/04/22 13:00	03/05/22 20:41	1
o-Terphenyl	93		70 - 130	03/04/22 13:00	03/05/22 20:41	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	328		5.00		mg/Kg			03/04/22 21:07	1

Client Sample ID: FL-2 @ 12'

Lab Sample ID: 880-12054-6

Date Collected: 03/03/22 12:45

Matrix: Solid

Date Received: 03/04/22 12:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		03/04/22 13:00	03/05/22 12:08	1
Toluene	<0.00202	U	0.00202		mg/Kg		03/04/22 13:00	03/05/22 12:08	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		03/04/22 13:00	03/05/22 12:08	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		03/04/22 13:00	03/05/22 12:08	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		03/04/22 13:00	03/05/22 12:08	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		03/04/22 13:00	03/05/22 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	03/04/22 13:00	03/05/22 12:08	1
1,4-Difluorobenzene (Surr)	97		70 - 130	03/04/22 13:00	03/05/22 12:08	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: FL-2 @ 12'

Lab Sample ID: 880-12054-6

Date Collected: 03/03/22 12:45

Matrix: Solid

Date Received: 03/04/22 12:13

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			03/06/22 20:58	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/06/22 20:29	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 21:02	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 21:02	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 13:00	03/05/22 21:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	92		70 - 130				03/04/22 13:00	03/05/22 21:02	1
o-Terphenyl	93		70 - 130				03/04/22 13:00	03/05/22 21:02	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	357		4.98		mg/Kg			03/04/22 21:16	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-11926-A-1-A MS	Matrix Spike	101	100
880-11926-A-1-B MSD	Matrix Spike Duplicate	101	100
880-12054-1	NSW #1	102	97
880-12054-2	SSW #1	103	97
880-12054-3	ESW #1	103	95
880-12054-4	ESW #2	104	99
880-12054-5	FL-1 @ 14'	105	98
880-12054-6	FL-2 @ 12'	101	97
LCS 880-20683/1-A	Lab Control Sample	101	101
LCSD 880-20683/2-A	Lab Control Sample Dup	104	92
MB 880-20683/5-A	Method Blank	100	94
MB 880-20798/5-A	Method Blank	97	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DFBZ = 1,4-Difluorobenzene (Surr)

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-12045-A-1-E MS	Matrix Spike	120	100
880-12045-A-1-F MSD	Matrix Spike Duplicate	115	100
880-12054-1	NSW #1	93	97
880-12054-2	SSW #1	93	89
880-12054-3	ESW #1	90	92
880-12054-4	ESW #2	87	86
880-12054-5	FL-1 @ 14'	90	93
880-12054-6	FL-2 @ 12'	92	93
LCS 880-20883/2-A	Lab Control Sample	114	100
LCSD 880-20883/3-A	Lab Control Sample Dup	105	98
MB 880-20883/1-A	Method Blank	100	110

Surrogate Legend

1CO = 1-Chlorooctane

OTPH = o-Terphenyl

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-20683/5-A

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20683

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/02/22 13:00	03/05/22 09:22	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/02/22 13:00	03/05/22 09:22	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/02/22 13:00	03/05/22 09:22	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/02/22 13:00	03/05/22 09:22	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/02/22 13:00	03/05/22 09:22	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/02/22 13:00	03/05/22 09:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	03/02/22 13:00	03/05/22 09:22	1
1,4-Difluorobenzene (Surr)	94		70 - 130	03/02/22 13:00	03/05/22 09:22	1

Lab Sample ID: LCS 880-20683/1-A

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20683

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.1065		mg/Kg		106	70 - 130
Toluene	0.100	0.1028		mg/Kg		103	70 - 130
Ethylbenzene	0.100	0.09916		mg/Kg		99	70 - 130
m-Xylene & p-Xylene	0.200	0.2025		mg/Kg		101	70 - 130
o-Xylene	0.100	0.1042		mg/Kg		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	101		70 - 130

Lab Sample ID: LCSD 880-20683/2-A

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20683

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.1120		mg/Kg		112	70 - 130	5	35
Toluene	0.100	0.1099		mg/Kg		110	70 - 130	7	35
Ethylbenzene	0.100	0.1066		mg/Kg		107	70 - 130	7	35
m-Xylene & p-Xylene	0.200	0.2183		mg/Kg		109	70 - 130	7	35
o-Xylene	0.100	0.1112		mg/Kg		111	70 - 130	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	92		70 - 130

Lab Sample ID: 880-11926-A-1-A MS

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 20683

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.0996	0.09263		mg/Kg		93	70 - 130
Toluene	<0.00199	U	0.0996	0.08949		mg/Kg		90	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-11926-A-1-A MS

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 20683

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00199	U	0.0996	0.08636		mg/Kg		87	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.199	0.1774		mg/Kg		89	70 - 130
o-Xylene	<0.00199	U	0.0996	0.08810		mg/Kg		88	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: 880-11926-A-1-B MSD

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 20683

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	<0.00199	U	0.100	0.09735		mg/Kg		97	70 - 130	5	35
Toluene	<0.00199	U	0.100	0.09295		mg/Kg		93	70 - 130	4	35
Ethylbenzene	<0.00199	U	0.100	0.08974		mg/Kg		89	70 - 130	4	35
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1842		mg/Kg		92	70 - 130	4	35
o-Xylene	<0.00199	U	0.100	0.08997		mg/Kg		90	70 - 130	2	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Lab Sample ID: MB 880-20798/5-A

Matrix: Solid

Analysis Batch: 20854

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20798

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/03/22 16:00	03/04/22 22:26	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/03/22 16:00	03/04/22 22:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	03/03/22 16:00	03/04/22 22:26	1
1,4-Difluorobenzene (Surr)	94		70 - 130	03/03/22 16:00	03/04/22 22:26	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-20883/1-A

Matrix: Solid

Analysis Batch: 20957

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20883

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/04/22 11:31	03/05/22 12:16	1

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-20883/1-A

Matrix: Solid

Analysis Batch: 20957

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 20883

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/04/22 11:31	03/05/22 12:16	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/04/22 11:31	03/05/22 12:16	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				03/04/22 11:31	03/05/22 12:16	1
o-Terphenyl	110		70 - 130				03/04/22 11:31	03/05/22 12:16	1

Lab Sample ID: LCS 880-20883/2-A

Matrix: Solid

Analysis Batch: 20957

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 20883

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	919.2		mg/Kg		92	70 - 130
Diesel Range Organics (Over C10-C28)	1000	919.8		mg/Kg		92	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	114		70 - 130				
o-Terphenyl	100		70 - 130				

Lab Sample ID: LCSD 880-20883/3-A

Matrix: Solid

Analysis Batch: 20957

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 20883

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	861.0		mg/Kg		86	70 - 130	7	20
Diesel Range Organics (Over C10-C28)	1000	899.9		mg/Kg		90	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	105		70 - 130						
o-Terphenyl	98		70 - 130						

Lab Sample ID: 880-12045-A-1-E MS

Matrix: Solid

Analysis Batch: 20957

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 20883

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1029		mg/Kg		103	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	1003		mg/Kg		98	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	120		70 - 130						
o-Terphenyl	100		70 - 130						

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-12045-A-1-F MSD

Matrix: Solid

Analysis Batch: 20957

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 20883

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	998	998.5		mg/Kg		100	70 - 130	3	20
Diesel Range Organics (Over C10-C28)	<50.0	U	998	997.5		mg/Kg		97	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	115		70 - 130								
o-Terphenyl	100		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-20870/1-A

Matrix: Solid

Analysis Batch: 20923

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/04/22 15:45	1

Lab Sample ID: LCS 880-20870/2-A

Matrix: Solid

Analysis Batch: 20923

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	253.0		mg/Kg		101	90 - 110

Lab Sample ID: LCSD 880-20870/3-A

Matrix: Solid

Analysis Batch: 20923

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	253.0		mg/Kg		101	90 - 110	0	20

Lab Sample ID: 880-12045-A-11-G MS

Matrix: Solid

Analysis Batch: 20923

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12.1		253	265.5		mg/Kg		100	90 - 110

Lab Sample ID: 880-12045-A-11-H MSD

Matrix: Solid

Analysis Batch: 20923

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12.1		253	263.1		mg/Kg		99	90 - 110	1	20

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

GC VOA

Prep Batch: 20683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Total/NA	Solid	5035	
880-12054-2	SSW #1	Total/NA	Solid	5035	
880-12054-3	ESW #1	Total/NA	Solid	5035	
880-12054-4	ESW #2	Total/NA	Solid	5035	
880-12054-5	FL-1 @ 14'	Total/NA	Solid	5035	
880-12054-6	FL-2 @ 12'	Total/NA	Solid	5035	
MB 880-20683/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-20683/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-20683/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-11926-A-1-A MS	Matrix Spike	Total/NA	Solid	5035	
880-11926-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Prep Batch: 20798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-20798/5-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 20854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Total/NA	Solid	8021B	20683
880-12054-2	SSW #1	Total/NA	Solid	8021B	20683
880-12054-3	ESW #1	Total/NA	Solid	8021B	20683
880-12054-4	ESW #2	Total/NA	Solid	8021B	20683
880-12054-5	FL-1 @ 14'	Total/NA	Solid	8021B	20683
880-12054-6	FL-2 @ 12'	Total/NA	Solid	8021B	20683
MB 880-20683/5-A	Method Blank	Total/NA	Solid	8021B	20683
MB 880-20798/5-A	Method Blank	Total/NA	Solid	8021B	20798
LCS 880-20683/1-A	Lab Control Sample	Total/NA	Solid	8021B	20683
LCSD 880-20683/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	20683
880-11926-A-1-A MS	Matrix Spike	Total/NA	Solid	8021B	20683
880-11926-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	20683

Analysis Batch: 21000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Total/NA	Solid	Total BTEX	
880-12054-2	SSW #1	Total/NA	Solid	Total BTEX	
880-12054-3	ESW #1	Total/NA	Solid	Total BTEX	
880-12054-4	ESW #2	Total/NA	Solid	Total BTEX	
880-12054-5	FL-1 @ 14'	Total/NA	Solid	Total BTEX	
880-12054-6	FL-2 @ 12'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 20883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Total/NA	Solid	8015NM Prep	
880-12054-2	SSW #1	Total/NA	Solid	8015NM Prep	
880-12054-3	ESW #1	Total/NA	Solid	8015NM Prep	
880-12054-4	ESW #2	Total/NA	Solid	8015NM Prep	
880-12054-5	FL-1 @ 14'	Total/NA	Solid	8015NM Prep	
880-12054-6	FL-2 @ 12'	Total/NA	Solid	8015NM Prep	
MB 880-20883/1-A	Method Blank	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

GC Semi VOA (Continued)

Prep Batch: 20883 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 880-20883/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-20883/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12045-A-1-E MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-12045-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 20957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Total/NA	Solid	8015B NM	20883
880-12054-2	SSW #1	Total/NA	Solid	8015B NM	20883
880-12054-3	ESW #1	Total/NA	Solid	8015B NM	20883
880-12054-4	ESW #2	Total/NA	Solid	8015B NM	20883
880-12054-5	FL-1 @ 14'	Total/NA	Solid	8015B NM	20883
880-12054-6	FL-2 @ 12'	Total/NA	Solid	8015B NM	20883
MB 880-20883/1-A	Method Blank	Total/NA	Solid	8015B NM	20883
LCS 880-20883/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	20883
LCSD 880-20883/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	20883
880-12045-A-1-E MS	Matrix Spike	Total/NA	Solid	8015B NM	20883
880-12045-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	20883

Analysis Batch: 20980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Total/NA	Solid	8015 NM	
880-12054-2	SSW #1	Total/NA	Solid	8015 NM	
880-12054-3	ESW #1	Total/NA	Solid	8015 NM	
880-12054-4	ESW #2	Total/NA	Solid	8015 NM	
880-12054-5	FL-1 @ 14'	Total/NA	Solid	8015 NM	
880-12054-6	FL-2 @ 12'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 20870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Soluble	Solid	DI Leach	
880-12054-2	SSW #1	Soluble	Solid	DI Leach	
880-12054-3	ESW #1	Soluble	Solid	DI Leach	
880-12054-4	ESW #2	Soluble	Solid	DI Leach	
880-12054-5	FL-1 @ 14'	Soluble	Solid	DI Leach	
880-12054-6	FL-2 @ 12'	Soluble	Solid	DI Leach	
MB 880-20870/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-20870/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-20870/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12045-A-11-G MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12045-A-11-H MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 20923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-1	NSW #1	Soluble	Solid	300.0	20870
880-12054-2	SSW #1	Soluble	Solid	300.0	20870
880-12054-3	ESW #1	Soluble	Solid	300.0	20870
880-12054-4	ESW #2	Soluble	Solid	300.0	20870
880-12054-5	FL-1 @ 14'	Soluble	Solid	300.0	20870

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

HPLC/IC (Continued)

Analysis Batch: 20923 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12054-6	FL-2 @ 12'	Soluble	Solid	300.0	20870
MB 880-20870/1-A	Method Blank	Soluble	Solid	300.0	20870
LCS 880-20870/2-A	Lab Control Sample	Soluble	Solid	300.0	20870
LCSD 880-20870/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	20870
880-12045-A-11-G MS	Matrix Spike	Soluble	Solid	300.0	20870
880-12045-A-11-H MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	20870

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: NSW #1

Lab Sample ID: 880-12054-1

Date Collected: 03/03/22 11:30

Matrix: Solid

Date Received: 03/04/22 12:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.05 g	5 mL	20683	03/04/22 13:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 10:25	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21000	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20980	03/06/22 20:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20883	03/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/05/22 19:15	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	20870	03/04/22 13:50	CH	XEN MID
Soluble	Analysis	300.0		1			20923	03/04/22 19:17	SC	XEN MID

Client Sample ID: SSW #1

Lab Sample ID: 880-12054-2

Date Collected: 03/03/22 11:45

Matrix: Solid

Date Received: 03/04/22 12:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5 mL	20683	03/04/22 13:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 10:46	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21000	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20980	03/06/22 20:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20883	03/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/05/22 19:36	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	20870	03/04/22 13:50	CH	XEN MID
Soluble	Analysis	300.0		1			20923	03/04/22 19:26	SC	XEN MID

Client Sample ID: ESW #1

Lab Sample ID: 880-12054-3

Date Collected: 03/03/22 12:00

Matrix: Solid

Date Received: 03/04/22 12:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5 mL	20683	03/04/22 13:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 11:06	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21000	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20980	03/06/22 20:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	20883	03/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/05/22 19:57	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	20870	03/04/22 13:50	CH	XEN MID
Soluble	Analysis	300.0		1			20923	03/04/22 19:35	SC	XEN MID

Client Sample ID: ESW #2

Lab Sample ID: 880-12054-4

Date Collected: 03/03/22 12:15

Matrix: Solid

Date Received: 03/04/22 12:13

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	20683	03/04/22 13:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 11:27	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21000	03/06/22 20:58	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Client Sample ID: ESW #2

Date Collected: 03/03/22 12:15

Date Received: 03/04/22 12:13

Lab Sample ID: 880-12054-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			20980	03/06/22 20:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	20883	03/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/05/22 20:19	AJ	XEN MID
Soluble	Leach	DI Leach			4.95 g	50 mL	20870	03/04/22 13:50	CH	XEN MID
Soluble	Analysis	300.0		1			20923	03/05/22 19:21	SC	XEN MID

Client Sample ID: FL-1 @ 14'

Date Collected: 03/03/22 12:30

Date Received: 03/04/22 12:13

Lab Sample ID: 880-12054-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	20683	03/04/22 13:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 11:47	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21000	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20980	03/06/22 20:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	20883	03/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/05/22 20:41	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	20870	03/04/22 13:50	CH	XEN MID
Soluble	Analysis	300.0		1			20923	03/04/22 21:07	SC	XEN MID

Client Sample ID: FL-2 @ 12'

Date Collected: 03/03/22 12:45

Date Received: 03/04/22 12:13

Lab Sample ID: 880-12054-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	20683	03/04/22 13:00	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	20854	03/05/22 12:08	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			21000	03/06/22 20:58	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			20980	03/06/22 20:29	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	20883	03/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			20957	03/05/22 21:02	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	20870	03/04/22 13:50	CH	XEN MID
Soluble	Analysis	300.0		1			20923	03/04/22 21:16	SC	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12054-1
SDG: Rural Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-12054-1	NSW #1	Solid	03/03/22 11:30	03/04/22 12:13
880-12054-2	SSW #1	Solid	03/03/22 11:45	03/04/22 12:13
880-12054-3	ESW #1	Solid	03/03/22 12:00	03/04/22 12:13
880-12054-4	ESW #2	Solid	03/03/22 12:15	03/04/22 12:13
880-12054-5	FL-1 @ 14'	Solid	03/03/22 12:30	03/04/22 12:13
880-12054-6	FL-2 @ 12'	Solid	03/03/22 12:45	03/04/22 12:13

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199* Phoenix, AZ (480) 355-0900
 Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
 Atlanta GA (770) 449-8800

Work Order No: 12054

www.xenco.com Page 1 of 1

Project Manager:	Joel Lowry	Bill to, (if different)	Ramille Bryant
Company Name	Etech Environmental & Safety	Company Name:	Plains Pipeline
Address	3100 Plains Highway	Address	
City, State ZIP	Lovington, NM, 88260	City, State ZIP	
Phone.	575-396-2378	Email	Email Results to PM@etechenv.com + Client

Work Order Comments	
Program	UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project	
Reporting Level	I <input type="checkbox"/> Level II <input type="checkbox"/> PST/US <input type="checkbox"/> TRR <input type="checkbox"/> Level I <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:

Project Name: Astro Dog 6-Inch		Turn Around		ANALYSIS REQUEST												Preservative Codes					
Project Number: 15649		Routine <input type="checkbox"/>														HNO3 HN					
Project Location: Rural Eddy		Rush <input checked="" type="checkbox"/>														H2SO4 H2					
Sampler's Name		Due Date														HCL HL					
PO #: SR3 2022-012																None NO					
SAMPLE RECEIPT		Temp Blank: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Wet Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														NaOH Na			
Temperature (°C): 3.2/3.1		Thermometer ID: 128														MeOH Me					
Received Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Correction Factor: -0.1														Zn Acetate+ NaOH Zn					
Cooler Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Total Containers:														TAT starts the day received by the lab if received by 4 30pm					
Sample Custody Seals: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																Sample Comments					
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	Chloride E300	BTEX 8021	TPH Modified Ext	TPH TX1005												
NSW #1	S	3/13/22	11:30			X	X	X													
SSW #1			11:45																		
ESW #1			12:00																		
ESW #2			12:15																		
FL 10' 14'			12:30	14'																	
FL 20' 12'			12:45	12'																	



880-12054 Chain of Custody

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SLP 6010 8RCRA	Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U
			1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 Joel Lowry	2 [Signature]	3/4/22 12:13	4		
3			5		
5			6		

Revised Date 10/14/19 Rev 2019.1

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-12054-1

SDG Number: Rural Eddy

Login Number: 12054**List Number: 1****Creator: Kramer, Jessica****List Source: Eurofins Midland**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-12301-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
3/11/2022 6:37:39 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Laboratory Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Job ID: 880-12301-1

Laboratory: Eurofins Midland

Narrative

**Job Narrative
880-12301-1**

Receipt

The samples were received on 3/10/2022 3:52 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-21365 and analytical batch 880-21366 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: NW #2

Lab Sample ID: 880-12301-1

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 14:51	1
Toluene	0.00564		0.00199		mg/Kg		03/11/22 08:50	03/11/22 14:51	1
Ethylbenzene	0.00368		0.00199		mg/Kg		03/11/22 08:50	03/11/22 14:51	1
m-Xylene & p-Xylene	0.0747		0.00398		mg/Kg		03/11/22 08:50	03/11/22 14:51	1
o-Xylene	0.0272		0.00199		mg/Kg		03/11/22 08:50	03/11/22 14:51	1
Xylenes, Total	0.102		0.00398		mg/Kg		03/11/22 08:50	03/11/22 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		70 - 130	03/11/22 08:50	03/11/22 14:51	1
1,4-Difluorobenzene (Surr)	93		70 - 130	03/11/22 08:50	03/11/22 14:51	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.111		0.00398		mg/Kg			03/11/22 18:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	910		49.9		mg/Kg			03/11/22 18:20	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 10:46	1
Diesel Range Organics (Over C10-C28)	810		49.9		mg/Kg		03/11/22 08:28	03/11/22 10:46	1
Oil Range Organics (Over C28-C36)	100		49.9		mg/Kg		03/11/22 08:28	03/11/22 10:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	81		70 - 130	03/11/22 08:28	03/11/22 10:46	1
o-Terphenyl	74		70 - 130	03/11/22 08:28	03/11/22 10:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.6		5.00		mg/Kg			03/11/22 15:05	1

Client Sample ID: SW #2

Lab Sample ID: 880-12301-2

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:11	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:11	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:11	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/11/22 08:50	03/11/22 15:11	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:11	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/11/22 08:50	03/11/22 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		70 - 130	03/11/22 08:50	03/11/22 15:11	1
1,4-Difluorobenzene (Surr)	95		70 - 130	03/11/22 08:50	03/11/22 15:11	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: SW #2

Lab Sample ID: 880-12301-2

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/11/22 18:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/11/22 18:20	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 11:51	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 11:51	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 11:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130				03/11/22 08:28	03/11/22 11:51	1
o-Terphenyl	119		70 - 130				03/11/22 08:28	03/11/22 11:51	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	446		4.99		mg/Kg			03/11/22 15:31	1

Client Sample ID: FL-3 @ 14'

Lab Sample ID: 880-12301-3

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 15:32	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 15:32	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 15:32	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/11/22 08:50	03/11/22 15:32	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 15:32	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/11/22 08:50	03/11/22 15:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130				03/11/22 08:50	03/11/22 15:32	1
1,4-Difluorobenzene (Surr)	96		70 - 130				03/11/22 08:50	03/11/22 15:32	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/11/22 18:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	999		50.0		mg/Kg			03/11/22 18:20	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/11/22 08:28	03/11/22 12:13	1
Diesel Range Organics (Over C10-C28)	870		50.0		mg/Kg		03/11/22 08:28	03/11/22 12:13	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-3 @ 14'

Lab Sample ID: 880-12301-3

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil Range Organics (Over C28-C36)	129		50.0		mg/Kg		03/11/22 08:28	03/11/22 12:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	109		70 - 130				03/11/22 08:28	03/11/22 12:13	1
o-Terphenyl	111		70 - 130				03/11/22 08:28	03/11/22 12:13	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	492		4.97		mg/Kg			03/11/22 15:40	1

Client Sample ID: FL-4 @ 14'

Lab Sample ID: 880-12301-4

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:53	1
Toluene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:53	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:53	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		03/11/22 08:50	03/11/22 15:53	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		03/11/22 08:50	03/11/22 15:53	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		03/11/22 08:50	03/11/22 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		70 - 130				03/11/22 08:50	03/11/22 15:53	1
1,4-Difluorobenzene (Surr)	104		70 - 130				03/11/22 08:50	03/11/22 15:53	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			03/11/22 18:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	131		49.9		mg/Kg			03/11/22 18:20	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 12:34	1
Diesel Range Organics (Over C10-C28)	131		49.9		mg/Kg		03/11/22 08:28	03/11/22 12:34	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 12:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130				03/11/22 08:28	03/11/22 12:34	1
o-Terphenyl	96		70 - 130				03/11/22 08:28	03/11/22 12:34	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	391		4.96		mg/Kg			03/11/22 15:49	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-5 @ 14.5'

Lab Sample ID: 880-12301-5

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 16:13	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 16:13	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 16:13	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/11/22 08:50	03/11/22 16:13	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 16:13	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/11/22 08:50	03/11/22 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130	03/11/22 08:50	03/11/22 16:13	1
1,4-Difluorobenzene (Surr)	95		70 - 130	03/11/22 08:50	03/11/22 16:13	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/11/22 18:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	227		50.0		mg/Kg			03/11/22 18:20	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/11/22 08:28	03/11/22 12:57	1
Diesel Range Organics (Over C10-C28)	227		50.0		mg/Kg		03/11/22 08:28	03/11/22 12:57	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/11/22 08:28	03/11/22 12:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130	03/11/22 08:28	03/11/22 12:57	1
o-Terphenyl	113		70 - 130	03/11/22 08:28	03/11/22 12:57	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	267		5.00		mg/Kg			03/11/22 15:58	1

Client Sample ID: FL-6 @ 14.5'

Lab Sample ID: 880-12301-6

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 13:18	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 13:18	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 13:18	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		03/11/22 08:45	03/11/22 13:18	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 13:18	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		03/11/22 08:45	03/11/22 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	03/11/22 08:45	03/11/22 13:18	1
1,4-Difluorobenzene (Surr)	105		70 - 130	03/11/22 08:45	03/11/22 13:18	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-6 @ 14.5'

