MILAGRO GAS PLANT

RELEASE DELINEATION AND DEFERRAL REQUEST

JANUARY 16, 2020

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

State of New Mexico
Energy Minerals and Natural Resources Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NRM2210139687
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party: Harvest Four Corners, LLC	OGRID 37388
Contact Name: Monica Smith	Contact Telephone: (505) 632-4625
Contact email: msmith@harvestmidstream.com	Incident # *(assigned by OCD)*
Contact mailing address: 188 CR 4900, Bloomfield, NM 87413	

Location of Release Source

Latitude 36.735966 Longitude -107.841185
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Milagro Gas Plant	Site Type: Gas Plant
Date Release Discovered: October 20, 2019	API# *(if applicable)*

Unit Letter	Section	Township	Range	County
O	12	29N	11W	San Juan

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☒ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☒ Natural Gas	Volume Released (Mcf): 252.7	Volume Recovered (Mcf)
☒ Other (describe)	Volume/Weight Released (provide units): 8 bbls amine/water solution	Volume/Weight Recovered (provide units): 10 cy impacted soil

Cause of Release: Milagro Plant had a plant upset 10/20/2019 in which the Foxboro analog input card failed, which contained Train 3 contactor level transmitter, without indication. This caused the loss of the liquid seal in the bottom of the contactor and sent inlet pressure, approximately 885 psig, to the amine flash tank which has two 6”x8” PSV’s to atmosphere. There is another 4”x6” PSV, on the liquid leg, downstream of the flash tank but upstream of the control valve that also lifted. The liquid PSV discharges to atmosphere, but into an makeshift catch tank which is approximately 4’ tall and 12’ in diameter, with roughly a 4 ft hole cut in the top. The catch tank is of full of amine, but we have an estimated 8 barrels of 50% water and 50% amine that made it outside of the catch tank and onto the ground. Release stopped/ contained and facility placed back into services. No emergency personnel required.

State of New Mexico
Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☒ No	If YES, for what reason(s) does the responsible party consider this a major release?

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?
Immediate notification was provided to Cory Smith via email by Monica Smith on October 20, 2019.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☒ The source of the release has been stopped.
☒ The impacted area has been secured to protect human health and the environment.
☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why: Approximately 10 cubic yards of impacted soil were removed with hand tools from the release area. Further excavation is not feasible at this time due to access restraints and potential damage to onsite equipment related to the active gas plant. Delineation soil samples have been collected at the site and are further described in the attached report. A deferral is being requested for the impacted soil remaining on the property.

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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.

Printed Name: _____Monica Smith_____ Title: _____EH&S Specialist_____

Signature: _____MonicaSmith_____ Date: ___1/17/19_____

email: ____msmith@harvestmidstream.com_____ Telephone: _____ (505) 632-4625 ___

OCD Only

Received by: _Ramona Marcus_____ Date: 4/11/2022_____

Incident ID	NRM2210139687
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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?	50-100 (ft bgs)
Did this release impact groundwater or surface water?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☒ 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)?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☒ 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?	☐ Yes ☒ No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☒ No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☒ No
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☒ No
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☒ No
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☒ No
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☒ No
Did the release impact areas **not** on an exploration, development, production, or storage site?	☐ Yes ☒ 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.

State of New Mexico
Oil Conservation Division

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Printed Name: ____Monica Smith_____ Title: _____EH&S Specialist_____

Signature:_____Monica Smith_____ Date: _____1/17/2020_____

email: __ msmith@harvestmidstream.com _____ Telephone: (505) 632-4625

OCD Only

Received by: __Ramona Marcus_____ Date: 4/11/2022

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Oil Conservation Division

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Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☒ Extents of contamination must be fully delineated.

☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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.

Printed Name: ____Monica Smith_____ Title: _____EH&S Specialist_____

Signature: _____Monica Smith_____ Date: __1/17/2020_____

email: _____ msmith@harvestmidstream.com _____ Telephone: _(505) 632-4625 _____

OCD Only

Received by: ___Ramona Marcus_____ Date: 4/11/2022

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Nelson Velez Date: 05/18/2022

LT Environmental, Inc.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096

January 16, 2020

Mr. Cory Smith
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Release Delineation and Deferral Request
Harvest Four Corners, LLC
Milagro Gas Plant
San Juan County, New Mexico

Dear Mr. Smith:

LT Environmental, Inc. (LTE), on behalf of Harvest Four Corners, LLC (Harvest), presents the following Release Delineation and Deferral Request (Request) detailing soil sampling and site delineation activities at the Milagro Gas Plant (Site). The Site is located in Section 12, Township 29 North, Range 11 West, in San Juan County, New Mexico (Figure 1). The purpose of the soil sampling and delineation activities was to confirm the presence or absence of impacts to soil following a release of amine/water solution at the Site. Based on field observations, field screening, and laboratory analytical results from soil sampling activities, Harvest is submitting this Deferral Request for the release at the Site.

RELEASE BACKGROUND

On October 20, 2019, a pipe seal failed, causing liquid amine/water solution to be discharged into an above ground relief tank that measures approximately 4 feet tall and 12 feet in diameter. With this discharge, the tank overflowed and caused approximately eight barrels (bbls) of amine/water solution to be released onto the ground within the gas plant onto structural fill and crushed aggregate. On October 21 and 22, 2019, Harvest personnel were able to use hand tools to remove the top two to four inches of impacted material (comprised of soil and gravel) with observable odors and/or staining. Approximately 10 cubic yards of material was removed and disposed of offsite at Industrial Ecosystems, Inc (IEI), located in Aztec, New Mexico.

Harvest reported the release to the New Mexico Oil Conservation Division (NMOCD) via email on October 20, 2019. A Release Notification and Corrective Action Form C-141 (Form C-141) has been prepared for this release and is included with this report.

SITE DESCRIPTION AND CLOSURE CRITERIA

LTE characterized the Site according to Table 1, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29, Section 12 (19.15.29.12) of the New Mexico Administrative Code (NMAC). Depth to groundwater at the Site is estimated to be between 50 feet and 100 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is New Mexico Office of State Engineer (NMOSE) well SJ 03023, located approximately 3,430 feet southeast of the Site. The groundwater well has a depth to groundwater of approximately 65 feet bgs and a total depth of 90 feet bgs. Ground surface elevation at the groundwater well location is approximately 5,653 feet above mean sea level (amsl), which is approximately 55 feet lower in elevation than the Site. The average depth to groundwater in all permitted wells with documented depth to groundwater information and within one mile of the Site is 93 feet bgs.

The closest significant watercourse to the Site is an intermittent dry wash, and a first order tributary to Hare Canyon, located approximately 1,055 feet southwest of the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is located in a low potential karst area. Figure 2 shows the Site in relation to the above potential receptors.

Based on the results of the Site Characterization, the following NMOCD Table 1 Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH)-gasoline range organics (GRO) and TPH-diesel range organics (DRO): 1,000 mg/kg
- TPH: 2,500 mg/kg
- Chloride: 10,000 mg/kg

INITIAL SOIL SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

Harvest personnel removed the top two to four inches of impacted material immediately after the release occurred. Due to heavy density of existing above- and below-ground active infrastructure, as well as the composition of the subsurface material, soil removal was limited to manual removal with shovels. Figure 3 shows the general area of the Site impacted by the release. On October 25, 2019, LTE collected soil samples from the area of the release to assess the presence or absence of impacted soil following the initial hand-excavation activities. Due to

size of the impacted area, seven composite soil samples were collected from the excavated area (one composite sample from every approximately 200 square feet). All samples were collected using a hand shovel to a depth of approximately 0.5 feet bgs (below the original ground surface elevation). Figure 4 depicts the area of the release and the seven areas from which composite samples were collected.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were shipped at or below 4 degrees Celsius (°C) under strict chain-of-custody (COC) procedures to Hall Environmental Analysis Laboratory (Hall) in Albuquerque, New Mexico for the following analysis:

- BTEX by United States Environmental Protection Agency (EPA) Method 8021B
- TPH-GRO, TPH-DRO, and TPH-motor oil range organics (MRO) by EPA Method 8015M/D
- Chloride anion by EPA Method 300.0
- pH by Method SM4500H+B / EPA9040C

Analytical results indicated that elevated TPH-DRO concentrations were present in all of the composite soil samples collected. Total TPH-GRO and TPH-DRO concentrations and TPH concentrations exceeded the Closure Criteria. The pH results ranged from 9.24 to 9.57 standard units. BTEX compounds and chloride concentrations were not detected in any of the composite soil samples above laboratory-reporting limits. Laboratory analytical reports and COC documentation for the initial soil samples are included as Attachment 1.