Lab Sample ID: 880-12301-6

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			03/11/22 18:22	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	274		49.9		mg/Kg			03/11/22 18:20	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 13:18	1
Diesel Range Organics (Over C10-C28)	274		49.9		mg/Kg		03/11/22 08:28	03/11/22 13:18	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/11/22 08:28	03/11/22 13:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	106		70 - 130				03/11/22 08:28	03/11/22 13:18	1
o-Terphenyl	102		70 - 130				03/11/22 08:28	03/11/22 13:18	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	246		4.95		mg/Kg			03/11/22 16:33	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-12254-A-1-E MS	Matrix Spike	102	104
880-12254-A-1-F MSD	Matrix Spike Duplicate	102	103
880-12301-1	NW #2	101	93
880-12301-2	SW #2	98	95
880-12301-3	FL-3 @ 14'	107	96
880-12301-4	FL-4 @ 14'	103	104
880-12301-5	FL-5 @ 14.5'	105	95
880-12301-6	FL-6 @ 14.5'	102	105
880-12301-6 MS	FL-6 @ 14.5'	113	110
880-12301-6 MSD	FL-6 @ 14.5'	112	112
LCS 880-21364/1-A	Lab Control Sample	96	104
LCS 880-21365/1-A	Lab Control Sample	94	103
LCSD 880-21364/2-A	Lab Control Sample Dup	103	109
LCSD 880-21365/2-A	Lab Control Sample Dup	97	98
MB 880-21364/5-A	Method Blank	104	104
MB 880-21365/5-A	Method Blank	97	101
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-12301-1	NW #2	81	74
880-12301-1 MS	NW #2	83	66 S1-
880-12301-1 MSD	NW #2	81	65 S1-
880-12301-2	SW #2	117	119
880-12301-3	FL-3 @ 14'	109	111
880-12301-4	FL-4 @ 14'	100	96
880-12301-5	FL-5 @ 14.5'	110	113
880-12301-6	FL-6 @ 14.5'	106	102
LCS 880-21362/2-A	Lab Control Sample	97	90
LCSD 880-21362/3-A	Lab Control Sample Dup	102	95
MB 880-21362/1-A	Method Blank	111	113
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-21364/5-A

Matrix: Solid

Analysis Batch: 21361

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21364

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:45	03/11/22 12:56	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/11/22 08:45	03/11/22 12:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		70 - 130	03/11/22 08:45	03/11/22 12:56	1
1,4-Difluorobenzene (Surr)	104		70 - 130	03/11/22 08:45	03/11/22 12:56	1

Lab Sample ID: LCS 880-21364/1-A

Matrix: Solid

Analysis Batch: 21361

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21364

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09733		mg/Kg		97	70 - 130
Toluene	0.100	0.09798		mg/Kg		98	70 - 130
Ethylbenzene	0.100	0.1017		mg/Kg		102	70 - 130
m-Xylene & p-Xylene	0.200	0.2078		mg/Kg		104	70 - 130
o-Xylene	0.100	0.1011		mg/Kg		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-21364/2-A

Matrix: Solid

Analysis Batch: 21361

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21364

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.1003		mg/Kg		100	70 - 130	3	35
Toluene	0.100	0.1006		mg/Kg		101	70 - 130	3	35
Ethylbenzene	0.100	0.1023		mg/Kg		102	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.2119		mg/Kg		106	70 - 130	2	35
o-Xylene	0.100	0.1041		mg/Kg		104	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	109		70 - 130

Lab Sample ID: 880-12301-6 MS

Matrix: Solid

Analysis Batch: 21361

Client Sample ID: FL-6 @ 14.5'

Prep Type: Total/NA

Prep Batch: 21364

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U	0.0998	0.07999		mg/Kg		80	70 - 130
Toluene	<0.00200	U	0.0998	0.07840		mg/Kg		77	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-12301-6 MS

Matrix: Solid

Analysis Batch: 21361

Client Sample ID: FL-6 @ 14.5'

Prep Type: Total/NA

Prep Batch: 21364

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.0998	0.07743		mg/Kg		77	70 - 130
m-Xylene & p-Xylene	<0.00399	U	0.200	0.1595		mg/Kg		79	70 - 130
o-Xylene	<0.00200	U	0.0998	0.08084		mg/Kg		80	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		70 - 130
1,4-Difluorobenzene (Surr)	110		70 - 130

Lab Sample ID: 880-12301-6 MSD

Matrix: Solid

Analysis Batch: 21361

Client Sample ID: FL-6 @ 14.5'

Prep Type: Total/NA

Prep Batch: 21364

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U	0.0996	0.08021		mg/Kg		81	70 - 130	0	35
Toluene	<0.00200	U	0.0996	0.08055		mg/Kg		80	70 - 130	3	35
Ethylbenzene	<0.00200	U	0.0996	0.07568		mg/Kg		75	70 - 130	2	35
m-Xylene & p-Xylene	<0.00399	U	0.199	0.1542		mg/Kg		76	70 - 130	3	35
o-Xylene	<0.00200	U	0.0996	0.07417		mg/Kg		74	70 - 130	9	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: MB 880-21365/5-A

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21365

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/11/22 08:50	03/11/22 12:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/11/22 08:50	03/11/22 12:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	03/11/22 08:50	03/11/22 12:40	1
1,4-Difluorobenzene (Surr)	101		70 - 130	03/11/22 08:50	03/11/22 12:40	1

Lab Sample ID: LCS 880-21365/1-A

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21365

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.09712		mg/Kg		97	70 - 130
Toluene	0.100	0.09327		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.09429		mg/Kg		94	70 - 130
m-Xylene & p-Xylene	0.200	0.2190		mg/Kg		109	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCS 880-21365/1-A

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21365

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	0.100	0.1061		mg/Kg		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Lab Sample ID: LCSD 880-21365/2-A

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21365

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.100	0.09481		mg/Kg		95	70 - 130	2	35
Toluene	0.100	0.09272		mg/Kg		93	70 - 130	1	35
Ethylbenzene	0.100	0.09409		mg/Kg		94	70 - 130	0	35
m-Xylene & p-Xylene	0.200	0.2206		mg/Kg		110	70 - 130	1	35
o-Xylene	0.100	0.1082		mg/Kg		108	70 - 130	2	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		70 - 130
1,4-Difluorobenzene (Surr)	98		70 - 130

Lab Sample ID: 880-12254-A-1-E MS

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 21365

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00199	U	0.0998	0.08929		mg/Kg		89	70 - 130
Toluene	<0.00199	U F1	0.0998	0.07024		mg/Kg		70	70 - 130
Ethylbenzene	<0.00199	U F1	0.0998	0.05491	F1	mg/Kg		54	70 - 130
m-Xylene & p-Xylene	<0.00398	U F1	0.200	0.09500	F1	mg/Kg		48	70 - 130
o-Xylene	<0.00199	U F1	0.0998	0.06803	F1	mg/Kg		68	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 880-12254-A-1-F MSD

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 21365

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00199	U	0.0996	0.07551		mg/Kg		76	70 - 130	17	35
Toluene	<0.00199	U F1	0.0996	0.05814	F1	mg/Kg		58	70 - 130	19	35
Ethylbenzene	<0.00199	U F1	0.0996	0.04339	F1	mg/Kg		43	70 - 130	23	35
m-Xylene & p-Xylene	<0.00398	U F1	0.199	0.07847	F1	mg/Kg		39	70 - 130	19	35
o-Xylene	<0.00199	U F1	0.0996	0.05406	F1	mg/Kg		54	70 - 130	23	35

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QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-12254-A-1-F MSD

Matrix: Solid

Analysis Batch: 21366

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 21365

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	103		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-21362/1-A

Matrix: Solid

Analysis Batch: 21357

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 21362

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/11/22 08:28	03/11/22 09:39	1	
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/11/22 08:28	03/11/22 09:39	1	
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/11/22 08:28	03/11/22 09:39	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil	Fac
1-Chlorooctane	111		70 - 130				03/11/22 08:28	03/11/22 09:39	1	
o-Terphenyl	113		70 - 130				03/11/22 08:28	03/11/22 09:39	1	

Lab Sample ID: LCS 880-21362/2-A

Matrix: Solid

Analysis Batch: 21357

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 21362

	Spike	LCS	LCS						%Rec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Gasoline Range Organics (GRO)-C6-C10	1000	891.1		mg/Kg		89	70 - 130			
Diesel Range Organics (Over C10-C28)	1000	929.2		mg/Kg		93	70 - 130			
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	97		70 - 130							
o-Terphenyl	90		70 - 130							

Lab Sample ID: LCSD 880-21362/3-A

Matrix: Solid

Analysis Batch: 21357

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 21362

	Spike	LCSD	LCSD					%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	1000	833.5		mg/Kg		83	70 - 130	7	20	
Diesel Range Organics (Over C10-C28)	1000	926.9		mg/Kg		93	70 - 130	0	20	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	102		70 - 130							
o-Terphenyl	95		70 - 130							

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QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-12301-1 MS

Matrix: Solid

Analysis Batch: 21357

Client Sample ID: NW #2

Prep Type: Total/NA

Prep Batch: 21362

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	83		70 - 130
o-Terphenyl	66	S1-	70 - 130

Lab Sample ID: 880-12301-1 MSD

Matrix: Solid

Analysis Batch: 21357

Client Sample ID: NW #2

Prep Type: Total/NA

Prep Batch: 21362

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	81		70 - 130
o-Terphenyl	65	S1-	70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-21349/1-A

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<5.00	U	5.00		mg/Kg			03/11/22 14:38	1	

Lab Sample ID: LCS 880-21349/2-A

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Lab Control Sample

Prep Type: Soluble

		Spike	LCS	LCS				%Rec.		
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chloride		250	240.1		mg/Kg		96	90 - 110		

Lab Sample ID: LCSD 880-21349/3-A

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

		Spike	LCSD	LCSD				%Rec.		RPD
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloride		250	240.2		mg/Kg		96	90 - 110	0	20

Lab Sample ID: 880-12301-1 MS

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: NW #2

Prep Type: Soluble

	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloride	28.6		250	288.9		mg/Kg		104	90 - 110	

Lab Sample ID: 880-12301-1 MSD

Matrix: Solid

Analysis Batch: 21408

Client Sample ID: NW #2

Prep Type: Soluble

	Sample	Sample	Spike	MSD	MSD				%Rec.	RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	Limit
Chloride	28.6		250	283.0		mg/Kg		102	90 - 110	20

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

GC VOA

Analysis Batch: 21361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-6	FL-6 @ 14.5'	Total/NA	Solid	8021B	21364
MB 880-21364/5-A	Method Blank	Total/NA	Solid	8021B	21364
LCS 880-21364/1-A	Lab Control Sample	Total/NA	Solid	8021B	21364
LCSD 880-21364/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21364
880-12301-6 MS	FL-6 @ 14.5'	Total/NA	Solid	8021B	21364
880-12301-6 MSD	FL-6 @ 14.5'	Total/NA	Solid	8021B	21364

Prep Batch: 21364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-6	FL-6 @ 14.5'	Total/NA	Solid	5035	
MB 880-21364/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21364/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21364/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12301-6 MS	FL-6 @ 14.5'	Total/NA	Solid	5035	
880-12301-6 MSD	FL-6 @ 14.5'	Total/NA	Solid	5035	

Prep Batch: 21365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Total/NA	Solid	5035	
880-12301-2	SW #2	Total/NA	Solid	5035	
880-12301-3	FL-3 @ 14'	Total/NA	Solid	5035	
880-12301-4	FL-4 @ 14'	Total/NA	Solid	5035	
880-12301-5	FL-5 @ 14.5'	Total/NA	Solid	5035	
MB 880-21365/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-21365/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-21365/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-12254-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
880-12254-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 21366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Total/NA	Solid	8021B	21365
880-12301-2	SW #2	Total/NA	Solid	8021B	21365
880-12301-3	FL-3 @ 14'	Total/NA	Solid	8021B	21365
880-12301-4	FL-4 @ 14'	Total/NA	Solid	8021B	21365
880-12301-5	FL-5 @ 14.5'	Total/NA	Solid	8021B	21365
MB 880-21365/5-A	Method Blank	Total/NA	Solid	8021B	21365
LCS 880-21365/1-A	Lab Control Sample	Total/NA	Solid	8021B	21365
LCSD 880-21365/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	21365
880-12254-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	21365
880-12254-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	21365

Analysis Batch: 21415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Total/NA	Solid	Total BTEX	
880-12301-2	SW #2	Total/NA	Solid	Total BTEX	
880-12301-3	FL-3 @ 14'	Total/NA	Solid	Total BTEX	
880-12301-4	FL-4 @ 14'	Total/NA	Solid	Total BTEX	
880-12301-5	FL-5 @ 14.5'	Total/NA	Solid	Total BTEX	
880-12301-6	FL-6 @ 14.5'	Total/NA	Solid	Total BTEX	

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QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

GC Semi VOA

Analysis Batch: 21357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Total/NA	Solid	8015B NM	21362
880-12301-2	SW #2	Total/NA	Solid	8015B NM	21362
880-12301-3	FL-3 @ 14'	Total/NA	Solid	8015B NM	21362
880-12301-4	FL-4 @ 14'	Total/NA	Solid	8015B NM	21362
880-12301-5	FL-5 @ 14.5'	Total/NA	Solid	8015B NM	21362
880-12301-6	FL-6 @ 14.5'	Total/NA	Solid	8015B NM	21362
MB 880-21362/1-A	Method Blank	Total/NA	Solid	8015B NM	21362
LCS 880-21362/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	21362
LCSD 880-21362/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	21362
880-12301-1 MS	NW #2	Total/NA	Solid	8015B NM	21362
880-12301-1 MSD	NW #2	Total/NA	Solid	8015B NM	21362

Prep Batch: 21362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Total/NA	Solid	8015NM Prep	
880-12301-2	SW #2	Total/NA	Solid	8015NM Prep	
880-12301-3	FL-3 @ 14'	Total/NA	Solid	8015NM Prep	
880-12301-4	FL-4 @ 14'	Total/NA	Solid	8015NM Prep	
880-12301-5	FL-5 @ 14.5'	Total/NA	Solid	8015NM Prep	
880-12301-6	FL-6 @ 14.5'	Total/NA	Solid	8015NM Prep	
MB 880-21362/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-21362/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-21362/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12301-1 MS	NW #2	Total/NA	Solid	8015NM Prep	
880-12301-1 MSD	NW #2	Total/NA	Solid	8015NM Prep	

Analysis Batch: 21412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Total/NA	Solid	8015 NM	
880-12301-2	SW #2	Total/NA	Solid	8015 NM	
880-12301-3	FL-3 @ 14'	Total/NA	Solid	8015 NM	
880-12301-4	FL-4 @ 14'	Total/NA	Solid	8015 NM	
880-12301-5	FL-5 @ 14.5'	Total/NA	Solid	8015 NM	
880-12301-6	FL-6 @ 14.5'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 21349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Soluble	Solid	DI Leach	
880-12301-2	SW #2	Soluble	Solid	DI Leach	
880-12301-3	FL-3 @ 14'	Soluble	Solid	DI Leach	
880-12301-4	FL-4 @ 14'	Soluble	Solid	DI Leach	
880-12301-5	FL-5 @ 14.5'	Soluble	Solid	DI Leach	
880-12301-6	FL-6 @ 14.5'	Soluble	Solid	DI Leach	
MB 880-21349/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-21349/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-21349/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12301-1 MS	NW #2	Soluble	Solid	DI Leach	
880-12301-1 MSD	NW #2	Soluble	Solid	DI Leach	

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QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

HPLC/IC

Analysis Batch: 21408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12301-1	NW #2	Soluble	Solid	300.0	21349
880-12301-2	SW #2	Soluble	Solid	300.0	21349
880-12301-3	FL-3 @ 14'	Soluble	Solid	300.0	21349
880-12301-4	FL-4 @ 14'	Soluble	Solid	300.0	21349
880-12301-5	FL-5 @ 14.5'	Soluble	Solid	300.0	21349
880-12301-6	FL-6 @ 14.5'	Soluble	Solid	300.0	21349
MB 880-21349/1-A	Method Blank	Soluble	Solid	300.0	21349
LCS 880-21349/2-A	Lab Control Sample	Soluble	Solid	300.0	21349
LCSD 880-21349/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	21349
880-12301-1 MS	NW #2	Soluble	Solid	300.0	21349
880-12301-1 MSD	NW #2	Soluble	Solid	300.0	21349

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: NW #2

Lab Sample ID: 880-12301-1

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 14:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21415	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21412	03/11/22 18:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21362	03/11/22 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21357	03/11/22 10:46	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21349	03/10/22 18:13	CH	XEN MID
Soluble	Analysis	300.0		1			21408	03/11/22 15:05	CH	XEN MID

Client Sample ID: SW #2

Lab Sample ID: 880-12301-2

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 15:11	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21415	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21412	03/11/22 18:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	21362	03/11/22 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21357	03/11/22 11:51	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	21349	03/10/22 18:13	CH	XEN MID
Soluble	Analysis	300.0		1			21408	03/11/22 15:31	CH	XEN MID

Client Sample ID: FL-3 @ 14'

Lab Sample ID: 880-12301-3

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 15:32	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21415	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21412	03/11/22 18:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21362	03/11/22 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21357	03/11/22 12:13	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	21349	03/10/22 18:13	CH	XEN MID
Soluble	Analysis	300.0		1			21408	03/11/22 15:40	CH	XEN MID

Client Sample ID: FL-4 @ 14'

Lab Sample ID: 880-12301-4

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 15:53	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21415	03/11/22 18:22	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-4 @ 14'

Lab Sample ID: 880-12301-4

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			21412	03/11/22 18:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21362	03/11/22 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21357	03/11/22 12:34	AJ	XEN MID
Soluble	Leach	DI Leach			5.04 g	50 mL	21349	03/10/22 18:13	CH	XEN MID
Soluble	Analysis	300.0		1			21408	03/11/22 15:49	CH	XEN MID

Client Sample ID: FL-5 @ 14.5'

Lab Sample ID: 880-12301-5

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21365	03/11/22 08:50	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21366	03/11/22 16:13	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21415	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21412	03/11/22 18:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	21362	03/11/22 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21357	03/11/22 12:57	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	21349	03/10/22 18:13	CH	XEN MID
Soluble	Analysis	300.0		1			21408	03/11/22 15:58	CH	XEN MID

Client Sample ID: FL-6 @ 14.5'

Lab Sample ID: 880-12301-6

Date Collected: 03/10/22 00:00

Matrix: Solid

Date Received: 03/10/22 15:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	21364	03/11/22 08:45	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	21361	03/11/22 13:18	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			21415	03/11/22 18:22	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			21412	03/11/22 18:20	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	21362	03/11/22 08:28	DM	XEN MID
Total/NA	Analysis	8015B NM		1			21357	03/11/22 13:18	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	21349	03/10/22 18:13	CH	XEN MID
Soluble	Analysis	300.0		1			21408	03/11/22 16:33	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-12301-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-12301-1	NW #2	Solid	03/10/22 00:00	03/10/22 15:52
880-12301-2	SW #2	Solid	03/10/22 00:00	03/10/22 15:52
880-12301-3	FL-3 @ 14'	Solid	03/10/22 00:00	03/10/22 15:52
880-12301-4	FL-4 @ 14'	Solid	03/10/22 00:00	03/10/22 15:52
880-12301-5	FL-5 @ 14.5'	Solid	03/10/22 00:00	03/10/22 15:52
880-12301-6	FL-6 @ 14.5'	Solid	03/10/22 00:00	03/10/22 15:52



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
 Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
 Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
 Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
 Atlanta GA (770) 449-8800

Work Order No: 12301

www.xenco.com Page 1 of 1

Project Manager:	Joel Lowry	Bill to: (if different)	Camille Bryant
Company Name:	Etech Environmental and Safety	Company Name:	Plains Pipeline
Address:	2617 West Marland	Address:	
City, State ZIP:	Hobbs, NM 88240	City, State ZIP:	
Phone:	(575) 264-9884	Email	Email Results to <u>PM@etechenv.com</u> + Client

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting Level <input type="checkbox"/> Level <input type="checkbox"/> PST/US <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/>	
Deliverables EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other	

Project Name:		Astro Dog 6-Inch		Turn Around		ANALYSIS REQUEST										Preservative Codes					
Project Number:		15649		Routine <input type="checkbox"/>												HNO3 HN					
Project Location:		Rural Eddy Co, NM		Rush <input checked="" type="checkbox"/>												H2S04 H2					
Sampler's Name:		Joel Lowry		Due Date ASAP												HCL HL					
PO #:		<u>SRS 2022-012</u>														None NO					
SAMPLE RECEIPT		Temp Blank.		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Wet Ice.		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>												NaOH Na	
Temperature (°C):		<u>34.0</u>		Thermometer ID												MeOH Me					
Received Intact:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Correction Factor												Zn Acetate+ NaOH Zn					
Cooler Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Total Containers												TAT starts the day received by the lab if received by 4 30pm					
Sample Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A														Sample Comments					
Sample Identification		Matrix		Date Sampled		Time Sampled		Depth		Number of Containers/Preservative Code											
NW #2		Soil		3/10/2022						1/NO											
SW #2		Soil		3/10/2022						1/NO											
FL-3 @ 14'		Soil		3/10/2022				14		1/NO											
FL-4 @ 14'		Soil		3/10/2022				14		1/NO											
FL-5 @ 14 5'		Soil		3/10/2022				14 5		1/NO											
FL-6 @ 14 5'		Soil		3/10/2022				14 5		1/NO											



Total 200.7 / 6010 200.8 / 6020:		8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn	
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg	

Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)		Received by: (Signature)		Date/Time		Relinquished by: (Signature)		Received by: (Signature)		Date/Time	
1 <u>[Signature]</u>		2 <u>[Signature]</u>		3/10/22		3 <u>[Signature]</u>		4 <u>[Signature]</u>			
5		6		15.52		7		8			

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-12301-1
SDG Number: Rural Eddy Co., NM

Login Number: 12301

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-12845-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
3/29/2022 2:12:54 PM

Jessica Kramer, Project Manager
(432)704-5440
jessica.kramer@eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
SQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Job ID: 880-12845-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-12845-1

Receipt

The samples were received on 3/24/2022 12:56 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-22266 and analytical batch 880-22323 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Client Sample ID: SSW #3

Lab Sample ID: 880-12845-1

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 11:24	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 11:24	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 11:24	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		03/25/22 07:30	03/25/22 11:24	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 11:24	1
Xylenes, Total	<0.00401	U	0.00401		mg/Kg		03/25/22 07:30	03/25/22 11:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	03/25/22 07:30	03/25/22 11:24	1
1,4-Difluorobenzene (Surr)	112		70 - 130	03/25/22 07:30	03/25/22 11:24	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00401	U	0.00401		mg/Kg			03/25/22 13:37	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.8	U	49.8		mg/Kg			03/25/22 10:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/24/22 15:46	03/24/22 22:15	1
Diesel Range Organics (Over C10-C28)	<49.8	U	49.8		mg/Kg		03/24/22 15:46	03/24/22 22:15	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/24/22 15:46	03/24/22 22:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	100		70 - 130	03/24/22 15:46	03/24/22 22:15	1
o-Terphenyl	98		70 - 130	03/24/22 15:46	03/24/22 22:15	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	76.5		4.99		mg/Kg			03/25/22 12:58	1

Client Sample ID: NSW #2b

Lab Sample ID: 880-12845-2

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	886		49.9		mg/Kg			03/25/22 10:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/24/22 15:46	03/24/22 23:18	1
Diesel Range Organics (Over C10-C28)	772		49.9		mg/Kg		03/24/22 15:46	03/24/22 23:18	1
Oil Range Organics (Over C28-C36)	114		49.9		mg/Kg		03/24/22 15:46	03/24/22 23:18	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Client Sample ID: NSW #2b

Lab Sample ID: 880-12845-2

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	03/24/22 15:46	03/24/22 23:18	1
o-Terphenyl	120		70 - 130	03/24/22 15:46	03/24/22 23:18	1

Client Sample ID: NSW #3

Lab Sample ID: 880-12845-3

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00201	U	0.00201		mg/Kg		03/25/22 07:30	03/25/22 11:45	1
Toluene	<0.00201	U	0.00201		mg/Kg		03/25/22 07:30	03/25/22 11:45	1
Ethylbenzene	<0.00201	U	0.00201		mg/Kg		03/25/22 07:30	03/25/22 11:45	1
m-Xylene & p-Xylene	<0.00402	U	0.00402		mg/Kg		03/25/22 07:30	03/25/22 11:45	1
o-Xylene	<0.00201	U	0.00201		mg/Kg		03/25/22 07:30	03/25/22 11:45	1
Xylenes, Total	<0.00402	U	0.00402		mg/Kg		03/25/22 07:30	03/25/22 11:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		70 - 130				03/25/22 07:30	03/25/22 11:45	1
1,4-Difluorobenzene (Surr)	110		70 - 130				03/25/22 07:30	03/25/22 11:45	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00402	U	0.00402		mg/Kg			03/25/22 13:37	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	341		49.8		mg/Kg			03/25/22 10:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	49.8		mg/Kg		03/24/22 15:46	03/24/22 23:40	1
Diesel Range Organics (Over C10-C28)	341		49.8		mg/Kg		03/24/22 15:46	03/24/22 23:40	1
Oil Range Organics (Over C28-C36)	<49.8	U	49.8		mg/Kg		03/24/22 15:46	03/24/22 23:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	128		70 - 130				03/24/22 15:46	03/24/22 23:40	1
o-Terphenyl	123		70 - 130				03/24/22 15:46	03/24/22 23:40	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	55.3		4.97		mg/Kg			03/25/22 13:33	1

Client Sample ID: FL-3b @ 16'

Lab Sample ID: 880-12845-4

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Sample Depth: 16'

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.7	U	49.7		mg/Kg			03/25/22 10:50	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-3b @ 16'

Lab Sample ID: 880-12845-4

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Sample Depth: 16'

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.7	U	49.7		mg/Kg		03/24/22 15:46	03/25/22 00:01	1
Diesel Range Organics (Over C10-C28)	<49.7	U	49.7		mg/Kg		03/24/22 15:46	03/25/22 00:01	1
Oil Range Organics (Over C28-C36)	<49.7	U	49.7		mg/Kg		03/24/22 15:46	03/25/22 00:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	03/24/22 15:46	03/25/22 00:01	1
o-Terphenyl	109		70 - 130	03/24/22 15:46	03/25/22 00:01	1

Client Sample ID: FL-4b @ 16'

Lab Sample ID: 880-12845-5

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Sample Depth: 16'

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	155		50.0		mg/Kg			03/25/22 10:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/25/22 00:24	1
Diesel Range Organics (Over C10-C28)	155		50.0		mg/Kg		03/24/22 15:46	03/25/22 00:24	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/25/22 00:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	121		70 - 130	03/24/22 15:46	03/25/22 00:24	1
o-Terphenyl	119		70 - 130	03/24/22 15:46	03/25/22 00:24	1

Client Sample ID: FL-5b @ 14'

Lab Sample ID: 880-12845-6

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Sample Depth: 14'

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			03/25/22 10:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		03/24/22 15:46	03/25/22 00:46	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		03/24/22 15:46	03/25/22 00:46	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		03/24/22 15:46	03/25/22 00:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	124		70 - 130	03/24/22 15:46	03/25/22 00:46	1
o-Terphenyl	126		70 - 130	03/24/22 15:46	03/25/22 00:46	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-6b @ 17'

Lab Sample ID: 880-12845-7

Date Collected: 03/24/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Sample Depth: 17'

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			03/25/22 10:50	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/25/22 01:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/25/22 01:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/25/22 01:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130	03/24/22 15:46	03/25/22 01:09	1
o-Terphenyl	101		70 - 130	03/24/22 15:46	03/25/22 01:09	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-12845-1	SSW #3	109	112
880-12845-3	NSW #3	105	110
890-2122-A-1-E MS	Matrix Spike	108	104
890-2122-A-1-F MSD	Matrix Spike Duplicate	107	111
LCS 880-22266/1-A	Lab Control Sample	103	111
LCSD 880-22266/2-A	Lab Control Sample Dup	105	112
MB 880-22266/5-A	Method Blank	100	104
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-12845-1	SSW #3	100	98
880-12845-1 MS	SSW #3	103	89
880-12845-1 MSD	SSW #3	113	100
880-12845-2	NSW #2b	124	120
880-12845-3	NSW #3	128	123
880-12845-4	FL-3b @ 16'	111	109
880-12845-5	FL-4b @ 16'	121	119
880-12845-6	FL-5b @ 14'	124	126
880-12845-7	FL-6b @ 17'	103	101
LCS 880-22285/2-A	Lab Control Sample	96	81
LCSD 880-22285/3-A	Lab Control Sample Dup	114	96
MB 880-22285/1-A	Method Blank	114	119
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-22266/5-A

Matrix: Solid

Analysis Batch: 22323

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 10:42	1
Toluene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 10:42	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 10:42	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		03/25/22 07:30	03/25/22 10:42	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		03/25/22 07:30	03/25/22 10:42	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		03/25/22 07:30	03/25/22 10:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		70 - 130	03/25/22 07:30	03/25/22 10:42	1
1,4-Difluorobenzene (Surr)	104		70 - 130	03/25/22 07:30	03/25/22 10:42	1

Lab Sample ID: LCS 880-22266/1-A

Matrix: Solid

Analysis Batch: 22323

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.100	0.08853		mg/Kg		89	70 - 130
Toluene	0.100	0.08731		mg/Kg		87	70 - 130
Ethylbenzene	0.100	0.09324		mg/Kg		93	70 - 130
m-Xylene & p-Xylene	0.200	0.1909		mg/Kg		95	70 - 130
o-Xylene	0.100	0.09386		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Lab Sample ID: LCSD 880-22266/2-A

Matrix: Solid

Analysis Batch: 22323

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 22266

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	0.100	0.08920		mg/Kg		89	70 - 130	1	35
Toluene	0.100	0.08871		mg/Kg		89	70 - 130	2	35
Ethylbenzene	0.100	0.09388		mg/Kg		94	70 - 130	1	35
m-Xylene & p-Xylene	0.200	0.1927		mg/Kg		96	70 - 130	1	35
o-Xylene	0.100	0.09509		mg/Kg		95	70 - 130	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	112		70 - 130

Lab Sample ID: 890-2122-A-1-E MS

Matrix: Solid

Analysis Batch: 22323

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 22266

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.00200	U F1	0.0996	0.06367	F1	mg/Kg		64	70 - 130
Toluene	<0.00200	U F1	0.0996	0.07260		mg/Kg		71	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2122-A-1-E MS

Matrix: Solid

Analysis Batch: 22323

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 22266

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	<0.00200	U	0.0996	0.07681		mg/Kg		76	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.199	0.1597		mg/Kg		79	70 - 130
o-Xylene	<0.00200	U	0.0996	0.08081		mg/Kg		80	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: 890-2122-A-1-F MSD

Matrix: Solid

Analysis Batch: 22323

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 22266

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0992	0.07252		mg/Kg		73	70 - 130	13	35
Toluene	<0.00200	U F1	0.0992	0.06862	F1	mg/Kg		68	70 - 130	6	35
Ethylbenzene	<0.00200	U	0.0992	0.07502		mg/Kg		75	70 - 130	2	35
m-Xylene & p-Xylene	<0.00401	U	0.198	0.1562		mg/Kg		77	70 - 130	2	35
o-Xylene	<0.00200	U	0.0992	0.07864		mg/Kg		78	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	111		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-22285/1-A

Matrix: Solid

Analysis Batch: 22241

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22285

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/24/22 21:14	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/24/22 21:14	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		03/24/22 15:46	03/24/22 21:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	114		70 - 130	03/24/22 15:46	03/24/22 21:14	1
o-Terphenyl	119		70 - 130	03/24/22 15:46	03/24/22 21:14	1

Lab Sample ID: LCS 880-22285/2-A

Matrix: Solid

Analysis Batch: 22241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22285

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO)-C6-C10	1000	988.8		mg/Kg		99	70 - 130
Diesel Range Organics (Over C10-C28)	1000	972.2		mg/Kg		97	70 - 130

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QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-22285/2-A

Matrix: Solid

Analysis Batch: 22241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22285

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	96		70 - 130
o-Terphenyl	81		70 - 130

Lab Sample ID: LCSD 880-22285/3-A

Matrix: Solid

Analysis Batch: 22241

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 22285

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1143		mg/Kg		114	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	1000	1172		mg/Kg		117	70 - 130	19	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	114		70 - 130
o-Terphenyl	96		70 - 130

Lab Sample ID: 880-12845-1 MS

Matrix: Solid

Analysis Batch: 22241

Client Sample ID: SSW #3

Prep Type: Total/NA

Prep Batch: 22285

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	998	980.9		mg/Kg		98	70 - 130		
Diesel Range Organics (Over C10-C28)	<49.8	U	998	886.1		mg/Kg		87	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	89		70 - 130

Lab Sample ID: 880-12845-1 MSD

Matrix: Solid

Analysis Batch: 22241

Client Sample ID: SSW #3

Prep Type: Total/NA

Prep Batch: 22285

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.8	U	999	1041		mg/Kg		104	70 - 130	6	20
Diesel Range Organics (Over C10-C28)	<49.8	U	999	1010		mg/Kg		99	70 - 130	13	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	113		70 - 130
o-Terphenyl	100		70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-22343/1-A

Matrix: Solid

Analysis Batch: 22357

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			03/25/22 10:36	1

Lab Sample ID: LCS 880-22343/2-A

Matrix: Solid

Analysis Batch: 22357

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	250	274.1		mg/Kg		110	90 - 110

Lab Sample ID: LCSD 880-22343/3-A

Matrix: Solid

Analysis Batch: 22357

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	250	274.7		mg/Kg		110	90 - 110	0	20

Lab Sample ID: 880-12847-A-1-B MS

Matrix: Solid

Analysis Batch: 22357

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	36.6		249	308.2		mg/Kg		109	90 - 110

Lab Sample ID: 880-12847-A-1-C MSD

Matrix: Solid

Analysis Batch: 22357

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	36.6		249	308.3		mg/Kg		109	90 - 110	0	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

GC VOA

Prep Batch: 22266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Total/NA	Solid	5035	
880-12845-3	NSW #3	Total/NA	Solid	5035	
MB 880-22266/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-22266/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-22266/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2122-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2122-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 22323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Total/NA	Solid	8021B	22266
880-12845-3	NSW #3	Total/NA	Solid	8021B	22266
MB 880-22266/5-A	Method Blank	Total/NA	Solid	8021B	22266
LCS 880-22266/1-A	Lab Control Sample	Total/NA	Solid	8021B	22266
LCSD 880-22266/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	22266
890-2122-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	22266
890-2122-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	22266

Analysis Batch: 22359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Total/NA	Solid	Total BTEX	
880-12845-3	NSW #3	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 22241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Total/NA	Solid	8015B NM	22285
880-12845-2	NSW #2b	Total/NA	Solid	8015B NM	22285
880-12845-3	NSW #3	Total/NA	Solid	8015B NM	22285
880-12845-4	FL-3b @ 16'	Total/NA	Solid	8015B NM	22285
880-12845-5	FL-4b @ 16'	Total/NA	Solid	8015B NM	22285
880-12845-6	FL-5b @ 14'	Total/NA	Solid	8015B NM	22285
880-12845-7	FL-6b @ 17'	Total/NA	Solid	8015B NM	22285
MB 880-22285/1-A	Method Blank	Total/NA	Solid	8015B NM	22285
LCS 880-22285/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	22285
LCSD 880-22285/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	22285
880-12845-1 MS	SSW #3	Total/NA	Solid	8015B NM	22285
880-12845-1 MSD	SSW #3	Total/NA	Solid	8015B NM	22285

Prep Batch: 22285

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Total/NA	Solid	8015NM Prep	
880-12845-2	NSW #2b	Total/NA	Solid	8015NM Prep	
880-12845-3	NSW #3	Total/NA	Solid	8015NM Prep	
880-12845-4	FL-3b @ 16'	Total/NA	Solid	8015NM Prep	
880-12845-5	FL-4b @ 16'	Total/NA	Solid	8015NM Prep	
880-12845-6	FL-5b @ 14'	Total/NA	Solid	8015NM Prep	
880-12845-7	FL-6b @ 17'	Total/NA	Solid	8015NM Prep	
MB 880-22285/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-22285/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

GC Semi VOA (Continued)

Prep Batch: 22285 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-22285/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-12845-1 MS	SSW #3	Total/NA	Solid	8015NM Prep	
880-12845-1 MSD	SSW #3	Total/NA	Solid	8015NM Prep	

Analysis Batch: 22340

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Total/NA	Solid	8015 NM	
880-12845-2	NSW #2b	Total/NA	Solid	8015 NM	
880-12845-3	NSW #3	Total/NA	Solid	8015 NM	
880-12845-4	FL-3b @ 16'	Total/NA	Solid	8015 NM	
880-12845-5	FL-4b @ 16'	Total/NA	Solid	8015 NM	
880-12845-6	FL-5b @ 14'	Total/NA	Solid	8015 NM	
880-12845-7	FL-6b @ 17'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 22343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Soluble	Solid	DI Leach	
880-12845-3	NSW #3	Soluble	Solid	DI Leach	
MB 880-22343/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-22343/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-22343/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-12847-A-1-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-12847-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 22357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-12845-1	SSW #3	Soluble	Solid	300.0	22343
880-12845-3	NSW #3	Soluble	Solid	300.0	22343
MB 880-22343/1-A	Method Blank	Soluble	Solid	300.0	22343
LCS 880-22343/2-A	Lab Control Sample	Soluble	Solid	300.0	22343
LCSD 880-22343/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	22343
880-12847-A-1-B MS	Matrix Spike	Soluble	Solid	300.0	22343
880-12847-A-1-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	22343

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Client Sample ID: SSW #3

Lab Sample ID: 880-12845-1

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	22266	03/25/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22323	03/25/22 11:24	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22359	03/25/22 13:37	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.05 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/24/22 22:15	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	22343	03/25/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		1			22357	03/25/22 12:58	CH	XEN MID

Client Sample ID: NSW #2b

Lab Sample ID: 880-12845-2

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/24/22 23:18	AJ	XEN MID

Client Sample ID: NSW #3

Lab Sample ID: 880-12845-3

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.98 g	5 mL	22266	03/25/22 07:30	KL	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	22323	03/25/22 11:45	KL	XEN MID
Total/NA	Analysis	Total BTEX		1			22359	03/25/22 13:37	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.04 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/24/22 23:40	AJ	XEN MID
Soluble	Leach	DI Leach			5.03 g	50 mL	22343	03/25/22 09:00	CH	XEN MID
Soluble	Analysis	300.0		1			22357	03/25/22 13:33	CH	XEN MID

Client Sample ID: FL-3b @ 16'

Lab Sample ID: 880-12845-4

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.06 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/25/22 00:01	AJ	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-4b @ 16'

Lab Sample ID: 880-12845-5

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/25/22 00:24	AJ	XEN MID

Client Sample ID: FL-5b @ 14'

Lab Sample ID: 880-12845-6

Date Collected: 03/23/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/25/22 00:46	AJ	XEN MID

Client Sample ID: FL-6b @ 17'

Lab Sample ID: 880-12845-7

Date Collected: 03/24/22 00:00

Matrix: Solid

Date Received: 03/24/22 12:56

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			22340	03/25/22 10:50	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	22285	03/24/22 15:46	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22241	03/25/22 01:09	AJ	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-12845-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-12845-1	SSW #3	Solid	03/23/22 00:00	03/24/22 12:56	
880-12845-2	NSW #2b	Solid	03/23/22 00:00	03/24/22 12:56	
880-12845-3	NSW #3	Solid	03/23/22 00:00	03/24/22 12:56	
880-12845-4	FL-3b @ 16'	Solid	03/23/22 00:00	03/24/22 12:56	16'
880-12845-5	FL-4b @ 16'	Solid	03/23/22 00:00	03/24/22 12:56	16'
880-12845-6	FL-5b @ 14'	Solid	03/23/22 00:00	03/24/22 12:56	14'
880-12845-7	FL-6b @ 17'	Solid	03/24/22 00:00	03/24/22 12:56	17'



Chain of Custody

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

We



880-12845 Chain of Custody

Project Manager:	Joel Lowry	Bill to: (if different)	Camille Bryant
Company Name:	Etech Environmental and Safety	Company Name:	Plains Pipeline
Address:	2617 West Marland	Address:	
City, State ZIP:	Hobbs, NM 88240	City, State ZIP:	
Phone:	(575) 264-9884	Email:	Email Results to: PM@etechenv.com + Client

Work Order Comments	
Program:	UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RR <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting Level:	Level <input type="checkbox"/> Level <input type="checkbox"/> PST/US <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/>
Deliverables:	EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other: <input type="checkbox"/>

Project Name:		Astro Dog 6-Inch		Turn Around		ANALYSIS REQUEST														Preservative Codes	
Project Number:		15649		Routine: <input type="checkbox"/>																HNO3: HN	
Project Location:		Rural Eddy Co., NM		Rush: <input checked="" type="checkbox"/>																H2SO4: H2	
Sampler's Name:		Joel Lowry		Due Date: ASAP																HCL: HL	
PO #:		SRS# 2022-012																		None: NO	
SAMPLE RECEIPT		Temp Blank: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Wet Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																NaOH: Na	
Temperature (°C):		5.3 / 5.2		Thermometer ID:																MeOH: Me	
Received Intact:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Correction Factor:																Zn Acetate+ NaOH: Zn	
Cooler Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Total Containers:																TAT starts the day received by the lab, if received by 4:30pm	
Sample Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																			
Sample Identification		Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative Code	BTEX (8021)	TPH (Modified Ext.)	Cl- (E300)											Sample Comments	
SSW #3		Soil	3/23/2022			1/NO	X	X	X												
NSW #2b		Soil	3/23/2022			1/NO		X													
NSW #3		Soil	3/23/2022			1/NO	X	X	X												
FL-3b @ 16'		Soil	3/23/2022		16'	1/NO		X													
FL-4b @ 16'		Soil	3/23/2022		16'	1/NO		X													
FL-5b @ 14'		Soil	3/23/2022		14'	1/NO		X													
FL-6b @ 17'		Soil	3/24/2022		17'	1/NO		X													

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010:	8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 <i>[Signature]</i>	2 <i>[Signature]</i>	3/24/22	3		
4		12:56	5		
6			6		

Revised Date 10/14/19 Rev. 2019.1

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-12845-1
SDG Number: Rural Eddy Co., NM

Login Number: 12845

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-13232-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
4/5/2022 12:57:26 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Laboratory Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Job ID: 880-13232-1

Laboratory: Eurofins Midland

Narrative	Job Narrative 880-13232-1
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Receipt

The sample was received on 4/4/2022 8:38 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

GC Semi VOA

Method 8015MOD_NM: The method blank for preparation batch 880-22935 and analytical batch 880-22887 contained Gasoline Range Organics (GRO)-C6-C10, Diesel Range Organics (Over C10-C28) and Oil Range Organics (Over C28-C36) above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Client Sample ID: FL-4c @ 17'
Date Collected: 04/01/22 00:00
Date Received: 04/04/22 08:38
Sample Depth: 17'

Lab Sample ID: 880-13232-1
Matrix: Solid

Method: 8015 NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	93.4		50.0	15.0	mg/Kg			04/05/22 10:37	1
Method: 8015B NM - Diesel Range Organics (DRO) (GC)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	27.6	J B	50.0	15.0	mg/Kg		04/04/22 13:00	04/05/22 02:54	1
Diesel Range Organics (Over C10-C28)	65.8	B	50.0	15.0	mg/Kg		04/04/22 13:00	04/05/22 02:54	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/04/22 13:00	04/05/22 02:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	94		70 - 130				04/04/22 13:00	04/05/22 02:54	1
o-Terphenyl	105		70 - 130				04/04/22 13:00	04/05/22 02:54	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)					
880-13187-A-1-F MS	Matrix Spike	90	97					
880-13187-A-1-G MSD	Matrix Spike Duplicate	91	96					
880-13232-1	FL-4c @ 17'	94	105					
Surrogate Legend								
1CO = 1-Chlorooctane								
OTPH = o-Terphenyl								

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	1CO2 (70-130)	OTPH2 (70-130)					
LCS 880-22935/2-A	Lab Control Sample	97	116					
LCSD 880-22935/3-A	Lab Control Sample Dup	99	118					
MB 880-22935/1-A	Method Blank	107	127					
Surrogate Legend								
1CO = 1-Chlorooctane								
OTPH = o-Terphenyl								

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-22935/1-A

Matrix: Solid

Analysis Batch: 22887

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 22935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	20.39	J	50.0	15.0	mg/Kg		04/04/22 11:43	04/04/22 22:23	1
Diesel Range Organics (Over C10-C28)	26.46	J	50.0	15.0	mg/Kg		04/04/22 11:43	04/04/22 22:23	1
Oil Range Organics (Over C28-C36)	<15.0	U	50.0	15.0	mg/Kg		04/04/22 11:43	04/04/22 22:23	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130				04/04/22 11:43	04/04/22 22:23	1
o-Terphenyl	127		70 - 130				04/04/22 11:43	04/04/22 22:23	1

Lab Sample ID: LCS 880-22935/2-A

Matrix: Solid

Analysis Batch: 22887

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 22935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	841.9		mg/Kg		84	70 - 130
Diesel Range Organics (Over C10-C28)	1000	987.3		mg/Kg		99	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	97		70 - 130				
o-Terphenyl	116		70 - 130				

Lab Sample ID: LCSD 880-22935/3-A

Matrix: Solid

Analysis Batch: 22887

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 22935

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	837.8		mg/Kg		84	70 - 130	0	20
Diesel Range Organics (Over C10-C28)	1000	992.0		mg/Kg		99	70 - 130	0	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	99		70 - 130						
o-Terphenyl	118		70 - 130						

Lab Sample ID: 880-13187-A-1-F MS

Matrix: Solid

Analysis Batch: 22887

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 22935

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	19.3	J B	998	883.5		mg/Kg		87	70 - 130
Diesel Range Organics (Over C10-C28)	54.3	B	998	829.4		mg/Kg		78	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-13187-A-1-F MS

Matrix: Solid

Analysis Batch: 22887

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 22935

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	90		70 - 130
o-Terphenyl	97		70 - 130

Lab Sample ID: 880-13187-A-1-G MSD

Matrix: Solid

Analysis Batch: 22887

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 22935

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	19.3	J B	998	921.7		mg/Kg		90	70 - 130	4	20
Diesel Range Organics (Over C10-C28)	54.3	B	998	834.8		mg/Kg		78	70 - 130	1	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	91		70 - 130								
o-Terphenyl	96		70 - 130								

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

GC Semi VOA

Analysis Batch: 22887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13232-1	FL-4c @ 17'	Total/NA	Solid	8015B NM	22935
MB 880-22935/1-A	Method Blank	Total/NA	Solid	8015B NM	22935
LCS 880-22935/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	22935
LCSD 880-22935/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	22935
880-13187-A-1-F MS	Matrix Spike	Total/NA	Solid	8015B NM	22935
880-13187-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	22935

Prep Batch: 22935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13232-1	FL-4c @ 17'	Total/NA	Solid	8015NM Prep	
MB 880-22935/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-22935/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-22935/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-13187-A-1-F MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-13187-A-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 23016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13232-1	FL-4c @ 17'	Total/NA	Solid	8015 NM	

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Client Sample ID: FL-4c @ 17'
Date Collected: 04/01/22 00:00
Date Received: 04/04/22 08:38

Lab Sample ID: 880-13232-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			23016	04/05/22 10:37	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	22935	04/04/22 13:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			22887	04/05/22 02:54	AJ	XEN MID

Laboratory References:
XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH

1
2
3
4
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14

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Method	Method Description	Protocol	Laboratory
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-13232-1
SDG: Rural Eddy Co.,NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-13232-1	FL-4c @ 17'	Solid	04/01/22 00:00	04/04/22 08:38	17'

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Source: <http://www.bls.gov/news.release/tables/t000101.htm>

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-13232-1
SDG Number: Rural Eddy Co.,NM

Login Number: 13232

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-13517-1

Laboratory Sample Delivery Group: Rural Eddy Co.,NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
4/12/2022 2:57:31 PM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co., NM

Job ID: 880-13517-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-13517-1

Receipt

The samples were received on 4/11/2022 12:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

GC VOA

Method 8021B: The matrix spike (MS) recoveries for preparation batch 880-23328 and analytical batch 880-23365 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Client Sample ID: NT-10'

Lab Sample ID: 880-13517-1

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Sample Depth: 10'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 13:28	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 13:28	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 13:28	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		04/11/22 17:03	04/12/22 13:28	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 13:28	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		04/11/22 17:03	04/12/22 13:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	04/11/22 17:03	04/12/22 13:28	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/11/22 17:03	04/12/22 13:28	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			04/12/22 15:46	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/12/22 12:12	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/12/22 03:41	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/12/22 03:41	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/12/22 03:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	87		70 - 130	04/11/22 15:16	04/12/22 03:41	1
o-Terphenyl	98		70 - 130	04/11/22 15:16	04/12/22 03:41	1

Client Sample ID: NT-15'

Lab Sample ID: 880-13517-2

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Sample Depth: 15'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 13:49	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 13:49	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 13:49	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/11/22 17:03	04/12/22 13:49	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 13:49	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/11/22 17:03	04/12/22 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130	04/11/22 17:03	04/12/22 13:49	1
1,4-Difluorobenzene (Surr)	107		70 - 130	04/11/22 17:03	04/12/22 13:49	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Client Sample ID: NT-15'

Lab Sample ID: 880-13517-2

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Sample Depth: 15'

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/12/22 15:46	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			04/12/22 12:12	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/12/22 04:01	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/12/22 04:01	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/12/22 04:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	88		70 - 130				04/11/22 15:16	04/12/22 04:01	1
o-Terphenyl	95		70 - 130				04/11/22 15:16	04/12/22 04:01	1

Client Sample ID: NT-20'

Lab Sample ID: 880-13517-3

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Sample Depth: 20'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 14:09	1
Toluene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 14:09	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 14:09	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		04/11/22 17:03	04/12/22 14:09	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		04/11/22 17:03	04/12/22 14:09	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		04/11/22 17:03	04/12/22 14:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		70 - 130				04/11/22 17:03	04/12/22 14:09	1
1,4-Difluorobenzene (Surr)	103		70 - 130				04/11/22 17:03	04/12/22 14:09	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			04/12/22 15:46	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			04/12/22 12:12	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		04/11/22 15:16	04/12/22 04:21	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		04/11/22 15:16	04/12/22 04:21	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/11/22 15:16	04/12/22 04:21	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Client Sample ID: NT-20'
Date Collected: 04/08/22 00:00
Date Received: 04/11/22 00:00
Sample Depth: 20'