DELINEATION SOIL SAMPLING AND ANALYTICAL RESULTS

Based on the analytical results of the initial soil-sampling effort, LTE collected additional soil samples in November and December 2019 in order to vertically and laterally delineate residual soil impacts at the Site. Two locations, SS08 and SS09, were advanced within the excavation area to the maximum extent possible with a hand auger. Two soil samples were collected from each location, one at 0.25 feet bgs and one at 0.5 feet bgs (below the original ground surface elevation). In addition, soil samples were collected in each cardinal direction outside of the release footprint to delineate the lateral extent of impacted soil (locations SS10 through SS13). Two soil samples were collected at each location, one at 0.25 feet bgs and one at 0.75 feet bgs. Sampling locations are depicted on Figure 5. Field screening results and observations for each sample location were logged on lithologic/soil sampling logs, which are included in Attachment 2.

The soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples

were shipped at or below 4 °C under strict COC procedures to Hall in Albuquerque, New Mexico for TPH-DRO analysis. Laboratory analytical results indicate that TPH-DRO concentrations exceed the Closure Criteria in soil samples SS08 and SS09 at a depth of 0.25 feet. TPH-DRO was detected at SSS08 and SS09 in the soil samples collected at 0.5 feet bgs at concentrations below the NMOCD Closure Criteria. TPH-DRO was not detected above laboratory-reporting limits in any of the remaining soil samples collected during the delineation activities.

Laboratory analytical reports and COC documentation for the delineation soil samples also are included as Attachment 1. A photographic log from the sampling is included as Attachment 3.

DEFERRAL REQUEST

Following the release, Harvest initiated manual excavation efforts around active infrastructure and equipment. As much soil as possible was removed from the Site without disrupting active operations. Subsequent confirmation soil-sampling activities conducted by LTE indicated that impacted soil remains in a limited area at the Site at depths less than 0.5 feet bgs. Laboratory analytical results at soil sample locations SS10, SS11, SS12, and SS13 indicate that the lateral and vertical extent of the release have successfully been delineated. Vertical delineation was established at 0.5 feet bgs. Based on the aerial extent of the impact and delineation soil sampling results, approximately 60 cubic yards of impacted soil remain in place at the Site. The approximate extent of the release and area with remaining impacted soil is presented on Figure 5.

Based on the results presented in this report, LTE and Harvest do not believe deferment of the remaining impacted soil will result in imminent risk to human health, the environment, or groundwater. Specifically, imminent risk is not believed to be present at the Site because heavily impacted soil has been removed and disposed off-Site, depth to groundwater is greater than 50 feet bgs, and impacted soil remaining at the Site is at depths less than 0.5 feet. Additionally, based on the nature of the soil within this area of the Site (structural fill for equipment and machinery related to the gas plant operations) and the access restrictions presented by the gas plant equipment/machinery, further soil removal is not feasible at this time. In accordance with 19.15.29.12 C NMAC. (2), Harvest is proposing to leave in place approximately 60 cubic yards of impacted soil at the Site until facility closure and deconstruction. Accordingly, Harvest requests deferral of final remediation at the Site.

If you have any questions or comments, please do not hesitate to contact Ms. Brooke Herb at (970) 385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

Stuart Hyde, LG
Project Geologist

Ashley L. Ager, P.G.
Senior Geologist

cc: Monica Smith, Harvest Four Corners, LLC

Attachments:

Figure 1	Site Location Map
Figure 2	Receptor Map
Figure 3	Site Map
Figure 4	Composite Soil Sampling Areas (10/25/2019)
Figure 5	Delineation Soil Sample Locations
Table 1	Soil Analytical Results
Attachment 1	Laboratory Analytical Reports
Attachment 2	Lithologic/Soil Sampling Logs
Attachment 3	Photographic Log