Lab Sample ID: 880-13517-3
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130	04/11/22 15:16	04/12/22 04:21	1
o-Terphenyl	85		70 - 130	04/11/22 15:16	04/12/22 04:21	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-13501-A-5-C MS	Matrix Spike	93	105
880-13501-A-5-D MSD	Matrix Spike Duplicate	100	100
880-13517-1	NT-10'	107	107
880-13517-2	NT-15'	109	107
880-13517-3	NT-20'	109	103
LCS 880-23328/1-A	Lab Control Sample	96	104
LCSD 880-23328/2-A	Lab Control Sample Dup	94	102
MB 880-23328/5-A	Method Blank	97	100
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-13517-1	NT-10'	87	98
880-13517-2	NT-15'	88	95
880-13517-3	NT-20'	83	85
890-2177-A-1-B MS	Matrix Spike	97	89
890-2177-A-1-C MSD	Matrix Spike Duplicate	93	86
LCS 880-23313/2-A	Lab Control Sample	86	78
LCSD 880-23313/3-A	Lab Control Sample Dup	91	83
MB 880-23313/1-A	Method Blank	99	106
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-23328/5-A

Matrix: Solid

Analysis Batch: 23365

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23328

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 11:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 11:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 11:58	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		04/11/22 17:03	04/12/22 11:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		04/11/22 17:03	04/12/22 11:58	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		04/11/22 17:03	04/12/22 11:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		70 - 130	04/11/22 17:03	04/12/22 11:58	1
1,4-Difluorobenzene (Surr)	100		70 - 130	04/11/22 17:03	04/12/22 11:58	1

Lab Sample ID: LCS 880-23328/1-A

Matrix: Solid

Analysis Batch: 23365

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23328

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.08329		mg/Kg		83	70 - 130
Toluene	0.100	0.09279		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.09605		mg/Kg		96	70 - 130
m-Xylene & p-Xylene	0.200	0.1926		mg/Kg		96	70 - 130
o-Xylene	0.100	0.09385		mg/Kg		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		70 - 130
1,4-Difluorobenzene (Surr)	104		70 - 130

Lab Sample ID: LCSD 880-23328/2-A

Matrix: Solid

Analysis Batch: 23365

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23328

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.08654		mg/Kg		87	70 - 130	4	35
Toluene	0.100	0.09625		mg/Kg		96	70 - 130	4	35
Ethylbenzene	0.100	0.09917		mg/Kg		99	70 - 130	3	35
m-Xylene & p-Xylene	0.200	0.1983		mg/Kg		99	70 - 130	3	35
o-Xylene	0.100	0.09711		mg/Kg		97	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130
1,4-Difluorobenzene (Surr)	102		70 - 130

Lab Sample ID: 880-13501-A-5-C MS

Matrix: Solid

Analysis Batch: 23365

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 23328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1	0.100	0.1319	F1	mg/Kg		131	70 - 130
Toluene	<0.00200	U	0.100	0.1267		mg/Kg		126	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-13501-A-5-C MS

Matrix: Solid

Analysis Batch: 23365

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 23328

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U	0.100	0.1100		mg/Kg		110	70 - 130
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2260		mg/Kg		113	70 - 130
o-Xylene	<0.00200	U	0.100	0.1041		mg/Kg		104	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		70 - 130
1,4-Difluorobenzene (Surr)	105		70 - 130

Lab Sample ID: 880-13501-A-5-D MSD

Matrix: Solid

Analysis Batch: 23365

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 23328

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1	0.0998	0.1185		mg/Kg		118	70 - 130	11	35
Toluene	<0.00200	U	0.0998	0.1252		mg/Kg		125	70 - 130	1	35
Ethylbenzene	<0.00200	U	0.0998	0.1107		mg/Kg		111	70 - 130	1	35
m-Xylene & p-Xylene	<0.00401	U	0.200	0.2320		mg/Kg		116	70 - 130	3	35
o-Xylene	<0.00200	U	0.0998	0.1074		mg/Kg		108	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		70 - 130
1,4-Difluorobenzene (Surr)	100		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-23313/1-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23313

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/11/22 19:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/11/22 19:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/11/22 15:16	04/11/22 19:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	99		70 - 130	04/11/22 15:16	04/11/22 19:55	1
o-Terphenyl	106		70 - 130	04/11/22 15:16	04/11/22 19:55	1

Lab Sample ID: LCS 880-23313/2-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23313

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	765.0		mg/Kg		76	70 - 130
Diesel Range Organics (Over C10-C28)	1000	940.9		mg/Kg		94	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-23313/2-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23313

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	78		70 - 130

Lab Sample ID: LCSD 880-23313/3-A

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23313

			Spike	LCSD	LCSD				%Rec		RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10			1000	709.6		mg/Kg		71	70 - 130	8	20	
Diesel Range Organics (Over C10-C28)			1000	999.3		mg/Kg		100	70 - 130	6	20	
	LCSD	LCSD										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	91		70 - 130									
o-Terphenyl	83		70 - 130									

Lab Sample ID: 890-2177-A-1-B MS

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 23313

	Sample	Sample	Spike	MS	MS				%Rec			
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	998	817.6		mg/Kg		82	70 - 130			
Diesel Range Organics (Over C10-C28)	<49.9	U	998	979.3		mg/Kg		96	70 - 130			
	MS	MS										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	97		70 - 130									
o-Terphenyl	89		70 - 130									

Lab Sample ID: 890-2177-A-1-C MSD

Matrix: Solid

Analysis Batch: 23283

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 23313

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	781.5		mg/Kg		78	70 - 130	5	20	
Diesel Range Organics (Over C10-C28)	<49.9	U	997	955.7		mg/Kg		94	70 - 130	2	20	
	MSD	MSD										
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	93		70 - 130									
o-Terphenyl	86		70 - 130									

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

GC VOA

Prep Batch: 23328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13517-1	NT-10'	Total/NA	Solid	5035	
880-13517-2	NT-15'	Total/NA	Solid	5035	
880-13517-3	NT-20'	Total/NA	Solid	5035	
MB 880-23328/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-23328/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-23328/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-13501-A-5-C MS	Matrix Spike	Total/NA	Solid	5035	
880-13501-A-5-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 23365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13517-1	NT-10'	Total/NA	Solid	8021B	23328
880-13517-2	NT-15'	Total/NA	Solid	8021B	23328
880-13517-3	NT-20'	Total/NA	Solid	8021B	23328
MB 880-23328/5-A	Method Blank	Total/NA	Solid	8021B	23328
LCS 880-23328/1-A	Lab Control Sample	Total/NA	Solid	8021B	23328
LCSD 880-23328/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	23328
880-13501-A-5-C MS	Matrix Spike	Total/NA	Solid	8021B	23328
880-13501-A-5-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	23328

Analysis Batch: 23404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13517-1	NT-10'	Total/NA	Solid	Total BTEX	
880-13517-2	NT-15'	Total/NA	Solid	Total BTEX	
880-13517-3	NT-20'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 23283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13517-1	NT-10'	Total/NA	Solid	8015B NM	23313
880-13517-2	NT-15'	Total/NA	Solid	8015B NM	23313
880-13517-3	NT-20'	Total/NA	Solid	8015B NM	23313
MB 880-23313/1-A	Method Blank	Total/NA	Solid	8015B NM	23313
LCS 880-23313/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	23313
LCSD 880-23313/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	23313
890-2177-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	23313
890-2177-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	23313

Prep Batch: 23313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13517-1	NT-10'	Total/NA	Solid	8015NM Prep	
880-13517-2	NT-15'	Total/NA	Solid	8015NM Prep	
880-13517-3	NT-20'	Total/NA	Solid	8015NM Prep	
MB 880-23313/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-23313/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-23313/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2177-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2177-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

GC Semi VOA

Analysis Batch: 23382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-13517-1	NT-10'	Total/NA	Solid	8015 NM	
880-13517-2	NT-15'	Total/NA	Solid	8015 NM	
880-13517-3	NT-20'	Total/NA	Solid	8015 NM	

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Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Client Sample ID: NT-10'

Lab Sample ID: 880-13517-1

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	23328	04/11/22 17:03	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23365	04/12/22 13:28	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23404	04/12/22 15:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23382	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	23313	04/11/22 15:16	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/12/22 03:41	AJ	XEN MID

Client Sample ID: NT-15'

Lab Sample ID: 880-13517-2

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	23328	04/11/22 17:03	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23365	04/12/22 13:49	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23404	04/12/22 15:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23382	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	23313	04/11/22 15:16	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/12/22 04:01	AJ	XEN MID

Client Sample ID: NT-20'

Lab Sample ID: 880-13517-3

Date Collected: 04/08/22 00:00

Matrix: Solid

Date Received: 04/11/22 00:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	23328	04/11/22 17:03	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	23365	04/12/22 14:09	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			23404	04/12/22 15:46	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			23382	04/12/22 12:12	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	23313	04/11/22 15:16	AM	XEN MID
Total/NA	Analysis	8015B NM		1			23283	04/12/22 04:21	AJ	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-13517-1
SDG: Rural Eddy Co.,NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-13517-1	NT-10'	Solid	04/08/22 00:00	04/11/22 00:00	10'
880-13517-2	NT-15'	Solid	04/08/22 00:00	04/11/22 00:00	15'
880-13517-3	NT-20'	Solid	04/08/22 00:00	04/11/22 00:00	20'

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Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-13517-1
SDG Number: Rural Eddy Co.,NM

Login Number: 13517

List Number: 1

Creator: Teel, Brianna

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
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Laboratory Job ID: 880-14196-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
5/9/2022 2:53:52 PM

Jessica Kramer, Project Manager
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Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Job ID: 880-14196-1

Laboratory: Eurofins Midland

Narrative

**Job Narrative
880-14196-1**

Receipt

The samples were received on 4/28/2022 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.3°C

GC VOA

Method 8021B: Surrogate recovery for the following samples were outside control limits: SWSW (880-14196-1), FL-7 16-18' (880-14196-2), FL-10 @18' (880-14196-3) and (CCV 880-24955/20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-24439 and analytical batch 880-24611 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8015MOD_NM: Surrogate recovery for the following samples were outside control limits: FL-7 16-18' (880-14196-2), FL-10 @18' (880-14196-3), (890-2252-A-1-B), (890-2252-A-1-C MS) and (890-2252-A-1-D MSD). Evidence of matrix interferences is not obvious.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-24421 and analytical batch 880-24747 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Client Sample ID: SWSW

Lab Sample ID: 880-14196-1

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/04/22 12:55	05/06/22 22:59	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/04/22 12:55	05/06/22 22:59	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/04/22 12:55	05/06/22 22:59	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/04/22 12:55	05/06/22 22:59	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/04/22 12:55	05/06/22 22:59	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/04/22 12:55	05/06/22 22:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	173	S1+	70 - 130	05/04/22 12:55	05/06/22 22:59	1
1,4-Difluorobenzene (Surr)	84		70 - 130	05/04/22 12:55	05/06/22 22:59	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/09/22 15:19	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1840		49.9		mg/Kg			05/03/22 11:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	869		49.9		mg/Kg		04/28/22 14:02	05/02/22 19:03	1
Diesel Range Organics (Over C10-C28)	973		49.9		mg/Kg		04/28/22 14:02	05/02/22 19:03	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		04/28/22 14:02	05/02/22 19:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	101		70 - 130	04/28/22 14:02	05/02/22 19:03	1
o-Terphenyl	102		70 - 130	04/28/22 14:02	05/02/22 19:03	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47.0	F1	5.02		mg/Kg			05/04/22 08:35	1

Client Sample ID: FL-7 16-18'

Lab Sample ID: 880-14196-2

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Sample Depth: 16-18'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/04/22 12:55	05/06/22 23:25	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/04/22 12:55	05/06/22 23:25	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/04/22 12:55	05/06/22 23:25	1
m-Xylene & p-Xylene	<0.00401	U	0.00401		mg/Kg		05/04/22 12:55	05/06/22 23:25	1
o-Xylene	0.0132	B	0.00200		mg/Kg		05/04/22 12:55	05/06/22 23:25	1
Xylenes, Total	0.0132		0.00401		mg/Kg		05/04/22 12:55	05/06/22 23:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	181	S1+	70 - 130	05/04/22 12:55	05/06/22 23:25	1
1,4-Difluorobenzene (Surr)	83		70 - 130	05/04/22 12:55	05/06/22 23:25	1

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Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-7 16-18'

Lab Sample ID: 880-14196-2

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Sample Depth: 16-18'

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0132		0.00401		mg/Kg			05/09/22 15:19	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/03/22 11:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 19:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 19:46	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 19:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	66	S1-	70 - 130				04/28/22 14:02	05/02/22 19:46	1
o-Terphenyl	59	S1-	70 - 130				04/28/22 14:02	05/02/22 19:46	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	196		4.99		mg/Kg			05/04/22 08:54	1

Client Sample ID: FL-10 @18'

Lab Sample ID: 880-14196-3

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Sample Depth: 18'

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/04/22 12:55	05/06/22 23:51	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/04/22 12:55	05/06/22 23:51	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/04/22 12:55	05/06/22 23:51	1
m-Xylene & p-Xylene	<0.00403	U	0.00403		mg/Kg		05/04/22 12:55	05/06/22 23:51	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/04/22 12:55	05/06/22 23:51	1
Xylenes, Total	<0.00403	U	0.00403		mg/Kg		05/04/22 12:55	05/06/22 23:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	184	S1+	70 - 130				05/04/22 12:55	05/06/22 23:51	1
1,4-Difluorobenzene (Surr)	82		70 - 130				05/04/22 12:55	05/06/22 23:51	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00403	U	0.00403		mg/Kg			05/09/22 15:19	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	50.4		50.0		mg/Kg			05/03/22 11:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 20:07	1

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Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Client Sample ID: FL-10 @18'

Lab Sample ID: 880-14196-3

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Sample Depth: 18'

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	50.4		50.0		mg/Kg		04/28/22 14:02	05/02/22 20:07	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 20:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	69	S1-	70 - 130				04/28/22 14:02	05/02/22 20:07	1
o-Terphenyl	64	S1-	70 - 130				04/28/22 14:02	05/02/22 20:07	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	372		4.98		mg/Kg			05/04/22 09:00	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-14196-1	SWSW	173 S1+	84
880-14196-2	FL-7 16-18'	181 S1+	83
880-14196-3	FL-10 @18'	184 S1+	82
890-2241-A-1-G MS	Matrix Spike	121	85
890-2241-A-1-H MSD	Matrix Spike Duplicate	137 S1+	78
LCS 880-24825/1-A	Lab Control Sample	169 S1+	90
LCSD 880-24825/2-A	Lab Control Sample Dup	164 S1+	89
MB 880-24825/5-A	Method Blank	146031 S1+	263 S1+
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-14196-1	SWSW	101	102
880-14196-2	FL-7 16-18'	66 S1-	59 S1-
880-14196-3	FL-10 @18'	69 S1-	64 S1-
890-2252-A-1-C MS	Matrix Spike	42 S1-	37 S1-
890-2252-A-1-D MSD	Matrix Spike Duplicate	45 S1-	40 S1-
LCS 880-24439/2-A	Lab Control Sample	105	107
LCSD 880-24439/3-A	Lab Control Sample Dup	108	106
MB 880-24439/1-A	Method Blank	96	110
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-24825/5-A

Matrix: Solid

Analysis Batch: 24955

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24825

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.002348		0.00200		mg/Kg		05/04/22 12:55	05/06/22 14:02	1
Toluene	0.002776		0.00200		mg/Kg		05/04/22 12:55	05/06/22 14:02	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/04/22 12:55	05/06/22 14:02	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/04/22 12:55	05/06/22 14:02	1
o-Xylene	0.002063		0.00200		mg/Kg		05/04/22 12:55	05/06/22 14:02	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/04/22 12:55	05/06/22 14:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	146031	S1+	70 - 130	05/04/22 12:55	05/06/22 14:02	1
1,4-Difluorobenzene (Surr)	263	S1+	70 - 130	05/04/22 12:55	05/06/22 14:02	1

Lab Sample ID: LCS 880-24825/1-A

Matrix: Solid

Analysis Batch: 24955

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24825

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1133		mg/Kg		113	70 - 130
Toluene	0.100	0.1066		mg/Kg		107	70 - 130
Ethylbenzene	0.100	0.1240		mg/Kg		124	70 - 130
m-Xylene & p-Xylene	0.200	0.2510		mg/Kg		126	70 - 130
o-Xylene	0.100	0.1212		mg/Kg		121	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	169	S1+	70 - 130
1,4-Difluorobenzene (Surr)	90		70 - 130

Lab Sample ID: LCSD 880-24825/2-A

Matrix: Solid

Analysis Batch: 24955

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 24825

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1091		mg/Kg		109	70 - 130	4	35
Toluene	0.100	0.1031		mg/Kg		103	70 - 130	3	35
Ethylbenzene	0.100	0.1189		mg/Kg		119	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2400		mg/Kg		120	70 - 130	4	35
o-Xylene	0.100	0.1171		mg/Kg		117	70 - 130	3	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	164	S1+	70 - 130
1,4-Difluorobenzene (Surr)	89		70 - 130

Lab Sample ID: 890-2241-A-1-G MS

Matrix: Solid

Analysis Batch: 24955

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 24825

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00200	U F1 F2	0.101	<0.00202	U F1	mg/Kg		0.6	70 - 130
Toluene	<0.00200	U F1	0.101	<0.00202	U F1	mg/Kg		0	70 - 130

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QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2241-A-1-G MS

Matrix: Solid

Analysis Batch: 24955

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 24825

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00200	U F1	0.101	0.05543	F1	mg/Kg		55	70 - 130
m-Xylene & p-Xylene	<0.00400	U F1	0.202	0.1173	F1	mg/Kg		58	70 - 130
o-Xylene	<0.00200	U F1	0.101	0.05796	F1	mg/Kg		57	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	121		70 - 130
1,4-Difluorobenzene (Surr)	85		70 - 130

Lab Sample ID: 890-2241-A-1-H MSD

Matrix: Solid

Analysis Batch: 24955

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 24825

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00200	U F1 F2	0.101	0.05097	F1 F2	mg/Kg		51	70 - 130	195	35
Toluene	<0.00200	U F1	0.101	0.05046	F1	mg/Kg		50	70 - 130	NC	35
Ethylbenzene	<0.00200	U F1	0.101	0.05264	F1	mg/Kg		52	70 - 130	5	35
m-Xylene & p-Xylene	<0.00400	U F1	0.201	0.1084	F1	mg/Kg		54	70 - 130	8	35
o-Xylene	<0.00200	U F1	0.101	0.05612	F1	mg/Kg		56	70 - 130	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	137	S1+	70 - 130
1,4-Difluorobenzene (Surr)	78		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-24439/1-A

Matrix: Solid

Analysis Batch: 24611

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 24439

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 14:00	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 14:00	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		04/28/22 14:02	05/02/22 14:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	96		70 - 130	04/28/22 14:02	05/02/22 14:00	1
o-Terphenyl	110		70 - 130	04/28/22 14:02	05/02/22 14:00	1

Lab Sample ID: LCS 880-24439/2-A

Matrix: Solid

Analysis Batch: 24611

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24439

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1032		mg/Kg		103	70 - 130
Diesel Range Organics (Over C10-C28)	1000	952.8		mg/Kg		95	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-24439/2-A

Matrix: Solid

Analysis Batch: 24611

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 24439

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	107		70 - 130

Lab Sample ID: LCSD 880-24439/3-A

Matrix: Solid

Analysis Batch: 24611

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 24439

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	914.4		mg/Kg		91	70 - 130	12	20
Diesel Range Organics (Over C10-C28)	1000	948.7		mg/Kg		95	70 - 130	0	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	108		70 - 130
o-Terphenyl	106		70 - 130

Lab Sample ID: 890-2252-A-1-C MS

Matrix: Solid

Analysis Batch: 24611

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 24439

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	1000	341.0	F1	mg/Kg		30	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	335.4	F1	mg/Kg		34	70 - 130

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	42	S1-	70 - 130
o-Terphenyl	37	S1-	70 - 130

Lab Sample ID: 890-2252-A-1-D MSD

Matrix: Solid

Analysis Batch: 24611

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 24439

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	998	639.8	F1 F2	mg/Kg		60	70 - 130	61	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	998	365.7	F1	mg/Kg		37	70 - 130	9	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	45	S1-	70 - 130
o-Terphenyl	40	S1-	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-24421/1-A

Matrix: Solid

Analysis Batch: 24747

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/04/22 06:47	1

Lab Sample ID: LCS 880-24421/2-A

Matrix: Solid

Analysis Batch: 24747

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	240.9		mg/Kg		96	90 - 110

Lab Sample ID: LCSD 880-24421/3-A

Matrix: Solid

Analysis Batch: 24747

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	264.2		mg/Kg		106	90 - 110	9	20

Lab Sample ID: 880-14196-1 MS

Matrix: Solid

Analysis Batch: 24747

Client Sample ID: SWSW

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	47.0	F1	251	349.7	F1	mg/Kg		121	90 - 110

Lab Sample ID: 880-14196-1 MSD

Matrix: Solid

Analysis Batch: 24747

Client Sample ID: SWSW

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	47.0	F1	251	327.8	F1	mg/Kg		112	90 - 110	6	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

GC VOA

Prep Batch: 24825

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Total/NA	Solid	5035	
880-14196-2	FL-7 16-18'	Total/NA	Solid	5035	
880-14196-3	FL-10 @18'	Total/NA	Solid	5035	
MB 880-24825/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-24825/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-24825/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2241-A-1-G MS	Matrix Spike	Total/NA	Solid	5035	
890-2241-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 24955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Total/NA	Solid	8021B	24825
880-14196-2	FL-7 16-18'	Total/NA	Solid	8021B	24825
880-14196-3	FL-10 @18'	Total/NA	Solid	8021B	24825
MB 880-24825/5-A	Method Blank	Total/NA	Solid	8021B	24825
LCS 880-24825/1-A	Lab Control Sample	Total/NA	Solid	8021B	24825
LCSD 880-24825/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	24825
890-2241-A-1-G MS	Matrix Spike	Total/NA	Solid	8021B	24825
890-2241-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	24825

Analysis Batch: 25133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Total/NA	Solid	Total BTEX	
880-14196-2	FL-7 16-18'	Total/NA	Solid	Total BTEX	
880-14196-3	FL-10 @18'	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 24439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Total/NA	Solid	8015NM Prep	
880-14196-2	FL-7 16-18'	Total/NA	Solid	8015NM Prep	
880-14196-3	FL-10 @18'	Total/NA	Solid	8015NM Prep	
MB 880-24439/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-24439/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-24439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2252-A-1-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2252-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 24611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Total/NA	Solid	8015B NM	24439
880-14196-2	FL-7 16-18'	Total/NA	Solid	8015B NM	24439
880-14196-3	FL-10 @18'	Total/NA	Solid	8015B NM	24439
MB 880-24439/1-A	Method Blank	Total/NA	Solid	8015B NM	24439
LCS 880-24439/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	24439
LCSD 880-24439/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	24439
890-2252-A-1-C MS	Matrix Spike	Total/NA	Solid	8015B NM	24439
890-2252-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	24439

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

GC Semi VOA

Analysis Batch: 24739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Total/NA	Solid	8015 NM	
880-14196-2	FL-7 16-18'	Total/NA	Solid	8015 NM	
880-14196-3	FL-10 @18'	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 24421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Soluble	Solid	DI Leach	
880-14196-2	FL-7 16-18'	Soluble	Solid	DI Leach	
880-14196-3	FL-10 @18'	Soluble	Solid	DI Leach	
MB 880-24421/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-24421/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-24421/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14196-1 MS	SWSW	Soluble	Solid	DI Leach	
880-14196-1 MSD	SWSW	Soluble	Solid	DI Leach	

Analysis Batch: 24747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14196-1	SWSW	Soluble	Solid	300.0	24421
880-14196-2	FL-7 16-18'	Soluble	Solid	300.0	24421
880-14196-3	FL-10 @18'	Soluble	Solid	300.0	24421
MB 880-24421/1-A	Method Blank	Soluble	Solid	300.0	24421
LCS 880-24421/2-A	Lab Control Sample	Soluble	Solid	300.0	24421
LCSD 880-24421/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	24421
880-14196-1 MS	SWSW	Soluble	Solid	300.0	24421
880-14196-1 MSD	SWSW	Soluble	Solid	300.0	24421

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Client Sample ID: SWSW

Lab Sample ID: 880-14196-1

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	24825	05/04/22 12:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	24955	05/06/22 22:59	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25133	05/09/22 15:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24739	05/03/22 11:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	24439	04/28/22 14:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24611	05/02/22 19:03	AJ	XEN MID
Soluble	Leach	DI Leach			4.98 g	50 mL	24421	04/28/22 11:39	SC	XEN MID
Soluble	Analysis	300.0		1			24747	05/04/22 08:35	CH	XEN MID

Client Sample ID: FL-7 16-18'

Lab Sample ID: 880-14196-2

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.99 g	5 mL	24825	05/04/22 12:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	24955	05/06/22 23:25	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25133	05/09/22 15:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24739	05/03/22 11:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24439	04/28/22 14:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24611	05/02/22 19:46	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	24421	04/28/22 11:39	SC	XEN MID
Soluble	Analysis	300.0		1			24747	05/04/22 08:54	CH	XEN MID

Client Sample ID: FL-10 @18'

Lab Sample ID: 880-14196-3

Date Collected: 04/27/22 00:00

Matrix: Solid

Date Received: 04/28/22 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	24825	05/04/22 12:55	MR	XEN MID
Total/NA	Analysis	8021B		1	5 mL	5 mL	24955	05/06/22 23:51	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25133	05/09/22 15:19	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			24739	05/03/22 11:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	24439	04/28/22 14:02	DM	XEN MID
Total/NA	Analysis	8015B NM		1			24611	05/02/22 20:07	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	24421	04/28/22 11:39	SC	XEN MID
Soluble	Analysis	300.0		1			24747	05/04/22 09:00	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14196-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-14196-1	SWSW	Solid	04/27/22 00:00	04/28/22 10:20	
880-14196-2	FL-7 16-18'	Solid	04/27/22 00:00	04/28/22 10:20	16-18'
880-14196-3	FL-10 @18'	Solid	04/27/22 00:00	04/28/22 10:20	18'



Chain of Custody

Houston TX (281) 240-4200, Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
 Midland, TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
 Hobbs NM (575) 392-7550, Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
 Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
 Atlanta GA (770) 449-8800

Work Order No: 14196

5/9/2022

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Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Etech Environmental and Safety	Company Name:	
Address:	2617 West Marland	Address:	
City, State ZIP:	Hobbs, NM 88240	City, State ZIP:	
Phone:	(575) 264-9884	Email:	Email Results to <u>PM@etechenv.com</u> + Client

Work Order Comments	
Program:	UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RRF <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:	
Reporting Level	<input type="checkbox"/> Level <input type="checkbox"/> PST/US <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other <input type="checkbox"/>

Project Name:		Astro Dog 6-Inch		Turn Around		ANALYSIS REQUEST												Preservative Codes	
Project Number:		15649		Routine <input checked="" type="checkbox"/>														HNO3 HN	
Project Location:		Rural Eddy Co, NM		Rush <input type="checkbox"/>														H2S04 H2	
Sampler's Name:		Joel Lowry		Due Date														HCL HL	
PO #:		SRS# 2022-012																None NO	
SAMPLE RECEIPT		Temp Blank: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Wet Ice: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Thermometer ID		NaOH Na											
Temperature (°C):		151.3		Thermometer ID		Received Intact:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		MeOH Me									
Cooler Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Correction Factor:		-2		Zn Acetate+ NaOH Zn											
Sample Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Total Containers:				TAT starts the day received by the lab if received by 4 30pm											
Sample Identification		Matrix		Date Sampled		Time Sampled		Depth		Number of Containers/Preservative Code		BTEX (8021)		TPH (Modified Ext.)		Cl- (E300)		Sample Comments	
SWSW		Soil		4/27/2022						1/NO		X		X		X			
FL-7 16-18'		Soil		4/27/2022				16-18'		1/NO		X		X		X			
FL-10 @ 18'		Soil		4/27/2022				18'		1/NO		X		X		X			



880-14196 Chain of Custody

Total 200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010		8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U	1631 / 245.1 / 7470 / 7471 Hg											

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>[Signature]</i>	<i>Brittany Cox</i>	4/27 3:37	<i>Brittany Cox</i>	<i>[Signature]</i>	4/28/22

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-14196-1
SDG Number: Rural Eddy Co., NM

Login Number: 14196

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14739-1

Laboratory Sample Delivery Group: Rural Eddy
Client Project/Site: Astro Dog 6-2Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
5/19/2022 10:33:00 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Laboratory Job ID: 880-14739-1
SDG: Rural Eddy

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Job ID: 880-14739-1

Laboratory: Eurofins Midland

Narrative	
	Job Narrative 880-14739-1

Receipt

The samples were received on 5/12/2022 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C

GC VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

Method 300_ORGFM_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-25438 and analytical batch 880-25553 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Client Sample ID: FL-56

Lab Sample ID: 880-14739-1

Date Collected: 05/10/22 07:30

Matrix: Solid

Date Received: 05/12/22 10:40

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	70.4		49.9		mg/Kg			05/19/22 08:51	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 01:40	1
Diesel Range Organics (Over C10-C28)	70.4		49.9		mg/Kg		05/18/22 15:06	05/19/22 01:40	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 01:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	108		70 - 130				05/18/22 15:06	05/19/22 01:40	1
o-Terphenyl	110		70 - 130				05/18/22 15:06	05/19/22 01:40	1

Client Sample ID: FL-8

Lab Sample ID: 880-14739-2

Date Collected: 05/10/22 07:35

Matrix: Solid

Date Received: 05/12/22 10:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:46	05/17/22 17:24	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:46	05/17/22 17:24	1
Ethylbenzene	0.00383		0.00202		mg/Kg		05/16/22 13:46	05/17/22 17:24	1
m-Xylene & p-Xylene	0.00671		0.00403		mg/Kg		05/16/22 13:46	05/17/22 17:24	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/16/22 13:46	05/17/22 17:24	1
Xylenes, Total	0.00671		0.00403		mg/Kg		05/16/22 13:46	05/17/22 17:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130				05/16/22 13:46	05/17/22 17:24	1
1,4-Difluorobenzene (Surr)	93		70 - 130				05/16/22 13:46	05/17/22 17:24	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	0.0105		0.00403		mg/Kg			05/18/22 09:14	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1680		49.9		mg/Kg			05/19/22 08:51	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 02:01	1
Diesel Range Organics (Over C10-C28)	1680		49.9		mg/Kg		05/18/22 15:06	05/19/22 02:01	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 02:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	110		70 - 130				05/18/22 15:06	05/19/22 02:01	1
o-Terphenyl	113		70 - 130				05/18/22 15:06	05/19/22 02:01	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Client Sample ID: FL-8

Lab Sample ID: 880-14739-2

Date Collected: 05/10/22 07:35

Matrix: Solid

Date Received: 05/12/22 10:40

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	96.1	F1 F2	4.98		mg/Kg			05/13/22 17:51	1

Client Sample ID: FL-9

Lab Sample ID: 880-14739-3

Date Collected: 05/10/22 07:40

Matrix: Solid

Date Received: 05/12/22 10:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:46	05/17/22 17:44	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:46	05/17/22 17:44	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:46	05/17/22 17:44	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 13:46	05/17/22 17:44	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 13:46	05/17/22 17:44	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 13:46	05/17/22 17:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		70 - 130	05/16/22 13:46	05/17/22 17:44	1
1,4-Difluorobenzene (Surr)	91		70 - 130	05/16/22 13:46	05/17/22 17:44	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/18/22 09:14	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	341		49.9		mg/Kg			05/19/22 08:51	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 02:22	1
Diesel Range Organics (Over C10-C28)	341		49.9		mg/Kg		05/18/22 15:06	05/19/22 02:22	1
OII Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/18/22 15:06	05/19/22 02:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	117		70 - 130	05/18/22 15:06	05/19/22 02:22	1
o-Terphenyl	117		70 - 130	05/18/22 15:06	05/19/22 02:22	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	132		5.00		mg/Kg			05/13/22 18:16	1

Eurofins Midland

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-14739-2	FL-8	115	93
880-14739-3	FL-9	116	91
890-2303-A-1-E MS	Matrix Spike	110	96
890-2303-A-1-F MSD	Matrix Spike Duplicate	104	93
LCS 880-25638/1-A	Lab Control Sample	105	96
LCSD 880-25638/2-A	Lab Control Sample Dup	105	95
MB 880-25638/5-A	Method Blank	102	92
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-14739-1	FL-56	108	110
880-14739-2	FL-8	110	113
880-14739-3	FL-9	117	117
890-2316-A-1-G MS	Matrix Spike	104	98
890-2316-A-1-H MSD	Matrix Spike Duplicate	103	94
LCS 880-25829/2-A	Lab Control Sample	105	102
LCSD 880-25829/3-A	Lab Control Sample Dup	102	98
MB 880-25829/1-A	Method Blank	111	118
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25638/5-A

Matrix: Solid

Analysis Batch: 25671

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25638

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 13:46	05/17/22 12:34	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 13:46	05/17/22 12:34	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		70 - 130	05/16/22 13:46	05/17/22 12:34	1
1,4-Difluorobenzene (Surr)	92		70 - 130	05/16/22 13:46	05/17/22 12:34	1

Lab Sample ID: LCS 880-25638/1-A

Matrix: Solid

Analysis Batch: 25671

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.1010		mg/Kg		101	70 - 130
Toluene	0.100	0.1123		mg/Kg		112	70 - 130
Ethylbenzene	0.100	0.1158		mg/Kg		116	70 - 130
m-Xylene & p-Xylene	0.200	0.2346		mg/Kg		117	70 - 130
o-Xylene	0.100	0.1168		mg/Kg		117	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: LCSD 880-25638/2-A

Matrix: Solid

Analysis Batch: 25671

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25638

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.09697		mg/Kg		97	70 - 130	4	35
Toluene	0.100	0.1065		mg/Kg		106	70 - 130	5	35
Ethylbenzene	0.100	0.1108		mg/Kg		111	70 - 130	4	35
m-Xylene & p-Xylene	0.200	0.2249		mg/Kg		112	70 - 130	4	35
o-Xylene	0.100	0.1119		mg/Kg		112	70 - 130	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 890-2303-A-1-E MS

Matrix: Solid

Analysis Batch: 25671

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25638

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00201	U F1	0.101	0.06816	F1	mg/Kg		67	70 - 130
Toluene	<0.00201	U	0.101	0.07512		mg/Kg		74	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 890-2303-A-1-E MS

Matrix: Solid

Analysis Batch: 25671

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25638

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00201	U	0.101	0.07397		mg/Kg		73	70 - 130
m-Xylene & p-Xylene	<0.00402	U	0.202	0.1496		mg/Kg		74	70 - 130
o-Xylene	<0.00201	U	0.101	0.07506		mg/Kg		74	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	110		70 - 130
1,4-Difluorobenzene (Surr)	96		70 - 130

Lab Sample ID: 890-2303-A-1-F MSD

Matrix: Solid

Analysis Batch: 25671

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 25638

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00201	U F1	0.100	0.07943		mg/Kg		79	70 - 130	15	35
Toluene	<0.00201	U	0.100	0.08921		mg/Kg		89	70 - 130	17	35
Ethylbenzene	<0.00201	U	0.100	0.09057		mg/Kg		90	70 - 130	20	35
m-Xylene & p-Xylene	<0.00402	U	0.200	0.1847		mg/Kg		92	70 - 130	21	35
o-Xylene	<0.00201	U	0.100	0.09235		mg/Kg		92	70 - 130	21	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-25829/1-A

Matrix: Solid

Analysis Batch: 25770

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25829

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/18/22 21:27	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/18/22 21:27	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/18/22 15:06	05/18/22 21:27	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	111		70 - 130	05/18/22 15:06	05/18/22 21:27	1
o-Terphenyl	118		70 - 130	05/18/22 15:06	05/18/22 21:27	1

Lab Sample ID: LCS 880-25829/2-A

Matrix: Solid

Analysis Batch: 25770

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25829

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	857.6		mg/Kg		86	70 - 130
Diesel Range Organics (Over C10-C28)	1000	998.7		mg/Kg		100	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 880-25829/2-A

Matrix: Solid

Analysis Batch: 25770

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25829

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	105		70 - 130
o-Terphenyl	102		70 - 130

Lab Sample ID: LCSD 880-25829/3-A

Matrix: Solid

Analysis Batch: 25770

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25829

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	845.8		mg/Kg		85	70 - 130	1	20
Diesel Range Organics (Over C10-C28)	1000	959.5		mg/Kg		96	70 - 130	4	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	102		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-2316-A-1-G MS

Matrix: Solid

Analysis Batch: 25770

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25829

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1156		mg/Kg		113	70 - 130		
Diesel Range Organics (Over C10-C28)	<50.0	U F1	1000	1405	F1	mg/Kg		141	70 - 130		

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	104		70 - 130
o-Terphenyl	98		70 - 130

Lab Sample ID: 890-2316-A-1-H MSD

Matrix: Solid

Analysis Batch: 25770

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 25829

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1218		mg/Kg		119	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	<50.0	U F1	999	1377	F1	mg/Kg		138	70 - 130	2	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	103		70 - 130
o-Terphenyl	94		70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25438/1-A

Matrix: Solid

Analysis Batch: 25553

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/13/22 17:05	1

Lab Sample ID: LCS 880-25438/2-A

Matrix: Solid

Analysis Batch: 25553

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	250	250.7		mg/Kg		100	90 - 110

Lab Sample ID: LCSD 880-25438/3-A

Matrix: Solid

Analysis Batch: 25553

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	253.9		mg/Kg		102	90 - 110	1	20

Lab Sample ID: 880-14739-2 MS

Matrix: Solid

Analysis Batch: 25553

Client Sample ID: FL-8

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	96.1	F1 F2	249	340.2		mg/Kg		98	90 - 110

Lab Sample ID: 880-14739-2 MSD

Matrix: Solid

Analysis Batch: 25553

Client Sample ID: FL-8

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	96.1	F1 F2	249	246.5	F1 F2	mg/Kg		60	90 - 110	32	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

GC VOA

Prep Batch: 25638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-2	FL-8	Total/NA	Solid	5035	
880-14739-3	FL-9	Total/NA	Solid	5035	
MB 880-25638/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25638/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25638/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
890-2303-A-1-E MS	Matrix Spike	Total/NA	Solid	5035	
890-2303-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-2	FL-8	Total/NA	Solid	8021B	25638
880-14739-3	FL-9	Total/NA	Solid	8021B	25638
MB 880-25638/5-A	Method Blank	Total/NA	Solid	8021B	25638
LCS 880-25638/1-A	Lab Control Sample	Total/NA	Solid	8021B	25638
LCSD 880-25638/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25638
890-2303-A-1-E MS	Matrix Spike	Total/NA	Solid	8021B	25638
890-2303-A-1-F MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25638

Analysis Batch: 25797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-2	FL-8	Total/NA	Solid	Total BTEX	
880-14739-3	FL-9	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 25770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-1	FL-56	Total/NA	Solid	8015B NM	25829
880-14739-2	FL-8	Total/NA	Solid	8015B NM	25829
880-14739-3	FL-9	Total/NA	Solid	8015B NM	25829
MB 880-25829/1-A	Method Blank	Total/NA	Solid	8015B NM	25829
LCS 880-25829/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25829
LCSD 880-25829/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25829
890-2316-A-1-G MS	Matrix Spike	Total/NA	Solid	8015B NM	25829
890-2316-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	25829

Prep Batch: 25829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-1	FL-56	Total/NA	Solid	8015NM Prep	
880-14739-2	FL-8	Total/NA	Solid	8015NM Prep	
880-14739-3	FL-9	Total/NA	Solid	8015NM Prep	
MB 880-25829/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-25829/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25829/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2316-A-1-G MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2316-A-1-H MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-1	FL-56	Total/NA	Solid	8015 NM	
880-14739-2	FL-8	Total/NA	Solid	8015 NM	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

GC Semi VOA (Continued)

Analysis Batch: 25862 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-3	FL-9	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 25438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-2	FL-8	Soluble	Solid	DI Leach	
880-14739-3	FL-9	Soluble	Solid	DI Leach	
MB 880-25438/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25438/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-25438/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14739-2 MS	FL-8	Soluble	Solid	DI Leach	
880-14739-2 MSD	FL-8	Soluble	Solid	DI Leach	

Analysis Batch: 25553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14739-2	FL-8	Soluble	Solid	300.0	25438
880-14739-3	FL-9	Soluble	Solid	300.0	25438
MB 880-25438/1-A	Method Blank	Soluble	Solid	300.0	25438
LCS 880-25438/2-A	Lab Control Sample	Soluble	Solid	300.0	25438
LCSD 880-25438/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25438
880-14739-2 MS	FL-8	Soluble	Solid	300.0	25438
880-14739-2 MSD	FL-8	Soluble	Solid	300.0	25438

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Client Sample ID: FL-56

Lab Sample ID: 880-14739-1

Date Collected: 05/10/22 07:30

Matrix: Solid

Date Received: 05/12/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25862	05/19/22 08:51	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25829	05/18/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25770	05/19/22 01:40	AJ	XEN MID

Client Sample ID: FL-8

Lab Sample ID: 880-14739-2

Date Collected: 05/10/22 07:35

Matrix: Solid

Date Received: 05/12/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.96 g	5 mL	25638	05/16/22 13:46	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/17/22 17:24	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25797	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25862	05/19/22 08:51	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25829	05/18/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25770	05/19/22 02:01	AJ	XEN MID
Soluble	Leach	DI Leach			5.02 g	50 mL	25438	05/12/22 14:54	CH	XEN MID
Soluble	Analysis	300.0		1			25553	05/13/22 17:51	CH	XEN MID

Client Sample ID: FL-9

Lab Sample ID: 880-14739-3

Date Collected: 05/10/22 07:40

Matrix: Solid

Date Received: 05/12/22 10:40

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.02 g	5 mL	25638	05/16/22 13:46	MR	XEN MID
Total/NA	Analysis	8021B		1			25671	05/17/22 17:44	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25797	05/18/22 09:14	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25862	05/19/22 08:51	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25829	05/18/22 15:06	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25770	05/19/22 02:22	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	25438	05/12/22 14:54	CH	XEN MID
Soluble	Analysis	300.0		1			25553	05/13/22 18:16	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-2Inch

Job ID: 880-14739-1
SDG: Rural Eddy

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-14739-1	FL-56	Solid	05/10/22 07:30	05/12/22 10:40
880-14739-2	FL-8	Solid	05/10/22 07:35	05/12/22 10:40
880-14739-3	FL-9	Solid	05/10/22 07:40	05/12/22 10:40

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- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

Work Order No: 14739

www.xenco.com Page 1 of 1

Project Manager:	Joel Lowrey	Bill to (if different)	Etech
Company Name:	Etech Environmental and Safety	Company Name	C/O Joel Lowrey
Address:	2617 West Marland	Address:	
City, State ZIP:	Hobbs, NM 88240	City, State ZIP:	
Phone:	(575) 264-9884	Email	Email Results to PM@etechenv.com + Client

Work Order Comments				
Program	UST/PST <input type="checkbox"/>	PRF <input type="checkbox"/>	Brownfield <input type="checkbox"/>	RR <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project				
Reporting Level	<input type="checkbox"/>	Level <input type="checkbox"/>	PST/US <input type="checkbox"/>	TRF <input type="checkbox"/> Level <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/>	ADaPT <input type="checkbox"/>	Other	

[illegible]

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO ₂	Na	Sr	Tl	Sn	U	V	Zn
<i>Circle Method(s) and Metal(s) to be analyzed</i>			TCLP / SPLP 6010	8RCRA		Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Tl	U										1631 / 245.1 / 7470 / 7471	Hq	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)		Received by: (Signature)		Date/Time	
1	<i>[Signature]</i>	2	<i>[Signature]</i>	3	2/29/5/11/22
3		4		5	
5		6		7	

Revised Date 10/14/19 Rev. 2019.1

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-14739-1

SDG Number: Rural Eddy

Login Number: 14739

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-14811-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

Authorized for release by:

5/20/2022 11:17:49 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Job ID: 880-14811-1

Laboratory: Eurofins Midland

Narrative

**Job Narrative
880-14811-1**

Receipt

The samples were received on 5/16/2022 10:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C

GC VOA

Method 8021B: The matrix spike duplicate (MSD) recoveries for preparation batch 880-25653 and analytical batch 880-25750 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8021B: Surrogate recovery for the following sample was outside control limits: WSW #1 (880-14811-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Client Sample ID: SWSWb

Lab Sample ID: 880-14811-1

Date Collected: 05/12/22 00:00

Matrix: Solid

Date Received: 05/16/22 10:45

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/18/22 08:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/17/22 09:20	05/17/22 16:46	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/17/22 09:20	05/17/22 16:46	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/17/22 09:20	05/17/22 16:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				05/17/22 09:20	05/17/22 16:46	1
o-Terphenyl	95		70 - 130				05/17/22 09:20	05/17/22 16:46	1

Client Sample ID: WSW #1

Lab Sample ID: 880-14811-2

Date Collected: 05/12/22 00:00

Matrix: Solid

Date Received: 05/16/22 10:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:56	05/17/22 20:57	1
Toluene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:56	05/17/22 20:57	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:56	05/17/22 20:57	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/16/22 15:56	05/17/22 20:57	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/16/22 15:56	05/17/22 20:57	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/16/22 15:56	05/17/22 20:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	133	S1+	70 - 130				05/16/22 15:56	05/17/22 20:57	1
1,4-Difluorobenzene (Surr)	102		70 - 130				05/16/22 15:56	05/17/22 20:57	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/18/22 09:15	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/18/22 08:44	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/17/22 09:20	05/17/22 17:54	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/17/22 09:20	05/17/22 17:54	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/17/22 09:20	05/17/22 17:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	95		70 - 130				05/17/22 09:20	05/17/22 17:54	1
o-Terphenyl	96		70 - 130				05/17/22 09:20	05/17/22 17:54	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Client Sample ID: WSW #1
Date Collected: 05/12/22 00:00
Date Received: 05/16/22 10:45

Lab Sample ID: 880-14811-2
Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	964		5.04		mg/Kg			05/20/22 00:26	1

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Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-14809-A-10-A MS	Matrix Spike	103	88
880-14809-A-10-B MSD	Matrix Spike Duplicate	107	93
880-14811-2	WSW #1	133 S1+	102
LCS 880-25653/1-A	Lab Control Sample	102	94
LCSD 880-25653/2-A	Lab Control Sample Dup	101	95
MB 880-25653/5-A	Method Blank	82	93
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-14811-1	SWSWb	95	95
880-14811-1 MS	SWSWb	91	82
880-14811-1 MSD	SWSWb	91	83
880-14811-2	WSW #1	95	96
LCS 880-25676/2-A	Lab Control Sample	127	115
LCSD 880-25676/3-A	Lab Control Sample Dup	127	116
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-25653/5-A

Matrix: Solid

Analysis Batch: 25750

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 25653

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:56	05/17/22 18:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:56	05/17/22 18:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:56	05/17/22 18:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/16/22 15:56	05/17/22 18:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/16/22 15:56	05/17/22 18:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/16/22 15:56	05/17/22 18:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		70 - 130	05/16/22 15:56	05/17/22 18:16	1
1,4-Difluorobenzene (Surr)	93		70 - 130	05/16/22 15:56	05/17/22 18:16	1

Lab Sample ID: LCS 880-25653/1-A

Matrix: Solid

Analysis Batch: 25750

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25653

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09157		mg/Kg		92	70 - 130
Toluene	0.100	0.09298		mg/Kg		93	70 - 130
Ethylbenzene	0.100	0.09072		mg/Kg		91	70 - 130
m-Xylene & p-Xylene	0.200	0.1805		mg/Kg		90	70 - 130
o-Xylene	0.100	0.09064		mg/Kg		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 880-25653/2-A

Matrix: Solid

Analysis Batch: 25750

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25653

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.1007		mg/Kg		101	70 - 130	9	35
Toluene	0.100	0.1029		mg/Kg		103	70 - 130	10	35
Ethylbenzene	0.100	0.1014		mg/Kg		101	70 - 130	11	35
m-Xylene & p-Xylene	0.200	0.2050		mg/Kg		103	70 - 130	13	35
o-Xylene	0.100	0.1090		mg/Kg		109	70 - 130	18	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-14809-A-10-A MS

Matrix: Solid

Analysis Batch: 25750

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25653

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00202	U F1	0.100	0.07949		mg/Kg		79	70 - 130
Toluene	<0.00202	U	0.100	0.08307		mg/Kg		83	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 880-14809-A-10-A MS

Matrix: Solid

Analysis Batch: 25750

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 25653

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	<0.00202	U	0.100	0.08620		mg/Kg		86	70 - 130
m-Xylene & p-Xylene	<0.00403	U	0.200	0.1736		mg/Kg		87	70 - 130
o-Xylene	<0.00202	U	0.100	0.08637		mg/Kg		86	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		70 - 130
1,4-Difluorobenzene (Surr)	88		70 - 130

Lab Sample ID: 880-14809-A-10-B MSD

Matrix: Solid

Analysis Batch: 25750

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 25653

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00202	U F1	0.0990	0.06488	F1	mg/Kg		66	70 - 130	20	35
Toluene	<0.00202	U	0.0990	0.07059		mg/Kg		71	70 - 130	16	35
Ethylbenzene	<0.00202	U	0.0990	0.07525		mg/Kg		76	70 - 130	14	35
m-Xylene & p-Xylene	<0.00403	U	0.198	0.1500		mg/Kg		76	70 - 130	15	35
o-Xylene	<0.00202	U	0.0990	0.07580		mg/Kg		77	70 - 130	13	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	107		70 - 130
1,4-Difluorobenzene (Surr)	93		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: LCS 880-25676/2-A

Matrix: Solid

Analysis Batch: 25684

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 25676

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	1246		mg/Kg		125	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1072		mg/Kg		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1-Chlorooctane	127		70 - 130
o-Terphenyl	115		70 - 130