FIGURES

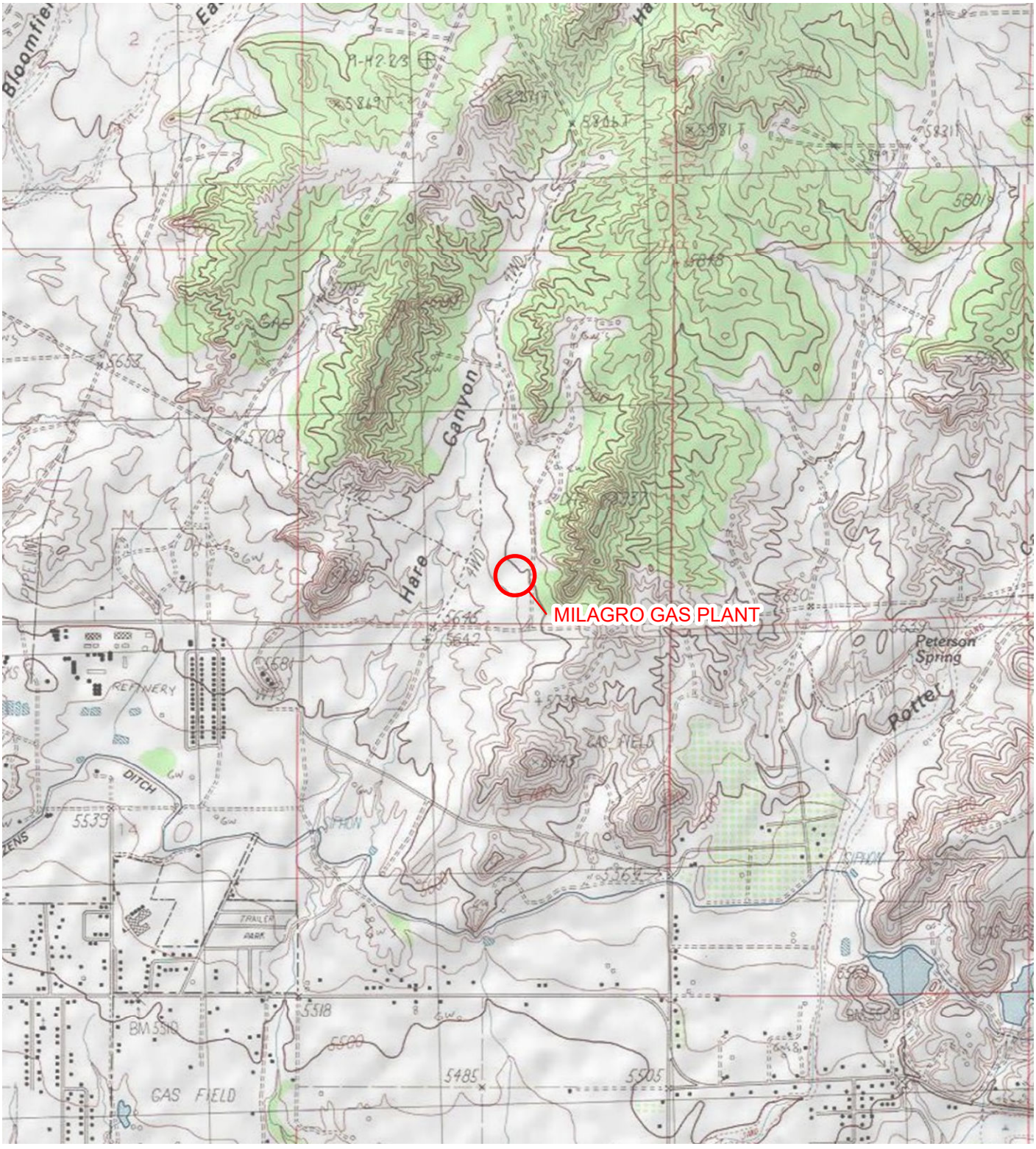

IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

NEW MEXICO

FIGURE 1
SITE LOCATION MAP
MILAGRO GAS PLANT
SEC 12 T29N R11W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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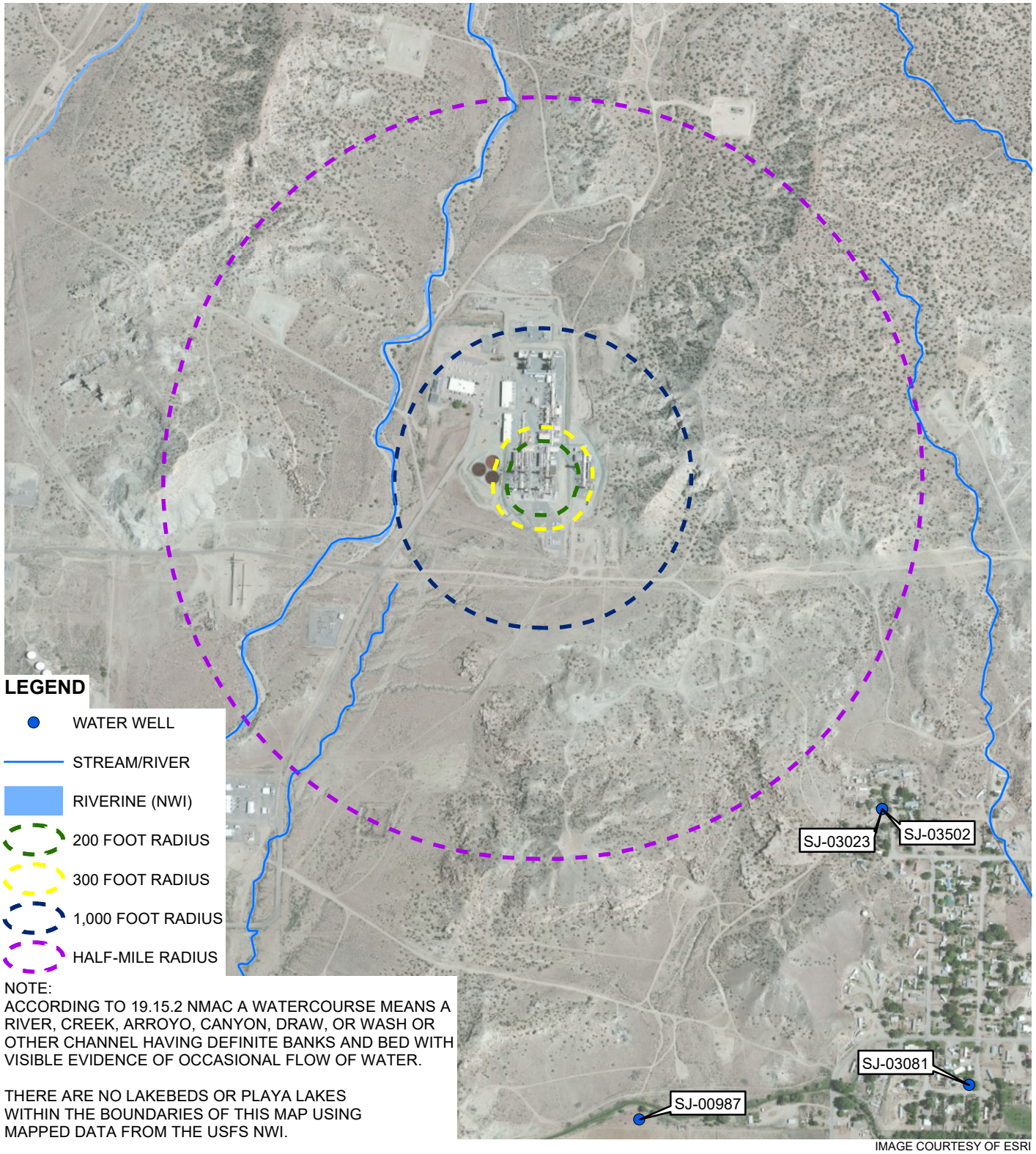

NOTE:
ACCORDING TO 19.15.2 NMAC A WATERCOURSE MEANS A RIVER, CREEK, ARROYO, CANYON, DRAW, OR WASH OR OTHER CHANNEL HAVING DEFINITE BANKS AND BED WITH VISIBLE EVIDENCE OF OCCASIONAL FLOW OF WATER.

THERE ARE NO LAKEBEDS OR PLAYA LAKES WITHIN THE BOUNDARIES OF THIS MAP USING MAPPED DATA FROM THE USFS NWI.

NOTE:
SITE IS NOT WITHIN 300 FEET OF ANY SITES INTENDED FOR HUMAN OCCUPANCY (SIHO). AERIAL AND SATELLITE IMAGERY INTERPRETATION FOR SIHO LOCATIONS WERE CONDUCTED USING GOOGLE EARTH IMAGERY ACQUIRED IN 2019.

NHD: NATIONAL HYDROGRAPHY DATASET
NMAC: NEW MEXICO ADMINISTRATIVE CODE
NWI: NATIONAL WETLAND INVENTORY
USFS: UNITED STATES FISH AND WILDLIFE SERVICE
USGS: UNITED STATES GEOLOGICAL SURVEY