Lab Sample ID: LCSD 880-25676/3-A

Matrix: Solid

Analysis Batch: 25684

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25676

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	1186		mg/Kg		119	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	1079		mg/Kg		108	70 - 130	1	20

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 880-25676/3-A

Matrix: Solid

Analysis Batch: 25684

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 25676

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	127		70 - 130
o-Terphenyl	116		70 - 130

Lab Sample ID: 880-14811-1 MS

Matrix: Solid

Analysis Batch: 25684

Client Sample ID: SWSWb

Prep Type: Total/NA

Prep Batch: 25676

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	1000	1206		mg/Kg		118	70 - 130	
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	951.8		mg/Kg		95	70 - 130	
Surrogate	%Recovery	Qualifier	Limits							
1-Chlorooctane	91		70 - 130							
o-Terphenyl	82		70 - 130							

Lab Sample ID: 880-14811-1 MSD

Matrix: Solid

Analysis Batch: 25684

Client Sample ID: SWSWb

Prep Type: Total/NA

Prep Batch: 25676

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	999	1167		mg/Kg		114	70 - 130	3	20	
Diesel Range Organics (Over C10-C28)	<50.0	U	999	951.2		mg/Kg		95	70 - 130	0	20	
Surrogate	%Recovery	Qualifier	Limits									
1-Chlorooctane	91		70 - 130									
o-Terphenyl	83		70 - 130									

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-25730/1-A

Matrix: Solid

Analysis Batch: 25928

Client Sample ID: Method Blank

Prep Type: Soluble

	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Chloride	<5.00	U	5.00		mg/Kg			05/19/22 20:27	1	

Lab Sample ID: LCS 880-25730/2-A

Matrix: Solid

Analysis Batch: 25928

Client Sample ID: Lab Control Sample

Prep Type: Soluble

	Spike	LCS	LCS						%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits			
Chloride	250	238.5		mg/Kg		95	90 - 110			

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 880-25730/3-A

Matrix: Solid

Analysis Batch: 25928

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride			250	238.4		mg/Kg		95	90 - 110	0	20

Lab Sample ID: 880-14809-A-11-B MS

Matrix: Solid

Analysis Batch: 25928

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	102		249	327.6		mg/Kg		91	90 - 110		

Lab Sample ID: 880-14809-A-11-C MSD

Matrix: Solid

Analysis Batch: 25928

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	102		249	336.7		mg/Kg		94	90 - 110	3	20

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

GC VOA

Prep Batch: 25653

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-2	WSW #1	Total/NA	Solid	5035	
MB 880-25653/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-25653/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-25653/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-14809-A-10-A MS	Matrix Spike	Total/NA	Solid	5035	
880-14809-A-10-B MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 25750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-2	WSW #1	Total/NA	Solid	8021B	25653
MB 880-25653/5-A	Method Blank	Total/NA	Solid	8021B	25653
LCS 880-25653/1-A	Lab Control Sample	Total/NA	Solid	8021B	25653
LCSD 880-25653/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	25653
880-14809-A-10-A MS	Matrix Spike	Total/NA	Solid	8021B	25653
880-14809-A-10-B MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	25653

Analysis Batch: 25804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-2	WSW #1	Total/NA	Solid	Total BTEX	

GC Semi VOA

Prep Batch: 25676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-1	SWSWb	Total/NA	Solid	8015NM Prep	
880-14811-2	WSW #1	Total/NA	Solid	8015NM Prep	
LCS 880-25676/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-25676/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-14811-1 MS	SWSWb	Total/NA	Solid	8015NM Prep	
880-14811-1 MSD	SWSWb	Total/NA	Solid	8015NM Prep	

Analysis Batch: 25684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-1	SWSWb	Total/NA	Solid	8015B NM	25676
880-14811-2	WSW #1	Total/NA	Solid	8015B NM	25676
LCS 880-25676/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	25676
LCSD 880-25676/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	25676
880-14811-1 MS	SWSWb	Total/NA	Solid	8015B NM	25676
880-14811-1 MSD	SWSWb	Total/NA	Solid	8015B NM	25676

Analysis Batch: 25783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-1	SWSWb	Total/NA	Solid	8015 NM	
880-14811-2	WSW #1	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 25730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-2	WSW #1	Soluble	Solid	DI Leach	
MB 880-25730/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-25730/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

HPLC/IC (Continued)

Leach Batch: 25730 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 880-25730/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
880-14809-A-11-B MS	Matrix Spike	Soluble	Solid	DI Leach	
880-14809-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 25928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-14811-2	WSW #1	Soluble	Solid	300.0	25730
MB 880-25730/1-A	Method Blank	Soluble	Solid	300.0	25730
LCS 880-25730/2-A	Lab Control Sample	Soluble	Solid	300.0	25730
LCSD 880-25730/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	25730
880-14809-A-11-B MS	Matrix Spike	Soluble	Solid	300.0	25730
880-14809-A-11-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	25730

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Client Sample ID: SWSWb

Lab Sample ID: 880-14811-1

Date Collected: 05/12/22 00:00

Matrix: Solid

Date Received: 05/16/22 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			25783	05/18/22 08:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	25676	05/17/22 09:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25684	05/17/22 16:46	AJ	XEN MID

Client Sample ID: WSW #1

Lab Sample ID: 880-14811-2

Date Collected: 05/12/22 00:00

Matrix: Solid

Date Received: 05/16/22 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	25653	05/16/22 15:56	MR	XEN MID
Total/NA	Analysis	8021B		1			25750	05/17/22 20:57	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			25804	05/18/22 09:15	AJ	XEN MID
Total/NA	Analysis	8015 NM		1			25783	05/18/22 08:44	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	25676	05/17/22 09:20	DM	XEN MID
Total/NA	Analysis	8015B NM		1			25684	05/17/22 17:54	AJ	XEN MID
Soluble	Leach	DI Leach			4.96 g	50 mL	25730	05/17/22 12:18	CH	XEN MID
Soluble	Analysis	300.0		1			25928	05/20/22 00:26	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

1
2
3
4
5
6
7
8
9
10
11
12
13
14

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-14811-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-14811-1	SWSWb	Solid	05/12/22 00:00	05/16/22 10:45
880-14811-2	WSW #1	Solid	05/12/22 00:00	05/16/22 10:45

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
 Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199 Phoenix AZ (480) 355-0900
 Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
 Atlanta GA (770) 449-8800

Work Order No: 14811www.xenco.com Page 1 of 1

Project Manager	Joel Lowry	Bill to (if different)	
Company Name	Etech Environmental and Safety	Company Name	
Address	2617 West Marland	Address	
City, State ZIP	Hobbs, NM 88240	City, State ZIP	
Phone	(575) 264-9884	Email	Email Results to <u>PM@etechenv.com</u> + Client

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RR <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting Level <input type="checkbox"/> Level <input type="checkbox"/> PST/US <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/>	
Deliverables EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other	

Project Name	Astro Dog 6-Inch		Turn Around	ANALYSIS REQUEST																Preservative Codes							
Project Number	15649		Routine <input checked="" type="checkbox"/>																	HNO3 HN							
Project Location	Rural Eddy Co, NM		Rush <input type="checkbox"/>																	H2SO4 H2							
Sampler's Name	Joel Lowry		Due Date																	HCL HL							
PO #	SRS# 2022-012																			None NO							
SAMPLE RECEIPT				Temp Blank	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wet Ice	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																	NaOH Na			
Temperature (°C)				3.9/3.7		Thermometer ID																		MeOH Me			
Received Intact:				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Correction Factor																		Zn Acetate+ NaOH Zn			
Cooler Custody Seals:				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Total Containers																		TAT starts the day received by the lab if received by 4 30pm			
Sample Custody Seals:				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A																				Sample Comments			
Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers/Preservative	Code	BTEX (8021)	TPH (Modified Ext.)	Cl- (E300)																		
SWSWb	Soil	5/12/2022			1/NO			X																			
WSW #1	Soil	5/12/2022			1/NO	X	X	X																			
																			 880-14811 Chain of Custody								

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
		5-13-22 2:22			5/16/22 10:45

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-14811-1
SDG Number: Rural Eddy Co., NM

Login Number: 14811

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-15058-1
Laboratory Sample Delivery Group: 15649
Client Project/Site: Astro Dog 6-inch

For:
Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: Joel Lowry

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
5/24/2022 11:57:14 AM

Jessica Kramer, Project Manager
(432)704-5440
Jessica.Kramer@et.eurofinsus.com

LINKS

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results through



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Laboratory Job ID: 880-15058-1
SDG: 15649

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
U	Indicates the analyte was analyzed for but not detected.

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⌘	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Job ID: 880-15058-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-15058-1

Receipt

The samples were received on 5/23/2022 2:49 PM and 5/23/2022 2:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C

GC VOA

Method 8021B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 880-26102 and analytical batch 880-26017 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method 8015MOD_NM: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 880-26028 and analytical batch 880-26024 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Client Sample ID: WSW #1b

Date Collected: 05/20/22 00:00

Date Received: 05/23/22 14:50

Lab Sample ID: 880-15058-1

Matrix: Solid

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	124		4.98		mg/Kg			05/23/22 16:12	1

Client Sample ID: WSW #2

Date Collected: 05/20/22 00:00

Date Received: 05/23/22 14:50

Lab Sample ID: 880-15058-2

Matrix: Solid

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00199	U F1	0.00199		mg/Kg		05/23/22 15:02	05/23/22 23:38	1
Toluene	<0.00199	U F1	0.00199		mg/Kg		05/23/22 15:02	05/23/22 23:38	1
Ethylbenzene	<0.00199	U	0.00199		mg/Kg		05/23/22 15:02	05/23/22 23:38	1
m-Xylene & p-Xylene	<0.00398	U	0.00398		mg/Kg		05/23/22 15:02	05/23/22 23:38	1
o-Xylene	<0.00199	U	0.00199		mg/Kg		05/23/22 15:02	05/23/22 23:38	1
Xylenes, Total	<0.00398	U	0.00398		mg/Kg		05/23/22 15:02	05/23/22 23:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		70 - 130	05/23/22 15:02	05/23/22 23:38	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/23/22 15:02	05/23/22 23:38	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00398	U	0.00398		mg/Kg			05/24/22 11:05	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/24/22 09:21	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 18:47	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 18:47	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 18:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/23/22 15:30	05/23/22 18:47	1
o-Terphenyl	113		70 - 130	05/23/22 15:30	05/23/22 18:47	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	78.0		4.95		mg/Kg			05/23/22 16:21	1

Client Sample ID: FL-8b

Date Collected: 05/20/22 00:00

Date Received: 05/23/22 14:50

Sample Depth: 18-20

Lab Sample ID: 880-15058-3

Matrix: Solid

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<50.0	U	50.0		mg/Kg			05/24/22 09:21	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Client Sample ID: FL-8b

Lab Sample ID: 880-15058-3

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Sample Depth: 18-20

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/23/22 15:30	05/23/22 19:09	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/23/22 15:30	05/23/22 19:09	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/23/22 15:30	05/23/22 19:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				05/23/22 15:30	05/23/22 19:09	1
o-Terphenyl	112		70 - 130				05/23/22 15:30	05/23/22 19:09	1

Client Sample ID: FL-9b

Lab Sample ID: 880-15058-4

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Sample Depth: 18-20

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/24/22 09:21	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 19:31	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 19:31	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 19:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				05/23/22 15:30	05/23/22 19:31	1
o-Terphenyl	110		70 - 130				05/23/22 15:30	05/23/22 19:31	1

Client Sample ID: FL-11

Lab Sample ID: 880-15058-5

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Sample Depth: 18-20

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:58	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:58	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:58	1
m-Xylene & p-Xylene	<0.00399	U	0.00399		mg/Kg		05/23/22 15:02	05/23/22 23:58	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:58	1
Xylenes, Total	<0.00399	U	0.00399		mg/Kg		05/23/22 15:02	05/23/22 23:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		70 - 130				05/23/22 15:02	05/23/22 23:58	1
1,4-Difluorobenzene (Surr)	98		70 - 130				05/23/22 15:02	05/23/22 23:58	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00399	U	0.00399		mg/Kg			05/24/22 11:05	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Client Sample ID: FL-11

Lab Sample ID: 880-15058-5

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Sample Depth: 18-20

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	79.9		49.9		mg/Kg			05/24/22 09:21	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 19:52	1
Diesel Range Organics (Over C10-C28)	79.9		49.9		mg/Kg		05/23/22 15:30	05/23/22 19:52	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 19:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	103		70 - 130				05/23/22 15:30	05/23/22 19:52	1
o-Terphenyl	111		70 - 130				05/23/22 15:30	05/23/22 19:52	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	93.3		4.99		mg/Kg			05/23/22 16:30	1

Client Sample ID: FL-12

Lab Sample ID: 880-15058-6

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:49

Sample Depth: 18-20

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00202	U	0.00202		mg/Kg		05/23/22 15:02	05/24/22 00:19	1
Toluene	<0.00202	U	0.00202		mg/Kg		05/23/22 15:02	05/24/22 00:19	1
Ethylbenzene	<0.00202	U	0.00202		mg/Kg		05/23/22 15:02	05/24/22 00:19	1
m-Xylene & p-Xylene	<0.00404	U	0.00404		mg/Kg		05/23/22 15:02	05/24/22 00:19	1
o-Xylene	<0.00202	U	0.00202		mg/Kg		05/23/22 15:02	05/24/22 00:19	1
Xylenes, Total	<0.00404	U	0.00404		mg/Kg		05/23/22 15:02	05/24/22 00:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		70 - 130				05/23/22 15:02	05/24/22 00:19	1
1,4-Difluorobenzene (Surr)	98		70 - 130				05/23/22 15:02	05/24/22 00:19	1

Method: Total BTEX - Total BTEX Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total BTEX	<0.00404	U	0.00404		mg/Kg			05/24/22 11:05	1

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	<49.9	U	49.9		mg/Kg			05/24/22 09:21	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 20:14	1
Diesel Range Organics (Over C10-C28)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 20:14	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		05/23/22 15:30	05/23/22 20:14	1

Eurofins Midland

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Client Sample ID: FL-12
Date Collected: 05/20/22 00:00
Date Received: 05/23/22 14:49
Sample Depth: 18-20

Lab Sample ID: 880-15058-6
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1-Chlorooctane	105		70 - 130	05/23/22 15:30	05/23/22 20:14	1
o-Terphenyl	114		70 - 130	05/23/22 15:30	05/23/22 20:14	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	105		5.00		mg/Kg			05/23/22 16:40	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Method: 8021B - Volatile Organic Compounds (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	BFB1 (70-130)	DFBZ1 (70-130)
880-15058-2	WSW #2	115	97
880-15058-2 MS	WSW #2	106	94
880-15058-2 MSD	WSW #2	108	95
880-15058-5	FL-11	110	98
880-15058-6	FL-12	114	98
LCS 880-26102/1-A	Lab Control Sample	108	95
LCSD 880-26102/2-A	Lab Control Sample Dup	105	95
MB 880-26086/5-A	Method Blank	107	89
MB 880-26102/5-A	Method Blank	113	97
Surrogate Legend			
BFB = 4-Bromofluorobenzene (Surr)			
DFBZ = 1,4-Difluorobenzene (Surr)			

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-15058-2	WSW #2	105	113
880-15058-3	FL-8b	103	112
880-15058-4	FL-9b	102	110
880-15058-5	FL-11	103	111
880-15058-6	FL-12	105	114
890-2323-A-2-B MS	Matrix Spike	101	102
890-2323-A-2-C MSD	Matrix Spike Duplicate	93	93
LCS 880-26028/2-A	Lab Control Sample	103	107
LCSD 880-26028/3-A	Lab Control Sample Dup	109	113
MB 880-26028/1-A	Method Blank	107	122
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 880-26086/5-A

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26086

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/22 11:13	05/23/22 12:40	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/22 11:13	05/23/22 12:40	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/22 11:13	05/23/22 12:40	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/23/22 11:13	05/23/22 12:40	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/22 11:13	05/23/22 12:40	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/23/22 11:13	05/23/22 12:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		70 - 130	05/23/22 11:13	05/23/22 12:40	1
1,4-Difluorobenzene (Surr)	89		70 - 130	05/23/22 11:13	05/23/22 12:40	1

Lab Sample ID: MB 880-26102/5-A

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26102

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:16	1
Toluene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:16	1
Ethylbenzene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:16	1
m-Xylene & p-Xylene	<0.00400	U	0.00400		mg/Kg		05/23/22 15:02	05/23/22 23:16	1
o-Xylene	<0.00200	U	0.00200		mg/Kg		05/23/22 15:02	05/23/22 23:16	1
Xylenes, Total	<0.00400	U	0.00400		mg/Kg		05/23/22 15:02	05/23/22 23:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	113		70 - 130	05/23/22 15:02	05/23/22 23:16	1
1,4-Difluorobenzene (Surr)	97		70 - 130	05/23/22 15:02	05/23/22 23:16	1

Lab Sample ID: LCS 880-26102/1-A

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26102

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.100	0.09146		mg/Kg		91	70 - 130
Toluene	0.100	0.1010		mg/Kg		101	70 - 130
Ethylbenzene	0.100	0.1026		mg/Kg		103	70 - 130
m-Xylene & p-Xylene	0.200	0.2101		mg/Kg		105	70 - 130
o-Xylene	0.100	0.1068		mg/Kg		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: LCSD 880-26102/2-A

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 26102

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.100	0.07726		mg/Kg		77	70 - 130	17	35

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: LCSD 880-26102/2-A

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 26102

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toluene	0.100	0.08319		mg/Kg		83	70 - 130	19	35
Ethylbenzene	0.100	0.08612		mg/Kg		86	70 - 130	17	35
m-Xylene & p-Xylene	0.200	0.1736		mg/Kg		87	70 - 130	19	35
o-Xylene	0.100	0.08878		mg/Kg		89	70 - 130	18	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Lab Sample ID: 880-15058-2 MS

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: WSW #2

Prep Type: Total/NA

Prep Batch: 26102

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.00199	U F1	0.101	0.07431		mg/Kg		74	70 - 130
Toluene	<0.00199	U F1	0.101	0.08116		mg/Kg		81	70 - 130
Ethylbenzene	<0.00199	U	0.101	0.08279		mg/Kg		82	70 - 130
m-Xylene & p-Xylene	<0.00398	U	0.201	0.1676		mg/Kg		83	70 - 130
o-Xylene	<0.00199	U	0.101	0.08543		mg/Kg		85	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		70 - 130
1,4-Difluorobenzene (Surr)	94		70 - 130

Lab Sample ID: 880-15058-2 MSD

Matrix: Solid

Analysis Batch: 26017

Client Sample ID: WSW #2

Prep Type: Total/NA

Prep Batch: 26102

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	<0.00199	U F1	0.100	0.06158	F1	mg/Kg		61	70 - 130	19	35
Toluene	<0.00199	U F1	0.100	0.06799	F1	mg/Kg		68	70 - 130	18	35
Ethylbenzene	<0.00199	U	0.100	0.07009		mg/Kg		70	70 - 130	17	35
m-Xylene & p-Xylene	<0.00398	U	0.200	0.1437		mg/Kg		72	70 - 130	15	35
o-Xylene	<0.00199	U	0.100	0.07514		mg/Kg		75	70 - 130	13	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		70 - 130
1,4-Difluorobenzene (Surr)	95		70 - 130

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-26028/1-A

Matrix: Solid

Analysis Batch: 26024

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		05/23/22 08:23	05/23/22 09:53	1

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 880-26028/1-A

Matrix: Solid

Analysis Batch: 26024

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		05/23/22 08:23	05/23/22 09:53	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		05/23/22 08:23	05/23/22 09:53	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	107		70 - 130				05/23/22 08:23	05/23/22 09:53	1
o-Terphenyl	122		70 - 130				05/23/22 08:23	05/23/22 09:53	1

Lab Sample ID: LCS 880-26028/2-A

Matrix: Solid

Analysis Batch: 26024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	888.2		mg/Kg		89	70 - 130
Diesel Range Organics (Over C10-C28)	1000	800.7		mg/Kg		80	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	103		70 - 130				
o-Terphenyl	107		70 - 130				

Lab Sample ID: LCSD 880-26028/3-A

Matrix: Solid

Analysis Batch: 26024

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 26028

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	908.6		mg/Kg		91	70 - 130	2	20
Diesel Range Organics (Over C10-C28)	1000	914.8		mg/Kg		91	70 - 130	13	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	109		70 - 130						
o-Terphenyl	113		70 - 130						

Lab Sample ID: 890-2323-A-2-B MS

Matrix: Solid

Analysis Batch: 26024

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 26028

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	1000	1466	F1	mg/Kg		144	70 - 130
Diesel Range Organics (Over C10-C28)	<50.0	U	1000	948.2		mg/Kg		95	70 - 130
Surrogate	MS %Recovery	MS Qualifier	Limits						
1-Chlorooctane	101		70 - 130						
o-Terphenyl	102		70 - 130						

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2323-A-2-C MSD

Matrix: Solid

Analysis Batch: 26024

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 26028

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<50.0	U F1 F2	999	1176	F2	mg/Kg		116	70 - 130	22	20
Diesel Range Organics (Over C10-C28)	<50.0	U	999	871.0		mg/Kg		87	70 - 130	8	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	93		70 - 130								
o-Terphenyl	93		70 - 130								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 880-26083/1-A

Matrix: Solid

Analysis Batch: 26099

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00	U	5.00		mg/Kg			05/23/22 13:07	1

Lab Sample ID: LCS 880-26083/2-A

Matrix: Solid

Analysis Batch: 26099

Client Sample ID: Lab Control Sample

Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits			
Chloride	250	236.5		mg/Kg		95	90 - 110			

Lab Sample ID: LCSD 880-26083/3-A

Matrix: Solid

Analysis Batch: 26099

Client Sample ID: Lab Control Sample Dup

Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	250	236.2		mg/Kg		94	90 - 110	0	20

Lab Sample ID: 890-2323-A-7-E MS

Matrix: Solid

Analysis Batch: 26099

Client Sample ID: Matrix Spike

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride	382		253	634.6		mg/Kg		100	90 - 110		

Lab Sample ID: 890-2323-A-7-F MSD

Matrix: Solid

Analysis Batch: 26099

Client Sample ID: Matrix Spike Duplicate

Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	382		253	614.2		mg/Kg		92	90 - 110	3	20

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

GC VOA

Analysis Batch: 26017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-2	WSW #2	Total/NA	Solid	8021B	26102
880-15058-5	FL-11	Total/NA	Solid	8021B	26102
880-15058-6	FL-12	Total/NA	Solid	8021B	26102
MB 880-26086/5-A	Method Blank	Total/NA	Solid	8021B	26086
MB 880-26102/5-A	Method Blank	Total/NA	Solid	8021B	26102
LCS 880-26102/1-A	Lab Control Sample	Total/NA	Solid	8021B	26102
LCSD 880-26102/2-A	Lab Control Sample Dup	Total/NA	Solid	8021B	26102
880-15058-2 MS	WSW #2	Total/NA	Solid	8021B	26102
880-15058-2 MSD	WSW #2	Total/NA	Solid	8021B	26102

Prep Batch: 26086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 880-26086/5-A	Method Blank	Total/NA	Solid	5035	

Prep Batch: 26102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-2	WSW #2	Total/NA	Solid	5035	
880-15058-5	FL-11	Total/NA	Solid	5035	
880-15058-6	FL-12	Total/NA	Solid	5035	
MB 880-26102/5-A	Method Blank	Total/NA	Solid	5035	
LCS 880-26102/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 880-26102/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	
880-15058-2 MS	WSW #2	Total/NA	Solid	5035	
880-15058-2 MSD	WSW #2	Total/NA	Solid	5035	

Analysis Batch: 26173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-2	WSW #2	Total/NA	Solid	Total BTEX	
880-15058-5	FL-11	Total/NA	Solid	Total BTEX	
880-15058-6	FL-12	Total/NA	Solid	Total BTEX	

GC Semi VOA

Analysis Batch: 26024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-2	WSW #2	Total/NA	Solid	8015B NM	26028
880-15058-3	FL-8b	Total/NA	Solid	8015B NM	26028
880-15058-4	FL-9b	Total/NA	Solid	8015B NM	26028
880-15058-5	FL-11	Total/NA	Solid	8015B NM	26028
880-15058-6	FL-12	Total/NA	Solid	8015B NM	26028
MB 880-26028/1-A	Method Blank	Total/NA	Solid	8015B NM	26028
LCS 880-26028/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	26028
LCSD 880-26028/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	26028
890-2323-A-2-B MS	Matrix Spike	Total/NA	Solid	8015B NM	26028
890-2323-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	26028

Prep Batch: 26028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-2	WSW #2	Total/NA	Solid	8015NM Prep	
880-15058-3	FL-8b	Total/NA	Solid	8015NM Prep	
880-15058-4	FL-9b	Total/NA	Solid	8015NM Prep	

Eurofins Midland

QC Association Summary

Client: Etech Environmental & Safety Solutions
 Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
 SDG: 15649

GC Semi VOA (Continued)