FIGURE 2
RECEPTOR MAP
MILAGRO GAS PLANT
SEC 12 T29N R11W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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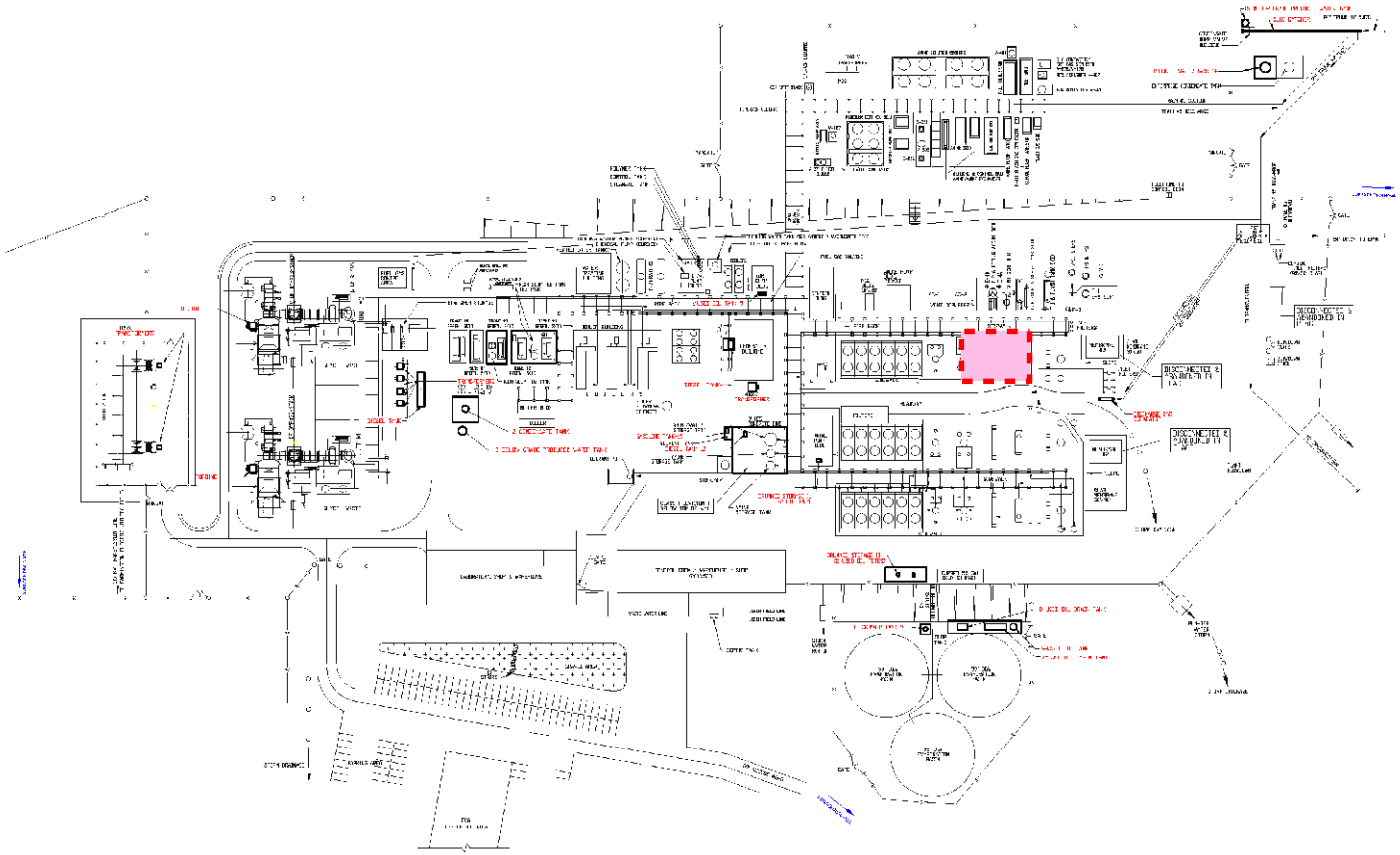

LEGEND

AREA OF RELEASE

0 125 250

Feet

N

FIGURE 3
SITE MAP
MILAGRO GAS PLANT
SEC 12 T29N R11W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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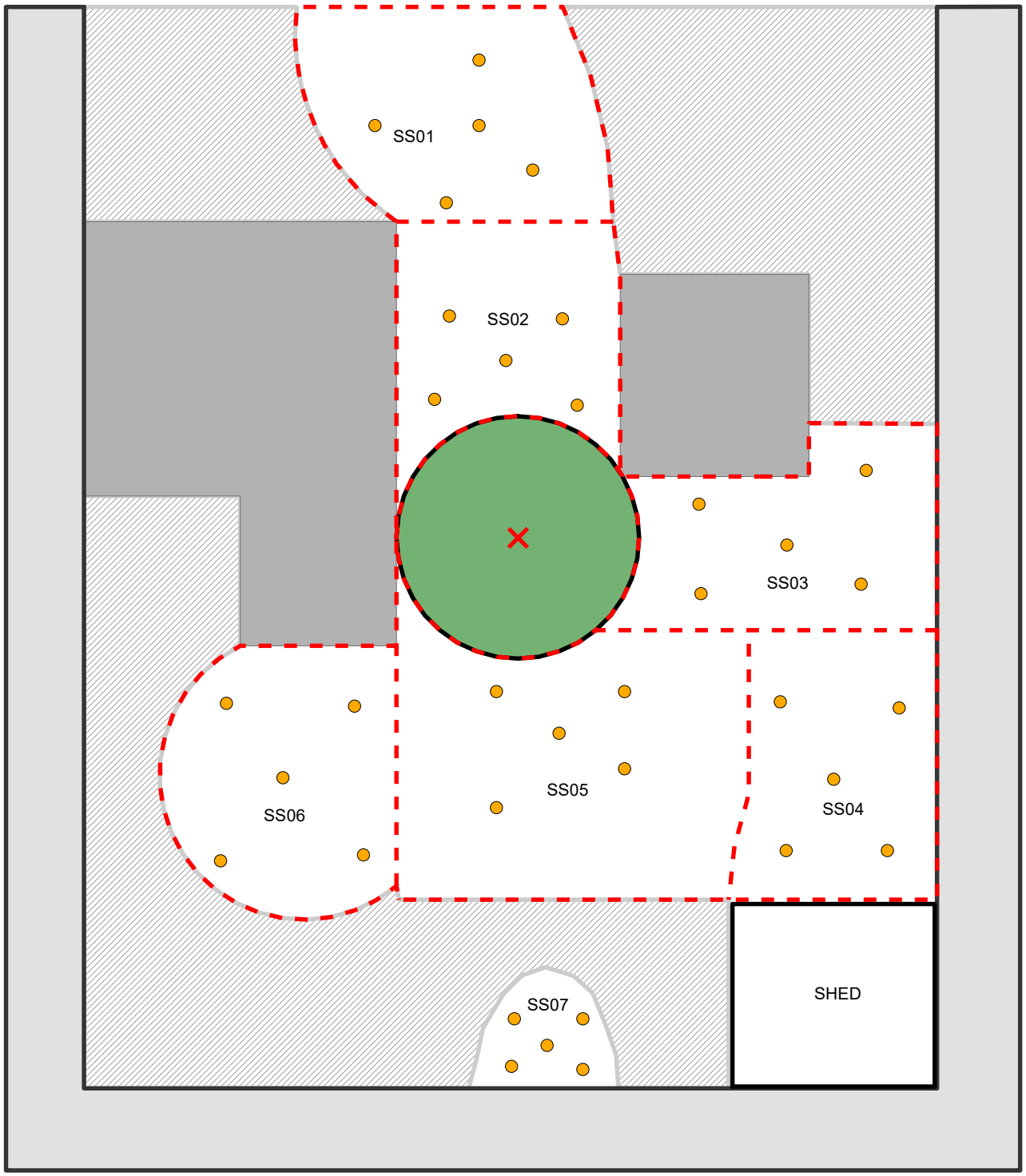

LEGEND

- RELEASE POINT
- SOIL SAMPLE ALIQUOT LOCATION
- EXTENT OF RELEASE/EXCAVATION AND COMPOSITE SAMPLING AREAS
- RELIEF TANK
- CONCRETE PAD
- CONCRETE SIDEWALK
- UNEXCAVATED GRAVEL

0 10 20
Feet

N

FIGURE 4
COMPOSITE SOIL SAMPLING AREAS (10/25/2019)
MILAGRO GAS PLANT
SEC 12 T29N R11W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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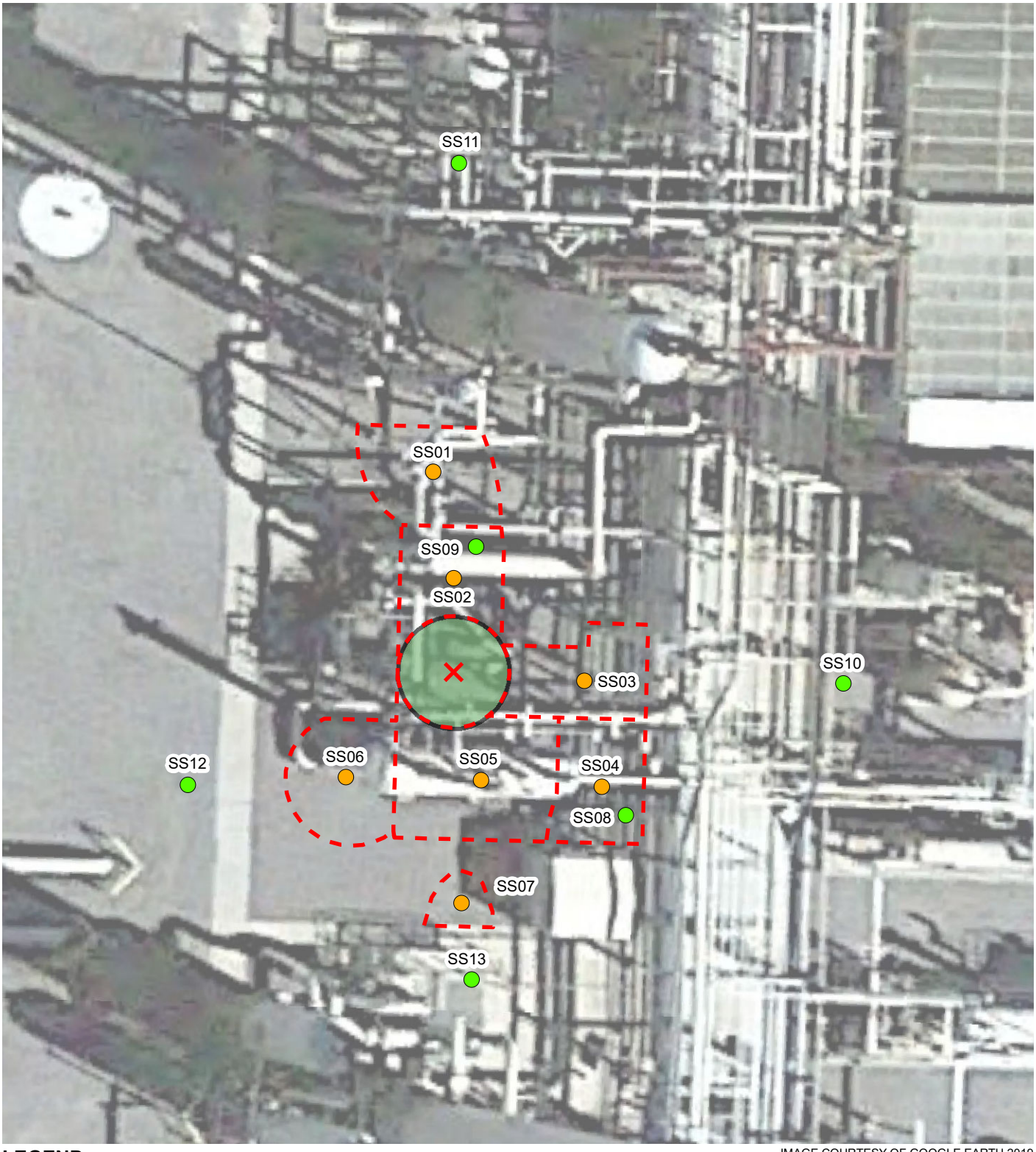

LEGEND

- RELEASE POINT
- COMPOSITE SOIL SAMPLE (10/25/2019)
- DELINEATION SOIL SAMPLE (11/21/2019 & 12/9/2019)
- EXTENT OF RELEASE/EXCAVATION
- RELIEF TANK

IMAGE COURTESY OF GOOGLE EARTH 2019

0 20 40
Feet

N

FIGURE 5
DELINEATION SOIL SAMPLE LOCATIONS
(DECEMBER 2019)
MILAGRO GAS PLANT
SEC 12 T29N R11W
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

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TABLES

TABLE 1
SOIL ANALYTICAL RESULTS

AMINE RELEASE AT MILAGRO GAS PLANT
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Sample Name	Sample Depth (feet bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	MRO (mg/kg)	Total GRO+DRO (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)	pH
Initial Composite-Soil Samples														
SS01	0.5	10/25/2019	<0.024	<0.048	<0.048	<0.096	<0.096	<4.8	4,200	<2,100	**4,200**	**4,200**	<60	9.24
SS02	0.5	10/25/2019	<0.023	<0.046	<0.046	<0.093	<0.093	<4.6	5,300	<2,300	**5,300**	**5,300**	<60	9.32
SS03	0.5	10/25/2019	<0.025	<0.049	<0.049	<0.099	<0.099	<4.9	5,100	<2,300	**5,100**	**5,100**	<60	9.57
SS04	0.5	10/25/2019	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	8,700	<2,100	**8,700**	**8,700**	<60	9.34
SS05	0.5	10/25/2019	<0.025	<0.050	<0.050	<0.10	<0.10	<5.0	7,200	<2,300	**7,200**	**7,200**	<60	9.54
SS06	0.5	10/25/2019	<0.024	<0.049	<0.049	<0.097	<0.097	<4.9	5,900	<2,200	**5,900**	**5,900**	<60	9.41
SS07	0.5	10/25/2019	<0.023	<0.046	<0.046	<0.092	<0.092	<4.6	3,900	<2,300	**3,900**	**3,900**	<60	9.38
Delineation Soil Samples														
SS08@0.25'	0.25	11/21/2019	NT	NT	NT	NT	NT	<4.0	2,600	<430 D	**2,600**	**2,600**	NT	NT
SS08@0.5'	0.5	11/21/2019	NT	NT	NT	NT	NT	<4.1	870	<46	870	870	NT	NT
SS09@0.25'	0.25	12/9/2019	NT	NT	NT	NT	NT	NT	3,400	NT	**3,400**	NT	NT	NT
SS09@0.5'	0.5	12/9/2019	NT	NT	NT	NT	NT	NT	96	NT	96	NT	NT	NT
SS10@0.25'	0.25	12/9/2019	NT	NT	NT	NT	NT	NT	<7.9	NT	<7.9	NT	NT	NT
SS10@0.75'	0.75	12/9/2019	NT	NT	NT	NT	NT	NT	<8.5	NT	<8.5	NT	NT	NT
SS11@0.25'	0.25	12/9/2019	NT	NT	NT	NT	NT	NT	<7.4	NT	<7.4	NT	NT	NT
SS11@0.75'	0.75	12/9/2019	NT	NT	NT	NT	NT	NT	<9.5	NT	<9.5	NT	NT	NT
SS12@0.25'	0.25	12/9/2019	NT	NT	NT	NT	NT	NT	<8.9	NT	<8.9	NT	NT	NT
SS12@0.75'	0.75	12/9/2019	NT	NT	NT	NT	NT	NT	<9.3	NT	<9.3	NT	NT	NT
SS13@0.25'	0.25	12/9/2019	NT	NT	NT	NT	NT	NT	<9.5	NT	<9.5	NT	NT	NT
SS13@0.75'	0.75	12/9/2019	NT	NT	NT	NT	NT	NT	<9.4	NT	<9.4	NT	NT	NT
NMOCD Table 1 Closure Criteria			**10**	NE	NE	NE	**50**	NE	NE	NE	**1,000**	**2,500**	**10,000**	NE

Notes:

bgs - below ground surface
BTEX - benzene, toluene, ethylbenzene, and total xylenes
DRO - diesel range organics
GRO - gasoline range organics
MRO - motor oil range organics
mg/kg - milligrams per kilogram
NMAC - New Mexico Administrative Code
NMOCD - New Mexico Oil Conservation Division
NE - not established
NT - not tested
TPH - total petroleum hydrocarbons
Bold - indicates result exceeds the applicable regulatory standard
< - indicates result is below laboratory reporting limits
Table 1 - closure criteria for soils impacted by a release per NMAC 19.15.29 August 2018

ATTACHMENT 1: LABORATORY ANALYTICAL REPORTS

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

November 05, 2019

Monica Smith

Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL: (505) 632-4475
FAX

RE: Milagro Amine Spill OrderNo.: 1910E03

Dear Monica Smith:

Hall Environmental Analysis Laboratory received 7 sample(s) on 10/26/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS01
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:30:00 AM
Lab ID: 1910E03-001 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	10/30/2019 11:06:21 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	4200	420		mg/Kg	50	10/31/2019 7:26:24 PM	48457
Motor Oil Range Organics (MRO)	ND	2100	D	mg/Kg	50	10/31/2019 7:26:24 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	10/31/2019 7:26:24 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/30/2019 2:11:16 PM	48446
Surr: BFB	117	77.4-118		%Rec	1	10/30/2019 2:11:16 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/30/2019 2:11:16 PM	48446
Toluene	ND	0.048		mg/Kg	1	10/30/2019 2:11:16 PM	48446
Ethylbenzene	ND	0.048		mg/Kg	1	10/30/2019 2:11:16 PM	48446
Xylenes, Total	ND	0.096		mg/Kg	1	10/30/2019 2:11:16 PM	48446
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	1	10/30/2019 2:11:16 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.24			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS02
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:32:00 AM
Lab ID: 1910E03-002 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	10/30/2019 11:18:42 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	5300	450		mg/Kg	50	10/31/2019 7:50:23 PM	48457
Motor Oil Range Organics (MRO)	ND	2300	D	mg/Kg	50	10/31/2019 7:50:23 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	10/31/2019 7:50:23 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/30/2019 3:21:41 PM	48446
Surr: BFB	107	77.4-118		%Rec	1	10/30/2019 3:21:41 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	10/30/2019 3:21:41 PM	48446
Toluene	ND	0.046		mg/Kg	1	10/30/2019 3:21:41 PM	48446
Ethylbenzene	ND	0.046		mg/Kg	1	10/30/2019 3:21:41 PM	48446
Xylenes, Total	ND	0.093		mg/Kg	1	10/30/2019 3:21:41 PM	48446
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	10/30/2019 3:21:41 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.32			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS03
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:35:00 AM
Lab ID: 1910E03-003 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	10/30/2019 11:31:02 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	5100	450		mg/Kg	50	10/31/2019 8:14:25 PM	48457
Motor Oil Range Organics (MRO)	ND	2300	D	mg/Kg	50	10/31/2019 8:14:25 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	10/31/2019 8:14:25 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/30/2019 3:45:08 PM	48446
Surr: BFB	98.0	77.4-118		%Rec	1	10/30/2019 3:45:08 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/30/2019 3:45:08 PM	48446
Toluene	ND	0.049		mg/Kg	1	10/30/2019 3:45:08 PM	48446
Ethylbenzene	ND	0.049		mg/Kg	1	10/30/2019 3:45:08 PM	48446
Xylenes, Total	ND	0.099		mg/Kg	1	10/30/2019 3:45:08 PM	48446
Surr: 4-Bromofluorobenzene	103	80-120		%Rec	1	10/30/2019 3:45:08 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.57			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS04
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:40:00 AM
Lab ID: 1910E03-004 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Chloride	ND	60		mg/Kg	20	10/30/2019 11:43:23 PM	48493
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	8700	430		mg/Kg	50	10/31/2019 8:38:19 PM	48457
Motor Oil Range Organics (MRO)	ND	2100	D	mg/Kg	50	10/31/2019 8:38:19 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	10/31/2019 8:38:19 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/30/2019 4:08:27 PM	48446
Surr: BFB	106	77.4-118		%Rec	1	10/30/2019 4:08:27 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	10/30/2019 4:08:27 PM	48446
Toluene	ND	0.046		mg/Kg	1	10/30/2019 4:08:27 PM	48446
Ethylbenzene	ND	0.046		mg/Kg	1	10/30/2019 4:08:27 PM	48446
Xylenes, Total	ND	0.092		mg/Kg	1	10/30/2019 4:08:27 PM	48446
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	10/30/2019 4:08:27 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.34			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS05
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:45:00 AM
Lab ID: 1910E03-005 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	10/31/2019 11:55:43 AM	48509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	7200	460		mg/Kg	50	10/31/2019 9:02:20 PM	48457
Motor Oil Range Organics (MRO)	ND	2300	D	mg/Kg	50	10/31/2019 9:02:20 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	10/31/2019 9:02:20 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	10/30/2019 4:31:50 PM	48446
Surr: BFB	106	77.4-118		%Rec	1	10/30/2019 4:31:50 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	10/30/2019 4:31:50 PM	48446
Toluene	ND	0.050		mg/Kg	1	10/30/2019 4:31:50 PM	48446
Ethylbenzene	ND	0.050		mg/Kg	1	10/30/2019 4:31:50 PM	48446
Xylenes, Total	ND	0.10		mg/Kg	1	10/30/2019 4:31:50 PM	48446
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	10/30/2019 4:31:50 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.54			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS06
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:47:00 AM
Lab ID: 1910E03-006 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	10/31/2019 12:32:45 PM	48509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	5900	440		mg/Kg	50	10/31/2019 9:26:14 PM	48457
Motor Oil Range Organics (MRO)	ND	2200	D	mg/Kg	50	10/31/2019 9:26:14 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	10/31/2019 9:26:14 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	10/30/2019 4:55:25 PM	48446
Surr: BFB	114	77.4-118		%Rec	1	10/30/2019 4:55:25 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	10/30/2019 4:55:25 PM	48446
Toluene	ND	0.049		mg/Kg	1	10/30/2019 4:55:25 PM	48446
Ethylbenzene	ND	0.049		mg/Kg	1	10/30/2019 4:55:25 PM	48446
Xylenes, Total	ND	0.097		mg/Kg	1	10/30/2019 4:55:25 PM	48446
Surr: 4-Bromofluorobenzene	121	80-120	S	%Rec	1	10/30/2019 4:55:25 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.41			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1910E03**
Date Reported: **11/5/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS07
Project: Milagro Amine Spill
Collection Date: 10/25/2019 10:50:00 AM
Lab ID: 1910E03-007 **Matrix:** SOIL **Received Date:** 10/26/2019 9:53:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	60		mg/Kg	20	10/31/2019 12:45:06 PM	48509
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	3900	470		mg/Kg	50	11/4/2019 3:01:12 PM	48457
Motor Oil Range Organics (MRO)	ND	2300	D	mg/Kg	50	11/4/2019 3:01:12 PM	48457
Surr: DNOP	0	70-130	S	%Rec	50	11/4/2019 3:01:12 PM	48457
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	10/30/2019 6:29:10 PM	48446
Surr: BFB	116	77.4-118		%Rec	1	10/30/2019 6:29:10 PM	48446
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	10/30/2019 6:29:10 PM	48446
Toluene	ND	0.046		mg/Kg	1	10/30/2019 6:29:10 PM	48446
Ethylbenzene	ND	0.046		mg/Kg	1	10/30/2019 6:29:10 PM	48446
Xylenes, Total	ND	0.092		mg/Kg	1	10/30/2019 6:29:10 PM	48446
Surr: 4-Bromofluorobenzene	123	80-120	S	%Rec	1	10/30/2019 6:29:10 PM	48446
SM4500H+B/EPA 9040C						Analyst: **JRR**	
pH	9.38			pH Units	1	11/1/2019 1:39:00 PM	R64162

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1910E03**
05-Nov-19

Client: Harvest
Project: Milagro Amine Spill

Sample ID: **MB-48493**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **48493**	RunNo: **64105**							
Prep Date: **10/30/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193433**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-48493**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **48493**	RunNo: **64105**							
Prep Date: **10/30/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193434**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.3	90	110			

Sample ID: **MB-48509**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBS**	Batch ID: **48509**	RunNo: **64117**							
Prep Date: **10/31/2019**	Analysis Date: **10/31/2019**	SeqNo: **2195081**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID: **LCS-48509**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSS**	Batch ID: **48509**	RunNo: **64117**							
Prep Date: **10/31/2019**	Analysis Date: **10/31/2019**	SeqNo: **2195082**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	99.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1910E03**
05-Nov-19