Prep Batch: 26028 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-5	FL-11	Total/NA	Solid	8015NM Prep	
880-15058-6	FL-12	Total/NA	Solid	8015NM Prep	
MB 880-26028/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-26028/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-26028/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2323-A-2-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2323-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 26131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-2	WSW #2	Total/NA	Solid	8015 NM	
880-15058-3	FL-8b	Total/NA	Solid	8015 NM	
880-15058-4	FL-9b	Total/NA	Solid	8015 NM	
880-15058-5	FL-11	Total/NA	Solid	8015 NM	
880-15058-6	FL-12	Total/NA	Solid	8015 NM	

HPLC/IC

Leach Batch: 26083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-1	WSW #1b	Soluble	Solid	DI Leach	
880-15058-2	WSW #2	Soluble	Solid	DI Leach	
880-15058-5	FL-11	Soluble	Solid	DI Leach	
880-15058-6	FL-12	Soluble	Solid	DI Leach	
MB 880-26083/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 880-26083/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 880-26083/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
890-2323-A-7-E MS	Matrix Spike	Soluble	Solid	DI Leach	
890-2323-A-7-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 26099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15058-1	WSW #1b	Soluble	Solid	300.0	26083
880-15058-2	WSW #2	Soluble	Solid	300.0	26083
880-15058-5	FL-11	Soluble	Solid	300.0	26083
880-15058-6	FL-12	Soluble	Solid	300.0	26083
MB 880-26083/1-A	Method Blank	Soluble	Solid	300.0	26083
LCS 880-26083/2-A	Lab Control Sample	Soluble	Solid	300.0	26083
LCSD 880-26083/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	26083
890-2323-A-7-E MS	Matrix Spike	Soluble	Solid	300.0	26083
890-2323-A-7-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	26083

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Client Sample ID: WSW #1b

Lab Sample ID: 880-15058-1

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	26083	05/23/22 15:15	SC	XEN MID
Soluble	Analysis	300.0		1			26099	05/23/22 16:12	CH	XEN MID

Client Sample ID: WSW #2

Lab Sample ID: 880-15058-2

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.03 g	5 mL	26102	05/23/22 15:02	MR	XEN MID
Total/NA	Analysis	8021B		1			26017	05/23/22 23:38	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26173	05/24/22 11:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26131	05/24/22 09:21	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	26028	05/23/22 15:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26024	05/23/22 18:47	AJ	XEN MID
Soluble	Leach	DI Leach			5.05 g	50 mL	26083	05/23/22 15:15	SC	XEN MID
Soluble	Analysis	300.0		1			26099	05/23/22 16:21	CH	XEN MID

Client Sample ID: FL-8b

Lab Sample ID: 880-15058-3

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			26131	05/24/22 09:21	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26028	05/23/22 15:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26024	05/23/22 19:09	AJ	XEN MID

Client Sample ID: FL-9b

Lab Sample ID: 880-15058-4

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			26131	05/24/22 09:21	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	26028	05/23/22 15:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26024	05/23/22 19:31	AJ	XEN MID

Client Sample ID: FL-11

Lab Sample ID: 880-15058-5

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.01 g	5 mL	26102	05/23/22 15:02	MR	XEN MID
Total/NA	Analysis	8021B		1			26017	05/23/22 23:58	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26173	05/24/22 11:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26131	05/24/22 09:21	SM	XEN MID

Eurofins Midland

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Client Sample ID: FL-11

Lab Sample ID: 880-15058-5

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	26028	05/23/22 15:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26024	05/23/22 19:52	AJ	XEN MID
Soluble	Leach	DI Leach			5.01 g	50 mL	26083	05/23/22 15:15	SC	XEN MID
Soluble	Analysis	300.0		1			26099	05/23/22 16:30	CH	XEN MID

Client Sample ID: FL-12

Lab Sample ID: 880-15058-6

Date Collected: 05/20/22 00:00

Matrix: Solid

Date Received: 05/23/22 14:49

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.95 g	5 mL	26102	05/23/22 15:02	MR	XEN MID
Total/NA	Analysis	8021B		1			26017	05/24/22 00:19	MR	XEN MID
Total/NA	Analysis	Total BTEX		1			26173	05/24/22 11:05	SM	XEN MID
Total/NA	Analysis	8015 NM		1			26131	05/24/22 09:21	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.03 g	10 mL	26028	05/23/22 15:30	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26024	05/23/22 20:14	AJ	XEN MID
Soluble	Leach	DI Leach			5 g	50 mL	26083	05/23/22 15:15	SC	XEN MID
Soluble	Analysis	300.0		1			26099	05/23/22 16:40	CH	XEN MID

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH
Total BTEX		Solid	Total BTEX

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	XEN MID
Total BTEX	Total BTEX Calculation	TAL SOP	XEN MID
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
300.0	Anions, Ion Chromatography	MCAWW	XEN MID
5035	Closed System Purge and Trap	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID
DI Leach	Deionized Water Leaching Procedure	ASTM	XEN MID

Protocol References:

ASTM = ASTM International

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-inch

Job ID: 880-15058-1
SDG: 15649

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Depth
880-15058-1	WSW #1b	Solid	05/20/22 00:00	05/23/22 14:50	
880-15058-2	WSW #2	Solid	05/20/22 00:00	05/23/22 14:50	
880-15058-3	FL-8b	Solid	05/20/22 00:00	05/23/22 14:50	18-20
880-15058-4	FL-9b	Solid	05/20/22 00:00	05/23/22 14:50	18-20
880-15058-5	FL-11	Solid	05/20/22 00:00	05/23/22 14:50	18-20
880-15058-6	FL-12	Solid	05/20/22 00:00	05/23/22 14:49	18-20



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
 Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
 Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199 Phoenix, AZ (480) 355-0900
 Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
 Atlanta GA (770) 449-8800

 Work Order No: 15088

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Project Manager:	<u>Joel Lowry</u>	Bill to (if different)	<u>Etech</u>
Company Name:	<u>Etech Environmental and Safety</u>	Company Name	<u>C/O Joel Lowry</u>
Address:	<u>2617 West Marland</u>	Address	
City, State ZIP	<u>Hobbs NM 88240</u>	City, State ZIP	
Phone	<u>(575) 264-9884</u>	Email	<u>Email Results to PM@etechenv.com + Client</u>

Work Order Comments	
Program	UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RR <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project	
Reporting Level	<input type="checkbox"/> Level <input type="checkbox"/> PST/US <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other

Project Name		<u>Astro Dog 6-Inch</u>		Turn Around		ANALYSIS REQUEST												Preservative Codes							
Project Number		<u>15649</u>		Routine														HNO3 HN							
Project Location		<u>Rural Eddy</u>		Rush! <input checked="" type="checkbox"/>														H2SO4 H2							
Sampler's Name		<u>Joel Lowry</u>		Due Date														HCL HL							
PO #:		<u>15649</u>																None NO							
SAMPLE RECEIPT		Temp Blank		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Wet Ice		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														NaOH Na			
Temperature (°C)		<u>5.0/5.0</u>		Thermometer ID														MeOH Me							
Received Intact:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Correction Factor														Zn Acetate+ NaOH Zn							
Cooler Custody Seals		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Total Containers														TAT starts the day received by the lab if received by 4 30pm							
Sample Custody Seals:		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																Sample Comments							
Sample Identification		Matrix		Date Sampled		Time Sampled		Depth		Number of Containers/Preservative Code															
<u>WSW #1b</u>		<u>S</u>		<u>5/20/22</u>																					
<u>WSW #7</u>		<u>↓</u>		<u>↓</u>																				<u>Rush!</u>	
<u>FL-8b</u>		<u>↓</u>		<u>↓</u>				<u>18-20</u>																	
<u>FL-9b</u>		<u>↓</u>		<u>↓</u>				<u>18-20</u>																	
<u>FL-11</u>		<u>↓</u>		<u>↓</u>				<u>18-20</u>																	
<u>FL-12</u>		<u>↓</u>		<u>↓</u>				<u>18-20</u>																	



880-15058 Chain of Custody

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg

Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
<u>Joel Lowry</u>	<u>Bu...</u>	<u>5/23/22</u>	<u>Bu...</u>	<u>[Signature]</u>	<u>5/23/22</u>
					<u>14:49</u>

Revised Date 101419 Rev 2019 1

5/24/2022

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Released to Imaging: 1/27/2023 10:04:50 AM

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-15058-1

SDG Number: 15649

Login Number: 15058**List Number: 1****Creator: Rodriguez, Leticia****List Source: Eurofins Midland**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-15494-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: PM List

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
6/7/2022 9:13:49 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Job ID: 880-15494-1

Laboratory: Eurofins Midland

Narrative

Job Narrative 880-15494-1

Receipt

The sample was received on 6/6/2022 4:29 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-15469-A-1-B MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/6 NSW

Lab Sample ID: 880-15494-1

Date Collected: 06/06/22 12:15

Matrix: Solid

Date Received: 06/06/22 16:29

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1630		50.0		mg/Kg			06/07/22 08:06	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/22 14:00	06/07/22 01:20	1
Diesel Range Organics (Over C10-C28)	1630		50.0		mg/Kg		06/06/22 14:00	06/07/22 01:20	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/22 14:00	06/07/22 01:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	84		70 - 130				06/06/22 14:00	06/07/22 01:20	1
o-Terphenyl	90		70 - 130				06/06/22 14:00	06/07/22 01:20	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1	OTPH1
		(70-130)	(70-130)
880-15469-A-1-B MS	Matrix Spike	75	67 S1-
880-15469-A-1-C MSD	Matrix Spike Duplicate	86	76
880-15494-1	6/6 NSW	84	90
LCS 880-26872/2-A	Lab Control Sample	105	104
LCSD 880-26872/3-A	Lab Control Sample Dup	103	103
MB 880-26872/1-A	Method Blank	93	103
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-26872/1-A

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26872

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/22 08:40	06/06/22 21:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/06/22 08:40	06/06/22 21:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/22 08:40	06/06/22 21:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				06/06/22 08:40	06/06/22 21:55	1
o-Terphenyl	103		70 - 130				06/06/22 08:40	06/06/22 21:55	1

Lab Sample ID: LCS 880-26872/2-A

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	1000	753.8		mg/Kg		75	70 - 130	
Diesel Range Organics (Over C10-C28)	1000	1025		mg/Kg		102	70 - 130	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
1-Chlorooctane	105		70 - 130					
o-Terphenyl	104		70 - 130					

Lab Sample ID: LCSD 880-26872/3-A

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	715.7		mg/Kg		72	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	1008		mg/Kg		101	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	103		70 - 130						
o-Terphenyl	103		70 - 130						

Lab Sample ID: 880-15469-A-1-B MS

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	800.5		mg/Kg		80	70 - 130	
Diesel Range Organics (Over C10-C28)	62.4		997	929.7		mg/Kg		87	70 - 130	

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-15469-A-1-B MS

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 26872

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	75		70 - 130
o-Terphenyl	67	S1-	70 - 130

Lab Sample ID: 880-15469-A-1-C MSD

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	923.7		mg/Kg		92	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	62.4		1000	1128		mg/Kg		107	70 - 130	19	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	86		70 - 130
o-Terphenyl	76		70 - 130

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

GC Semi VOA

Analysis Batch: 26868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15494-1	6/6 NSW	Total/NA	Solid	8015B NM	26872
MB 880-26872/1-A	Method Blank	Total/NA	Solid	8015B NM	26872
LCS 880-26872/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	26872
LCSD 880-26872/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	26872
880-15469-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	26872
880-15469-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	26872

Prep Batch: 26872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15494-1	6/6 NSW	Total/NA	Solid	8015NM Prep	
MB 880-26872/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-26872/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-26872/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-15469-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-15469-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 26962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15494-1	6/6 NSW	Total/NA	Solid	8015 NM	

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/6 NSW
Date Collected: 06/06/22 12:15
Date Received: 06/06/22 16:29

Lab Sample ID: 880-15494-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			26962	06/07/22 08:06	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	26872	06/06/22 14:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26868	06/07/22 01:20	SM	XEN MID

Laboratory References:
XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15494-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15494-1	6/6 NSW	Solid	06/06/22 12:15	06/06/22 16:29

- 1
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- 13
- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 988-3199 Phoenix AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800

Work Order No: 15494

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Project Manager:	Joel Lowry		Bill to* (if different)	Etech
Company Name	Etech Environmental and Safety		Company Name	C/O Joel Lowry
Address	2617 West Marland		Address.	
City, State ZIP	Hobbs, NM 88240		City, State ZIP	
Phone	(575) 264-9884	Email	Email Results to PM@etechenv.com + Client	

Work Order Comments				
Program:	UST/PST <input type="checkbox"/>	PRF <input type="checkbox"/>	Brownfield <input type="checkbox"/>	RR <input type="checkbox"/> Superfund <input type="checkbox"/>
State of Project:				
Reporting Level	<input type="checkbox"/>	Level <input type="checkbox"/>	PST/US <input type="checkbox"/>	TRF <input type="checkbox"/> Level <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/>	ADaPT <input type="checkbox"/>	Other	

[illegible]

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
<i>Circle Method(s) and Metal(s) to be analyzed</i>			TCLP / SPLP 6010		8RCRA	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U											1631 / 245.1 / 7470 / 7471	Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
		6/6/02 13:29			

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-15494-1
SDG Number: Rural Eddy Co., NM**Login Number: 15494****List Number: 1****Creator: Rodriguez, Leticia****List Source: Eurofins Midland**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-15495-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: PM List

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:

6/7/2022 9:14:36 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

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results through



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Job ID: 880-15495-1

Laboratory: Eurofins Midland

Narrative

Job Narrative
880-15495-1

Receipt

The sample was received on 6/6/2022 1:29 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.5°C

GC Semi VOA

Method 8015MOD_NM: Surrogate recovery for the following sample was outside control limits: (880-15469-A-1-B MS). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/3 NSW

Lab Sample ID: 880-15495-1

Date Collected: 06/03/22 17:45

Matrix: Solid

Date Received: 06/06/22 13:29

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	1440		50.0		mg/Kg			06/07/22 08:06	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/22 14:00	06/07/22 01:41	1
Diesel Range Organics (Over C10-C28)	1440		50.0		mg/Kg		06/06/22 14:00	06/07/22 01:41	1
OII Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/22 14:00	06/07/22 01:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	90		70 - 130				06/06/22 14:00	06/07/22 01:41	1
o-Terphenyl	95		70 - 130				06/06/22 14:00	06/07/22 01:41	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	1CO1 (70-130)	OTPH1 (70-130)
880-15469-A-1-B MS	Matrix Spike	75	67 S1-
880-15469-A-1-C MSD	Matrix Spike Duplicate	86	76
880-15495-1	6/3 NSW	90	95
LCS 880-26872/2-A	Lab Control Sample	105	104
LCSD 880-26872/3-A	Lab Control Sample Dup	103	103
MB 880-26872/1-A	Method Blank	93	103
Surrogate Legend			
1CO = 1-Chlorooctane			
OTPH = o-Terphenyl			

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-26872/1-A

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 26872

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/06/22 08:40	06/06/22 21:55	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/06/22 08:40	06/06/22 21:55	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/06/22 08:40	06/06/22 21:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	93		70 - 130				06/06/22 08:40	06/06/22 21:55	1
o-Terphenyl	103		70 - 130				06/06/22 08:40	06/06/22 21:55	1

Lab Sample ID: LCS 880-26872/2-A

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	753.8		mg/Kg		75	70 - 130
Diesel Range Organics (Over C10-C28)	1000	1025		mg/Kg		102	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	105		70 - 130				
o-Terphenyl	104		70 - 130				

Lab Sample ID: LCSD 880-26872/3-A

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	715.7		mg/Kg		72	70 - 130	5	20
Diesel Range Organics (Over C10-C28)	1000	1008		mg/Kg		101	70 - 130	2	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	103		70 - 130						
o-Terphenyl	103		70 - 130						

Lab Sample ID: 880-15469-A-1-B MS

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	800.5		mg/Kg		80	70 - 130
Diesel Range Organics (Over C10-C28)	62.4		997	929.7		mg/Kg		87	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 880-15469-A-1-B MS

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 26872

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	75		70 - 130
o-Terphenyl	67	S1-	70 - 130

Lab Sample ID: 880-15469-A-1-C MSD

Matrix: Solid

Analysis Batch: 26868

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 26872

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	923.7		mg/Kg		92	70 - 130	14	20
Diesel Range Organics (Over C10-C28)	62.4		1000	1128		mg/Kg		107	70 - 130	19	20
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
1-Chlorooctane	86		70 - 130								
o-Terphenyl	76		70 - 130								

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

GC Semi VOA

Analysis Batch: 26868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15495-1	6/3 NSW	Total/NA	Solid	8015B NM	26872
MB 880-26872/1-A	Method Blank	Total/NA	Solid	8015B NM	26872
LCS 880-26872/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	26872
LCSD 880-26872/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	26872
880-15469-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B NM	26872
880-15469-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	26872

Prep Batch: 26872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15495-1	6/3 NSW	Total/NA	Solid	8015NM Prep	
MB 880-26872/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-26872/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-26872/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
880-15469-A-1-B MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
880-15469-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 26963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15495-1	6/3 NSW	Total/NA	Solid	8015 NM	

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/3 NSW
Date Collected: 06/03/22 17:45
Date Received: 06/06/22 13:29

Lab Sample ID: 880-15495-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			26963	06/07/22 08:06	SM	XEN MID
Total/NA	Prep	8015NM Prep			10.01 g	10 mL	26872	06/06/22 14:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			26868	06/07/22 01:41	SM	XEN MID

Laboratory References:
XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Eurofins Midland

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15495-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15495-1	6/3 NSW	Solid	06/03/22 17:45	06/06/22 13:29

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
 Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock TX (806) 794-1296
 Hobbs NM (575) 392 7550 Carlsbad NM (575) 988-3199 Phoenix AZ (480) 355-0900
 Tampa FL (813) 620-2000 Tallahassee FL (850) 756-0747 Delray Beach FL (561) 689-6701
 Atlanta GA (770) 449-8800

Work Order No: 15495

www.xenco.com Page _____ of _____

Project Manager	<u>Joel Lowry</u>	Bill to (if different)	<u>Etech</u>
Company Name	Etech Environmental and Safety	Company Name	<u>C/O Joel Lowry</u>
Address	2617 West Marland	Address	
City, State ZIP	Hobbs, NM 88240	City, State ZIP	
Phone	(575) 264-9884	Email	Email Results to <u>PM@etechenv.com</u> + Client

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RR <input type="checkbox"/> Superfund <input type="checkbox"/>	State of Project.
Reporting Level <input type="checkbox"/> Level <input type="checkbox"/> PST/US <input type="checkbox"/> TRF <input type="checkbox"/> Level <input type="checkbox"/>	
Deliverables EDD <input type="checkbox"/> ADaPT <input type="checkbox"/> Other	

Project Name		<u>Astro Day 6"</u>		Turn Around		ANALYSIS REQUEST												Preservative Codes			
Project Number		<u>15649</u>		Routine <input type="checkbox"/>		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of Containers/Preservative Code</div> <div> <p>BTEX (8021) <u>8015</u></p> <p>TPH (Modified Ext.) <u>8015</u></p> <p>Cl (E300) <u>Rush next day</u></p> </div> </div>												HNO3 HN			
Project Location		<u>Rural Eddy</u>		Rush <input checked="" type="checkbox"/>														H2SO4 H2			
Sampler's Name		<u>Joel Lowry</u>		Due Date														HCL HL			
PO #		<u>15649</u>																None NO			
SAMPLE RECEIPT		Temp Blank Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wet Ice Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Thermometer ID <u>118</u>		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of Containers/Preservative Code</div> <div> <p>BTEX (8021) <u>8015</u></p> <p>TPH (Modified Ext.) <u>8015</u></p> <p>Cl (E300) <u>Rush next day</u></p> </div> </div>												NaOH Na			
Temperature (°C)		<u>4.2/45</u>																MeOH Me			
Received Intact		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Correction Factor <u>-2</u>														Zn Acetate+ NaOH Zn			
Cooler Custody Seals		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		Total Containers														TAT starts the day received by the lab if received by 4 30pm			
Sample Custody Seals		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A				<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Number of Containers/Preservative Code</div> <div> <p>BTEX (8021) <u>8015</u></p> <p>TPH (Modified Ext.) <u>8015</u></p> <p>Cl (E300) <u>Rush next day</u></p> </div> </div>												Sample Comments			
Sample Identification		Matrix		Date Sampled														Time Sampled		Depth	
<u>4/3 NSW</u>		<u>5</u>		<u>6/13/22</u>														<u>17:45</u>			



880-15495 Chain of Custody

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 Hg

Notice Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by (Signature)	Received by (Signature)	Date/Time	Relinquished by (Signature)	Received by (Signature)	Date/Time
<u>Joel Lowry</u>	<u>[Signature]</u>	<u>6/6/22</u>			
		<u>13:29</u>			

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-15495-1
SDG Number: Rural Eddy Co., NM

Login Number: 15495

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-15715-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: PM List

A handwritten signature in black ink, appearing to read "Jessica Kramer".

Authorized for release by:
6/10/2022 9:12:35 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project
results through



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www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Job ID: 880-15715-1

Laboratory: Eurofins Midland

Narrative	
	Job Narrative 880-15715-1

Receipt

The sample was received on 6/9/2022 4:18 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.7°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/8 NSW

Lab Sample ID: 880-15715-1

Date Collected: 06/08/22 00:00

Matrix: Solid

Date Received: 06/09/22 16:18

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	704		50.0		mg/Kg			06/10/22 09:46	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/09/22 17:00	06/10/22 03:08	1
Diesel Range Organics (Over C10-C28)	637		50.0		mg/Kg		06/09/22 17:00	06/10/22 03:08	1
Oil Range Organics (Over C28-C36)	67.0		50.0		mg/Kg		06/09/22 17:00	06/10/22 03:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	102		70 - 130				06/09/22 17:00	06/10/22 03:08	1
o-Terphenyl	106		70 - 130				06/09/22 17:00	06/10/22 03:08	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO1	OTPH1				
		(70-130)	(70-130)				
880-15715-1	6/8 NSW	102	106				
890-2387-A-61-C MS	Matrix Spike	84	82				
890-2387-A-61-D MSD	Matrix Spike Duplicate	84	82				
LCS 880-27170/2-A	Lab Control Sample	115	119				
LCSD 880-27170/3-A	Lab Control Sample Dup	108	112				
MB 880-27170/1-A	Method Blank	83	89				
Surrogate Legend							
1CO = 1-Chlorooctane							
OTPH = o-Terphenyl							

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-27170/1-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/09/22 11:40	06/09/22 20:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/22 11:40	06/09/22 20:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/22 11:40	06/09/22 20:34	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130				06/09/22 11:40	06/09/22 20:34	1
o-Terphenyl	89		70 - 130				06/09/22 11:40	06/09/22 20:34	1

Lab Sample ID: LCS 880-27170/2-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	953.3		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	917.9		mg/Kg		92	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	115		70 - 130				
o-Terphenyl	119		70 - 130				

Lab Sample ID: LCSD 880-27170/3-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	834.9		mg/Kg		83	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	1000	832.9		mg/Kg		83	70 - 130	10	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	108		70 - 130						
o-Terphenyl	112		70 - 130						

Lab Sample ID: 890-2387-A-61-C MS

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	877.0		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	800.5		mg/Kg		79	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2387-A-61-C MS

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 27170

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-2387-A-61-D MSD

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	947.0		mg/Kg		95	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	808.6		mg/Kg		79	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	82		70 - 130								

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

GC Semi VOA

Analysis Batch: 27127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15715-1	6/8 NSW	Total/NA	Solid	8015B NM	27170
MB 880-27170/1-A	Method Blank	Total/NA	Solid	8015B NM	27170
LCS 880-27170/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	27170
LCSD 880-27170/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	27170
890-2387-A-61-C MS	Matrix Spike	Total/NA	Solid	8015B NM	27170
890-2387-A-61-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	27170

Prep Batch: 27170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15715-1	6/8 NSW	Total/NA	Solid	8015NM Prep	
MB 880-27170/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-27170/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-27170/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2387-A-61-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2387-A-61-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 27266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15715-1	6/8 NSW	Total/NA	Solid	8015 NM	

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/8 NSW
Date Collected: 06/08/22 00:00
Date Received: 06/09/22 16:18

Lab Sample ID: 880-15715-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			27266	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.00 g	10 mL	27170	06/09/22 17:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/10/22 03:08	AJ	XEN MID

Laboratory References:
XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

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Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH

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- 11
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- 13
- 14

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15715-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15715-1	6/8 NSW	Solid	06/08/22 00:00	06/09/22 16:18

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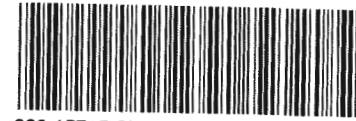
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Chain of Custody

Houston TX (281) 240-4200 Dallas TX (214) 902-0300 San Antonio TX (210) 509-3334
Midland TX (432) 704-5440 EL Paso TX (915) 585-3443 Lubbock, TX (806) 794-1296
Hobbs NM (575) 392-7550 Carlsbad NM (575) 968-3199 Phoenix AZ (480) 355-0900
Tampa FL (813) 620-2000 Tallahassee FL (904) 756-4747 Delray Beach FL (561) 689-6701
Atlanta GA (770) 449-8800



880-15715 Chain of Custody

www.xenco.com Page 1 of 1



Project Manager:	Joel Lowry	Bill to: (if different)	
Company Name:	Etech Environmental and Safety	Company Name:	
Address:	2617 West Marland	Address:	
City, State ZIP:	Hobbs, NM 88240	City, State ZIP:	
Phone:	(575) 264-9884	Email:	Email Results to PM@etechenv.com + Client

Work Order Comments				
Program: UST/PST <input type="checkbox"/> PRF <input type="checkbox"/> Brownfield <input type="checkbox"/> RR <input type="checkbox"/> Superfund <input type="checkbox"/>				
State of Project:				
Reporting Level <input type="checkbox"/>	Level <input type="checkbox"/>	PST/US <input type="checkbox"/>	TRF <input type="checkbox"/>	Level <input type="checkbox"/>
Deliverables	EDD <input type="checkbox"/>	ADaPT <input type="checkbox"/>	Other:	

[illegible]

Total	200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
<i>Circle Method(s) and Metal(s) to be analyzed</i>			TCLP / SPLP 6010	8RCRA		Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U					1631 / 245.1 / 7470 / 7471						Hg	

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		6/9/22 4:12	2		
3			4		
5			6		

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-15715-1
SDG Number: Rural Eddy Co., NM

Login Number: 15715

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	



Environment Testing America

ANALYTICAL REPORT

Eurofins Midland
1211 W. Florida Ave
Midland, TX 79701
Tel: (432)704-5440

Laboratory Job ID: 880-15716-1

Laboratory Sample Delivery Group: Rural Eddy Co., NM
Client Project/Site: Astro Dog 6-Inch

For:

Etech Environmental & Safety Solutions
PO BOX 62228
Midland, Texas 79711

Attn: PM List

A handwritten signature in black ink that reads "Jessica Kramer".