Client: Harvest
Project: Milagro Amine Spill

Sample ID: **LCS-48457** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **48457** RunNo: **64089**
Prep Date: **10/29/2019** Analysis Date: **10/30/2019** SeqNo: **2192645** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	44	10	50.00	0	88.2	63.9	124			
Surr: DNOP	3.2		5.000		64.8	70	130			S

Sample ID: **MB-48457** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **48457** RunNo: **64089**
Prep Date: **10/29/2019** Analysis Date: **10/30/2019** SeqNo: **2192646** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.4		10.00		84.4	70	130			

Sample ID: **LCS-48458** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **48458** RunNo: **64089**
Prep Date: **10/29/2019** Analysis Date: **10/31/2019** SeqNo: **2193220** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.2	70	130			

Sample ID: **LCS-48459** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **48459** RunNo: **64089**
Prep Date: **10/29/2019** Analysis Date: **10/30/2019** SeqNo: **2193221** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.4		5.000		87.0	70	130			

Sample ID: **MB-48458** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **48458** RunNo: **64089**
Prep Date: **10/29/2019** Analysis Date: **10/31/2019** SeqNo: **2193222** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		102	70	130			

Sample ID: **MB-48459** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **48459** RunNo: **64089**
Prep Date: **10/29/2019** Analysis Date: **10/30/2019** SeqNo: **2193223** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1910E03**
05-Nov-19

Client: Harvest
Project: Milagro Amine Spill

Sample ID: **MB-48446**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **48446**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193023** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.9	77.4	118			

Sample ID: **LCS-48446**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **48446**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193024** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	91.5	80	120			
Surr: BFB	1100		1000		108	77.4	118			

Sample ID: **MB-48453**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **48453**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/31/2019**	SeqNo: **2193052** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1000		1000		100	77.4	118			

Sample ID: **LCS-48453**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **48453**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193053** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	1100		1000		109	77.4	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1910E03**
05-Nov-19

Client: Harvest
Project: Milagro Amine Spill

Sample ID: **MB-48446**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **48446**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193064** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID: **LCS-48453**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **48453**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193065** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.0		1.000		105	80	120			

Sample ID: **1910E03-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS01**	Batch ID: **48446**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193068** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.023	0.9268	0	96.8	76	123			
Toluene	0.91	0.046	0.9268	0.009693	97.3	80.3	127			
Ethylbenzene	0.90	0.046	0.9268	0	96.8	80.2	131			
Xylenes, Total	2.7	0.093	2.780	0	97.4	78	133			
Surr: 4-Bromofluorobenzene	1.0		0.9268		111	80	120			

Sample ID: **1910E03-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **SS01**	Batch ID: **48446**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193070** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.024	0.9479	0	96.6	76	123	2.09	20	
Toluene	0.93	0.047	0.9479	0.009693	96.8	80.3	127	1.74	20	
Ethylbenzene	0.92	0.047	0.9479	0	97.4	80.2	131	2.93	20	
Xylenes, Total	2.8	0.095	2.844	0	98.5	78	133	3.29	20	
Surr: 4-Bromofluorobenzene	1.0		0.9479		109	80	120	0	0	

Sample ID: **MB-48453**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **48453**	RunNo: **64076**
Prep Date: **10/29/2019**	Analysis Date: **10/31/2019**	SeqNo: **2193088** Units: **%Rec**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1910E03**
05-Nov-19

Client: Harvest
Project: Milagro Amine Spill

Sample ID: **MB-48453**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **PBS**	Batch ID: **48453**	RunNo: **64076**							
Prep Date: **10/29/2019**	Analysis Date: **10/31/2019**	SeqNo: **2193088**	Units: **%Rec**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID: **LCS-48446**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**							
Client ID: **LCSS**	Batch ID: **48446**	RunNo: **64076**							
Prep Date: **10/29/2019**	Analysis Date: **10/30/2019**	SeqNo: **2193181**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.025	1.000	0	99.2	80	120			
Toluene	1.0	0.050	1.000	0	99.6	80	120			
Ethylbenzene	0.99	0.050	1.000	0	99.1	80	120			
Xylenes, Total	3.0	0.10	3.000	0	99.7	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1910E03**
05-Nov-19

Client: Harvest
Project: Milagro Amine Spill

Sample ID: **1910E03-002ADUP** SampType: **DUP** TestCode: **SM4500H+B/EPA 9040C**
Client ID: **SS02** Batch ID: **R64162** RunNo: **64162**
Prep Date: Analysis Date: **11/1/2019** SeqNo: **2195425** Units: **pH Units**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	9.34									

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Harvest** Work Order Number: **1910E03** RcptNo: **1**

Received By: **Yazmine Garduno** **10/26/2019 9:53:00 AM** Yazmine Garduno

Completed By: **Yazmine Garduno** **10/26/2019 11:24:46 AM** Yazmine Garduno

Reviewed By: JO 10/28/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

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

Adjusted? _____

Checked by: DAD 10/28/19

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.2	Good				

Chain-of-Custody Record

Client: Monica Smith
Harvest
Mailing Address: 1755 Arroyo Dr
Bloomfield, NM 87413
Phone #: 505-632-4625
email or Fax#: msmith@harvestmidstream.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush
Project Name: Milagro Amine Spill
Project #: 090319039
Project Manager: Stuart Hyde
cc email: shyde@itenv.com
bherb@itenv.com
Sampler: Stuart Hyde
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 1.6+0.6=2.2

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1910E03	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	pH
10/25/19	1030	S	SS01	2, 40z	Cool	-001	X	X					X				X
	1032		SS02			-002	X	X					X				X
	1035		SS03			-003	X	X					X				X
	1040		SS04			-004	X	X					X				X
	1045		SS05			-005	X	X					X				X
	1047		SS06			-006	X	X					X				X
	1050		SS07			-007	X	X					X				X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
10/25/19	1129	Stuart Hyde	Christine Walls		10/25/19	1129
10/25/19	1806	Chr Waet	Tyler	Courier	10/26/19	0953

Remarks:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

December 04, 2019

Stuart Hyde
Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL: (505) 632-4475
FAX

RE: Milagro Amine Release OrderNo.: 1911A76

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 3 sample(s) on 11/22/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1911A76**
Date Reported: **12/4/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: Comp A
Project: Milagro Amine Release
Collection Date: 11/21/2019 1:00:00 PM
Lab ID: 1911A76-001 **Matrix:** SOIL **Received Date:** 11/22/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	1500	97		mg/Kg	10	11/25/2019 12:27:43 PM	48997
Motor Oil Range Organics (MRO)	ND	490		mg/Kg	10	11/25/2019 12:27:43 PM	48997
Surr: DNOP	0	70-130	S	%Rec	10	11/25/2019 12:27:43 PM	48997
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	11/23/2019 2:32:25 AM	48965
Surr: BFB	102	77.4-118		%Rec	1	11/23/2019 2:32:25 AM	48965

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911A76**
Date Reported: **12/4/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS08 @ 0.5'
Project: Milagro Amine Release
Collection Date: 11/21/2019 1:05:00 PM
Lab ID: 1911A76-002 **Matrix:** SOIL **Received Date:** 11/22/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	870	9.2		mg/Kg	1	11/25/2019 11:37:41 AM	48997
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/25/2019 11:37:41 AM	48997
Surr: DNOP	101	70-130		%Rec	1	11/25/2019 11:37:41 AM	48997
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	11/23/2019 3:40:40 AM	48965
Surr: BFB	103	77.4-118		%Rec	1	11/23/2019 3:40:40 AM	48965