Authorized for release by:
6/10/2022 9:17:51 AM

Jessica Kramer, Project Manager
(432)704-5440

Jessica.Kramer@et.eurofinsus.com

LINKS

Review your project
results through



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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Laboratory Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

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Definitions/Glossary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Job ID: 880-15716-1

Laboratory: Eurofins Midland

Narrative	
	Job Narrative 880-15716-1

Receipt

The sample was received on 6/9/2022 4:18 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.7°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/9 NSW

Lab Sample ID: 880-15716-1

Date Collected: 06/09/22 00:00

Matrix: Solid

Date Received: 06/09/22 16:18

Method: 8015 NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total TPH	382		49.9		mg/Kg			06/10/22 09:46	1

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	49.9		mg/Kg		06/09/22 17:00	06/10/22 03:30	1
Diesel Range Organics (Over C10-C28)	382		49.9		mg/Kg		06/09/22 17:00	06/10/22 03:30	1
Oil Range Organics (Over C28-C36)	<49.9	U	49.9		mg/Kg		06/09/22 17:00	06/10/22 03:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	89		70 - 130				06/09/22 17:00	06/10/22 03:30	1
o-Terphenyl	95		70 - 130				06/09/22 17:00	06/10/22 03:30	1

Surrogate Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)
Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	1CO1	OTPH1				
		(70-130)	(70-130)				
880-15716-1	6/9 NSW	89	95				
890-2387-A-61-C MS	Matrix Spike	84	82				
890-2387-A-61-D MSD	Matrix Spike Duplicate	84	82				
LCS 880-27170/2-A	Lab Control Sample	115	119				
LCSD 880-27170/3-A	Lab Control Sample Dup	108	112				
MB 880-27170/1-A	Method Blank	83	89				
Surrogate Legend							
1CO = 1-Chlorooctane							
OTPH = o-Terphenyl							

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 880-27170/1-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 27170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO)-C6-C10	<50.0	U	50.0		mg/Kg		06/09/22 11:40	06/09/22 20:34	1
Diesel Range Organics (Over C10-C28)	<50.0	U	50.0		mg/Kg		06/09/22 11:40	06/09/22 20:34	1
Oil Range Organics (Over C28-C36)	<50.0	U	50.0		mg/Kg		06/09/22 11:40	06/09/22 20:34	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1-Chlorooctane	83		70 - 130				06/09/22 11:40	06/09/22 20:34	1
o-Terphenyl	89		70 - 130				06/09/22 11:40	06/09/22 20:34	1

Lab Sample ID: LCS 880-27170/2-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	1000	953.3		mg/Kg		95	70 - 130
Diesel Range Organics (Over C10-C28)	1000	917.9		mg/Kg		92	70 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1-Chlorooctane	115		70 - 130				
o-Terphenyl	119		70 - 130				

Lab Sample ID: LCSD 880-27170/3-A

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	1000	834.9		mg/Kg		83	70 - 130	13	20
Diesel Range Organics (Over C10-C28)	1000	832.9		mg/Kg		83	70 - 130	10	20
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1-Chlorooctane	108		70 - 130						
o-Terphenyl	112		70 - 130						

Lab Sample ID: 890-2387-A-61-C MS

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	997	877.0		mg/Kg		88	70 - 130
Diesel Range Organics (Over C10-C28)	<49.9	U	997	800.5		mg/Kg		79	70 - 130

Eurofins Midland

QC Sample Results

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Method: 8015B NM - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 890-2387-A-61-C MS

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 27170

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1-Chlorooctane	84		70 - 130
o-Terphenyl	82		70 - 130

Lab Sample ID: 890-2387-A-61-D MSD

Matrix: Solid

Analysis Batch: 27127

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 27170

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (GRO)-C6-C10	<49.9	U	1000	947.0		mg/Kg		95	70 - 130	8	20
Diesel Range Organics (Over C10-C28)	<49.9	U	1000	808.6		mg/Kg		79	70 - 130	1	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1-Chlorooctane	84		70 - 130								
o-Terphenyl	82		70 - 130								

QC Association Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

GC Semi VOA

Analysis Batch: 27127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15716-1	6/9 NSW	Total/NA	Solid	8015B NM	27170
MB 880-27170/1-A	Method Blank	Total/NA	Solid	8015B NM	27170
LCS 880-27170/2-A	Lab Control Sample	Total/NA	Solid	8015B NM	27170
LCSD 880-27170/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B NM	27170
890-2387-A-61-C MS	Matrix Spike	Total/NA	Solid	8015B NM	27170
890-2387-A-61-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B NM	27170

Prep Batch: 27170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15716-1	6/9 NSW	Total/NA	Solid	8015NM Prep	
MB 880-27170/1-A	Method Blank	Total/NA	Solid	8015NM Prep	
LCS 880-27170/2-A	Lab Control Sample	Total/NA	Solid	8015NM Prep	
LCSD 880-27170/3-A	Lab Control Sample Dup	Total/NA	Solid	8015NM Prep	
890-2387-A-61-C MS	Matrix Spike	Total/NA	Solid	8015NM Prep	
890-2387-A-61-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015NM Prep	

Analysis Batch: 27267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
880-15716-1	6/9 NSW	Total/NA	Solid	8015 NM	

Lab Chronicle

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Client Sample ID: 6/9 NSW
Date Collected: 06/09/22 00:00
Date Received: 06/09/22 16:18

Lab Sample ID: 880-15716-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015 NM		1			27267	06/10/22 09:46	AJ	XEN MID
Total/NA	Prep	8015NM Prep			10.02 g	10 mL	27170	06/09/22 17:00	DM	XEN MID
Total/NA	Analysis	8015B NM		1			27127	06/10/22 03:30	AJ	XEN MID

Laboratory References:
XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Accreditation/Certification Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Laboratory: Eurofins Midland

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704400-21-22	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015 NM		Solid	Total TPH

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Method	Method Description	Protocol	Laboratory
8015 NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015B NM	Diesel Range Organics (DRO) (GC)	SW846	XEN MID
8015NM Prep	Microextraction	SW846	XEN MID

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

XEN MID = Eurofins Midland, 1211 W. Florida Ave, Midland, TX 79701, TEL (432)704-5440

Sample Summary

Client: Etech Environmental & Safety Solutions
Project/Site: Astro Dog 6-Inch

Job ID: 880-15716-1
SDG: Rural Eddy Co., NM

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
880-15716-1	6/9 NSW	Solid	06/09/22 00:00	06/09/22 16:18

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Login Sample Receipt Checklist

Client: Etech Environmental & Safety Solutions

Job Number: 880-15716-1
SDG Number: Rural Eddy Co., NM

Login Number: 15716

List Number: 1

Creator: Rodriguez, Leticia

List Source: Eurofins Midland

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	

Appendix E

Regulatory Correspondence

From: [Karolanne Hudgens](#)
To: [Hamlet, Robert, EMNRD](#); "stucker@blm.gov"
Cc: [Bratcher, Mike, EMNRD](#); [Camille J Bryant](#)
Subject: [EXTERNAL] Astro Dog Release Site nAPP2204733624 - Discussion Notes
Date: Wednesday, May 11, 2022 12:14:19 PM

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Per the conference call between Plains, NMOCD and BLM, the following was discussed regarding the Astro Dog 6-inch, hereinafter referred to as the 'Site':

- The release at the Site was caused by a third-party line strike on the Plains Astro Dog 6-inch pipeline on February 14, 2022.
- The majority of the excavation has been vertically and/or horizontally delineated, with the exception of the north/northwest sidewall/floor and the west sidewall and floor.
- The lithology of the excavation area is mostly resilient hard rock (capable of breaking a hammerhoe) with interbedded lenses of more porous material (on average approximately 6" – 8" in thickness).
- Our main issue at the site has been chasing relatively low-level hydrocarbon impacts within these lenses to beneath a 16-inch Crestwood high-pressure gas line, which runs through the site from the southwest to the northeast and comprises the north/northwest boundary of the excavation.
- Plains is currently waiting on sample results from the western floor to determine if delineation has been achieved.
- Due to the location of the Crestwood gas line to the excavation area, and the safety risks associated with excavation of the hard rock material in proximity to the line, Plains requested an alternative method of remediation for this area.
- Plains also requests an extension for completion of remediation to closure at the Site.

Based on the results of the conference call, the following site activities have been agreed upon:

- The NMOCD will grant Plains an extension for completion of remediation activities at the Site.
- Plains will continue to delineate the area to the west, if applicable based on the sample results, where it is viable to excavate and collect samples to confirm delineation.
- Plains will treat the affected portion of the north/northwest sidewall of the excavation that is in proximity to the Crestwood gas line with an application of a 30% hydrogen peroxide solution utilizing a slow applicator dripper to ensure penetration into the hydrocarbon affected lenses. Plains will treat only the affected areas of the sidewall at or below 14 feet below ground surface (bgs).
- Plains will complete two (2) applications of the hydrogen peroxide treatment, and then collect samples for analysis. Based on the results of the soil samples, viability of the treatment will be determined and reviewed/discussed on another conference call with Plains, NMOCD and BLM. The effectiveness of the treatment and/or the need for further site remediation activities will be discussed at this time.

Plains greatly appreciates your time, and will follow-up with a conference call meeting invite once information is available regarding the sample results from the hydrogen peroxide treatment.

Thanks,

Karolanne Hudgens

HSE Remediation Specialist II
Plains All American
1106 Griffith Drive
Midland, Texas 79706
Office: 432.221.7921
Mobile: 575.200.5517

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From: [Hamlet, Robert, EMNRD](#)
To: [Camille J Bryant](#); ["Tucker, Shelly J"](#); [Bratcher, Mike, EMNRD](#)
Cc: [Karolanne Hudgens](#); ["Joel Lowry"](#)
Subject: RE: [EXTERNAL] FW: Plain's/San Mateo - Astro Dog 6-Inch - Project Update
Date: Thursday, July 7, 2022 11:47:00 AM

Camille,

Please, go ahead and backfill the excavation. The OCD grants approval of the remediation activities at the Astro Dog 6" Line Strike Release Site. A best case effort was put forth to remediate the affected lenses within the hardened rock. Thank you for your efforts.

Regards,

Robert Hamlet • Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
575.909.0302 | robert.hamlet@state.nm.us
<http://www.emnrd.state.nm.us/OCD/>



From: Camille J Bryant <CJBryant@paalp.com>
Sent: Thursday, July 7, 2022 8:47 AM
To: 'Tucker, Shelly J' <stucker@blm.gov>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>
Cc: Karolanne Hudgens <KHudgens@paalp.com>; 'Joel Lowry' <joel@etechenv.com>
Subject: RE: [EXTERNAL] FW: Plain's/San Mateo - Astro Dog 6-Inch - Project Update

Good morning,

Plains is submitting this follow-up email to address the status of the Astro Dog 6" Line Strike Release Site (NMOCD Incident # nAPP2204733624). As indicated below, the BLM has granted approval of the remediation activities at the Astro Dog 6" Line Strike Release Site, these activities include excavation and transportation off-site of approximately 5,928 cubic yards of crude oil impacted material and application of a 30% hydrogen peroxide solution to an area located directly beneath a high-pressure gas pipeline. These activities were discussed and approved during a meeting in May 2022 with the BLM, NMOCD, Etech and Plains representatives. The area where the hydrogen peroxide solution was applied was the only area which exhibited TPH concentrations above NMOCD regulatory guidelines. This area was saturated with the solution and confirmation soil samples were obtained and submitted for laboratory analysis. The laboratory analytical results indicated a TPH concentration of 386 mg/Kg (please see detailed description of remediation activities below).

Due to safety concerns associated with excavating beneath the high-pressure gas pipeline and the limited area of impact remaining in-situ, Plains respectfully requests NMOCD approval to conduct backfilling activities at the site. On completion of backfilling activities a Remediation Summary and Closure Request along with a Final C-141 will be submitted for approval to the NMOCD and BLM.

Please contact Joel Lowry or myself with any questions or concerns.

Plains appreciates your assistance with regard to this matter.

Respectfully,

Camille J. Bryant
HSE Remediation Supervisor
Plains All American
1106 Griffith Drive
Midland, Texas 79706
Office: 432.221.7924
Cell: 575.441.1099

From: Tucker, Shelly J <stucker@blm.gov>
Sent: Thursday, June 30, 2022 12:06 PM
To: Camille J Bryant <CJBryant@paalp.com>; mike.bratcher@state.nm.us;
robert.hamlet@state.nm.us
Cc: Karolanne Hudgens <KHudgens@paalp.com>; 'Joel Lowry' <joel@etechnv.com>
Subject: Re: [EXTERNAL] FW: Plain's/San Mateo - Astro Dog 6-Inch - Project Update [External]

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Upon review of the information provided, the BLM hereby approves backfilling activities. The BLM acknowledges the impact (which is above NMOCD guidelines) being left in place. Based on the dense subsurface rock, depth and width of the excavation, and estimated volume of impacted material being left in place, the BLM feels Plains has made a good faith effort in removing all impacted material. The BLM feels that further excavation activities could result in elevated safety issues for the contractors on site and potentially for the public driving on US Refinery Rd (due to the fact the excavation is directly next to the roadway).

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
Realty - Compliance

Bureau of Land Management

620 E. Greene St
Carlsbad, NM 88220

575.234.5706 - Direct
575.499.6831 - Mobile

stucker@blm.gov

*Please note a new spill/release email account has been set up. Please forward future email notifications for **spills/releases only** to this central email to ensure if I am unavailable, my supervisor will be able to assist with any questions.*

Spill/Release email: BLM_NM_CFO_REALTY_SPILL@BLM.GOV

From: Camille J Bryant <CJBryant@paalp.com>
Sent: Tuesday, June 14, 2022 7:49 AM
To: mike.bratcher@state.nm.us <mike.bratcher@state.nm.us>; robert.hamlet@state.nm.us <robert.hamlet@state.nm.us>; Tucker, Shelly J <stucker@blm.gov>
Cc: Karolanne Hudgens <KHudgens@paalp.com>; 'Joel Lowry' <joel@etechenv.com>
Subject: [EXTERNAL] FW: Plain's/San Mateo - Astro Dog 6-Inch - Project Update

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good Morning,

Please see the email below and the attached information packet describing remediation activities conducted at the Astro Dog 6" Line Strike Release Site (NMOCD Incident # nAPP2204733624). At this time Plains respectfully requests approval to conduct backfilling activities at the site. On completion of backfilling activities a Remediation Summary and Closure Request along with a Final C-141 will be submitted for approval to the NMOCD and BLM.

Please contact Joel Lowry or myself with any questions or concerns.

Plains appreciates your assistance with regard to this matter.

Respectfully,

*Camille J. Bryant
HSE Remediation Supervisor
Plains All American
1106 Griffith Drive
Midland, Texas 79706*

Office: 432.221.7924

Cell: 575.441.1099

From: Joel Lowry <joel@etechnv.com>

Sent: Monday, June 13, 2022 4:06 PM

To: Camille J Bryant <CJBryant@paalp.com>; Karolanne Hudgens <KHudgens@paalp.com>

Subject: FW: Plain's/San Mateo - Astro Dog 6-Inch - Project Update [External]

Caution: The email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Mrs. Bryant,

Please find attached an information packet that has been prepared for the Plains/San Mateo Astro Dog 6-Inch crude oil release site. On February 14, 2022, a contractor for an unaffiliated pipeline operator inadvertently struck a 6-inch pipeline belonging to Plains while conducting pipelining activities in the area. The release was limited to the open bell hole. On February 14, 2022, Matador/San Mateo reported the release to NMOCD and the incident was assigned NMOCD Incident Number **nAPP2204566669**. On February 16, 2022, Plains prepared its own NOR and C-141 and the release was assigned incident number **nAPP2204733624**. The initial report indicated approximately 12 barrels of crude oil were released. During initial response activities a vacuum truck was utilized to recover approximately 11 barrels of crude oil. Upon completion of Remediation Activities C-141's will be prepared to cover both incidents.

On February 22, 2022, remediation activities commenced at the release site. Impacted material within the release margins was excavated and stockpiled on-site, atop an impermeable liner, pending final disposition at an NMOCD surface waste facility. Upon beginning remediation activities it was determined that a hammer hoe would be required to remove affected material at the release site.

On March 3, 2022, Etech collected six (6) samples (FL-1 @ 14', FL-2 @ 12', ESW #1, ESW #2, NSW #1 and SSW #1) from the floor and sidewalls of the recently excavated area. The collected samples were submitted to an NMOCD-certified laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples. Excavation of impacted material continued toward the west.

On March 10, 2022, Etech collected six (6) samples (FL-3 @ 14', FL-4 @ 14', FL-5 @ 14.5', FL-6 @ 14.5', NW #2 and SW#2) from the floor and sidewalls of the recently excavated area. Laboratory analytical results indicated BTEX and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples. TPH concentrations ranged from less than the laboratory reporting limit in sample SW #2 to 999 mg/kg in sample FL-3 @ 14'. TPH concentrations exceeded the NMOCD Closure Criteria in each of the submitted samples with the exception of sample SW #2. Excavation activities continued toward the west and the floor and sidewalls of the excavated area were advanced in the areas characterized by samples FL-3 @ 14', FL-4 @ 14', FL-5 @ 14.5', FL-6 @ 14.5' and NW #2.

On March 23, 2022, Etech collected six (6) samples (FL-3b @ 16', FL-4b @ 16', FL-5b @ 14', NSW #2b, NSW #3, and SSW #3) from the floor and sidewalls of the recently excavated area. Laboratory analytical results indicated that BTEX and/or chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples. TPH concentrations were below the NMOCD Closure Criteria in each of the submitted samples with the exception of samples FL-4b @ 16' (155 mg/kg), NSW #2b (886 mg/kg) and NSW #3 (341 mg/kg). Impacted material in the area characterized by sample FL-4b @ 16' was removed. Further advancement of the north sidewall in the area characterized by samples NSW #2b and NSW #3 was limited due to safety concerns associated with the continued use of the hammer in such close proximity to an active 16-inch high-pressure gas line binding the Site toward the north.

On March 24, 2022, Etech collected one (1) sample (FL-6b @ 17') from the floor of the recently excavated area. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations which were determined to be less than the laboratory MDL. Excavation activities continued toward the west.

On April 1, 2022, Etech collected one (1) sample (FL-4c @ 17') from the floor of the recently excavated area. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations which were determined to be 93.4 mg/kg. Excavation activities continued toward the west.

On April 8, 2022, Etech advanced an investigative trench (NT) on the north side of the high-pressure gas line in the areas characterized by soil samples NSW #2b and NSW #3. During the advancement of the investigative trench, three (3) soil samples (NT-10', NT-15' and NT-20') were collected and submitted to the laboratory for analysis of BTEX and TPH concentrations which were determined to be below the applicable laboratory MDL in each of the submitted soil samples. Based on laboratory analytical results it was determined that impacts did not migrate horizontally toward the north beyond the high-pressure gas line.

On April 27, 2022, Etech collected three (3) samples (FL-7 @ 16-18', FL-10 @ 18' and SWSW) from the floor and sidewalls of the recently excavated area. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and chloride concentrations. Laboratory analytical results indicated that BTEX and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples. TPH concentrations were below the NMOCD Closure Criteria in each of the submitted samples with the exception of sample SWSW (1,840 mg/kg). Excavation activities continued toward the west and the sidewall of the excavation was advanced in the area characterized by sample SWSW.

On May 10, 2022, Etech collected three (3) samples (FL-5b, FL-8 and FL-9) from the floor of the recently excavated area. The collected soil samples were submitted to the laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated BTEX and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples. TPH concentrations ranged from 70.4 mg/kg in sample FL-5b to 1,680 mg/kg in sample FL-8. Excavation activities continued toward the west and the floor of the excavated area was advanced in the areas characterized by samples FL-8 and FL-9.

On May 11, 2022, representatives of Plains, the NMOCD and BLM met to discuss the remediation Site. During the meeting it was determined that the removal of hydrocarbon impacts on the north sidewall beneath the high-pressure gas line posed a significant safety risk and was impracticable. Since the impacted areas were limited to two small porous lenses between 12 and 14 ft. bgs and did not extend toward the north beyond the high-pressure gas line, saturating the affected areas with a 30% hydrogen peroxide solution may be sufficient to mitigate the contaminants.

On May 12, 2022, Etech collected two (2) samples (SWSWb and WSW #1) from sidewalls of the recently excavated area. The collected samples were submitted to the laboratory for analysis of BTEX, TPH and/or chloride concentrations. Laboratory analytical results indicated that BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples with the exception of the chloride concentration in soil sample WSW #1 which was determined to be 964 mg/kg. Excavation activities continued toward the west and the sidewall of the excavation was advanced in the area characterized by sample WSW #1.

On May 20, 2022, Etech collected six (6) samples (FL-8b, FL-9b, FL-11, FL-12, WSW #1b and WSW #2) from the floor and sidewalls of the recently excavated area. The collected samples were submitted to the laboratory for analysis of BTEX, TPH and/or chloride. Laboratory analytical results indicated BTEX, TPH and chloride concentrations were below the NMOCD Closure Criteria in each of the submitted samples. In addition, Etech treated the impacted areas on the north sidewall proximate to the high-pressure gas line by saturating it with a 30% hydrogen peroxide solution.

On June 3, 2022, Etech collected one (1) sample (6/3 NSW) from the treated area characterized by soil samples NSW #2b and NSW #3. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations which were determined to be 1,440 mg/kg. Upon collecting the sample, the affected area was saturated with a 30% hydrogen peroxide solution.

On June 6, 2022, Etech collected one (1) sample (6/6 NSW) from the treated area characterized by

soil samples NSW #2b and NSW #3. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations which were determined to be 1,630 mg/kg. Upon collecting the sample, the affected area was saturated with a 30% hydrogen peroxide solution.

On June 8, 2022, Etech collected one (1) sample (6/8 NSW) from the treated area characterized by soil samples NSW #2b and NSW #3. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations which were determined to be 784 mg/kg. Upon collecting the sample, the affected area was saturated with a 30% hydrogen peroxide solution.

On June 9, 2022, Etech collected one (1) sample (6/9 NSW) from the treated area characterized by soil samples NSW #2b and NSW #3. The collected soil sample was submitted to the laboratory for analysis of TPH concentrations which were determined to be 382 mg/kg.

Remediation activities were conducted in accordance with the BLM and NMOCD. During the course of remediation activities approximately 5,928 cubic yards of impacted material was excavated with a hammer hoe and transported to an NMOCD-approved surface waste facility for disposal. Based on laboratory analytical results and remediation activities conducted to date, Etech recommends Plains request permission to backfill the excavated area with locally-sourced, non-impacted material. Upon completion of backfilling activities, a *Remediation Summary and Closure Request* (C-141) will be prepared detailing remediation activities and laboratory analytical results from confirmation soil samples for submission to the NMOCD.

If you have any questions or need any additional information, please feel free to contact me by phone or email. Thanks.

Joel W. Lowry

Etech Environmental & Safety Solutions, Inc.
3100 Plains Highway
Lovington, NM 88260
Office: (575) 396-2378
Fax: (575) 396-1429
Cell: (432) 466-4450

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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 148443

CONDITIONS

Operator: PLAINS MARKETING L.P. 333 Clay Street Suite 1900 Houston, TX 77002	OGRID: 34053
	Action Number: 148443
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
rhamlet	We have received your closure report and final C-141 for Incident #NAPP2204733624 PLAINS ASTRO DOG 6 INCH, thank you. This closure is approved.	1/27/2023