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911A76**
Date Reported: **12/4/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Client Sample ID: SS08 @ 0.25'
Project: Milagro Amine Release
Collection Date: 11/21/2019 1:08:00 PM
Lab ID: 1911A76-003 **Matrix:** SOIL **Received Date:** 11/22/2019 8:43:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	2600	86		mg/Kg	10	11/25/2019 12:36:48 PM	48997
Motor Oil Range Organics (MRO)	ND	430	D	mg/Kg	10	11/25/2019 12:36:48 PM	48997
Surr: DNOP	0	70-130	S	%Rec	10	11/25/2019 12:36:48 PM	48997
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	11/23/2019 4:03:25 AM	48965
Surr: BFB	104	77.4-118		%Rec	1	11/23/2019 4:03:25 AM	48965

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1911A76**

04-Dec-19

Client: Harvest

Project: Milagro Amine Release

Sample ID: **LCS-48997** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **48997** RunNo: **64745**

Prep Date: **11/25/2019** Analysis Date: **11/25/2019** SeqNo: **2218777** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.00	0	98.0	63.9	124			
Surr: DNOP	4.1		5.000		82.3	70	130			

Sample ID: **MB-48997** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **48997** RunNo: **64745**

Prep Date: **11/25/2019** Analysis Date: **11/25/2019** SeqNo: **2218779** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		86.6	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1911A76**
04-Dec-19

Client: Harvest
Project: Milagro Amine Release

Sample ID: **MB-48965**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **PBS**	Batch ID: **48965**	RunNo: **64725**							
Prep Date: **11/21/2019**	Analysis Date: **11/22/2019**	SeqNo: **2217895**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		101	77.4	118			

Sample ID: **LCS-48965**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**							
Client ID: **LCSS**	Batch ID: **48965**	RunNo: **64725**							
Prep Date: **11/21/2019**	Analysis Date: **11/22/2019**	SeqNo: **2217896**	Units: **mg/Kg**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	80	120			
Surr: BFB	1200		1000		115	77.4	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Harvest** Work Order Number: **1911A76** RcptNo: 1

Received By: **Yazmine Garduno** **11/22/2019 8:43:00 AM**

Completed By: **Yazmine Garduno** **11/22/2019 10:00:59 AM**

Reviewed By: ENM 11/22/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

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

Adjusted? _____

Checked by: DM 11/22/19

Special Handling (if applicable)

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

Person Notified: _____ Date _____

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

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.6	Good				

Chain-of-Custody Record

Client: Harvest Four Corners
Monica Sandoval
Mailing Address: 1755 Arroyo Drive
Bloomfield, NM 87413
Phone #: 505-947-1852
email or Fax#: msandoval@harvestmidstream.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☐ Standard ☒ Rush TAT
Project Name: Milagro Amine Release
Project #: 0903190 39
Project Manager: Stuart Hyde
Sampler: Mary Mrdjenovich
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 4.3 +0.3 = 4.6

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1911A76	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/21/19	1300	S	Comp A	2, 4oz jars	cool	-001		X							X	
↓	1305	↓	SS08 @ 0.5'	↓	↓	-002		X							X	
↓	1308	↓	SS08 @ 0.25'	↓	↓	-003		X							X	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/21/19	1511	Mary Mrdjenovich	Stuart Hyde		11/21/19	1511
11/21/19	1752	Stuart Hyde	Jen Conner		11/22/19	0843

Remarks: Please hold remaining sample for further analysis. Please let know DRO ASAP. Please cc: bherb@itenv.com & shyde@itenv.com

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
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December 16, 2019

Stuart Hyde
Harvest
1755 Arroyo Dr.
Bloomfield, NM 87413
TEL: (505) 632-4475
FAX

RE: Milagro Amine Release OrderNo.: 1912436

Dear Stuart Hyde:

Hall Environmental Analysis Laboratory received 10 sample(s) on 12/10/2019 for the analyses presented in the following report.

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

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1912436**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Lab Order:** 1912436
Project: Milagro Amine Release

Lab ID: 1912436-001 **Collection Date:** 12/9/2019 10:36:00 AM
Client Sample ID: SS10@0.25' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	7.9		mg/Kg	1	12/13/2019 9:43:08 AM	49249
Surr: DNOP	96.8	70-130		%Rec	1	12/13/2019 9:43:08 AM	49249

Lab ID: 1912436-002 **Collection Date:** 12/9/2019 10:41:00 AM
Client Sample ID: SS10@0.75' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.5		mg/Kg	1	12/11/2019 9:06:24 PM	49249
Surr: DNOP	96.8	70-130		%Rec	1	12/11/2019 9:06:24 PM	49249

Lab ID: 1912436-003 **Collection Date:** 12/9/2019 11:05:00 AM
Client Sample ID: SS11@0.25' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	7.4		mg/Kg	1	12/11/2019 9:30:18 PM	49249
Surr: DNOP	99.0	70-130		%Rec	1	12/11/2019 9:30:18 PM	49249

Lab ID: 1912436-004 **Collection Date:** 12/9/2019 11:10:00 AM
Client Sample ID: SS11@0.75' **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/11/2019 3:16:50 PM	49263
Surr: DNOP	97.5	70-130		%Rec	1	12/11/2019 3:16:50 PM	49263

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order: **1912436**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest **Lab Order:** 1912436
Project: Milagro Amine Release

Lab ID: 1912436-005 **Collection Date:** 12/9/2019 10:13:00 AM
Client Sample ID: SS12@0.25 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	8.9		mg/Kg	1	12/11/2019 4:22:38 PM	49263
Surr: DNOP	95.9	70-130		%Rec	1	12/11/2019 4:22:38 PM	49263

Lab ID: 1912436-006 **Collection Date:** 12/9/2019 10:27:00 AM
Client Sample ID: SS12@0.75 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/11/2019 4:44:35 PM	49263
Surr: DNOP	96.5	70-130		%Rec	1	12/11/2019 4:44:35 PM	49263

Lab ID: 1912436-007 **Collection Date:** 12/9/2019 11:15:00 AM
Client Sample ID: SS13@0.25 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/11/2019 5:06:37 PM	49263
Surr: DNOP	97.0	70-130		%Rec	1	12/11/2019 5:06:37 PM	49263

Lab ID: 1912436-008 **Collection Date:** 12/9/2019 11:18:00 AM
Client Sample ID: SS13@0.75 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/11/2019 5:28:33 PM	49263
Surr: DNOP	96.2	70-130		%Rec	1	12/11/2019 5:28:33 PM	49263

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order: **1912436**
Date Reported: **12/16/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Harvest
Project: Milagro Amine Release
Lab Order: 1912436

Lab ID: 1912436-009
Collection Date: 12/9/2019 10:50:00 AM
Client Sample ID: SS09@0.25
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	3400	98		mg/Kg	10	12/12/2019 7:15:08 PM	49315
Surr: DNOP	0	70-130	S	%Rec	10	12/12/2019 7:15:08 PM	49315

Lab ID: 1912436-010
Collection Date: 12/9/2019 10:56:00 AM
Client Sample ID: SS09@0.5'
Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **BRM**	
Diesel Range Organics (DRO)	96	9.7		mg/Kg	1	12/12/2019 7:37:06 PM	49315
Surr: DNOP	105	70-130		%Rec	1	12/12/2019 7:37:06 PM	49315

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1912436**
16-Dec-19

Client: Harvest
Project: Milagro Amine Release

Sample ID: **LCS-49249** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49249** RunNo: **65093**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2233725** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	60	10	50.00	0	120	63.9	124			
Surr: DNOP	5.9		5.000		118	70	130			

Sample ID: **MB-49249** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49249** RunNo: **65093**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2233726** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	14		10.00		136	70	130			S

Sample ID: **1912436-004AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS11@0.75'** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234553** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.4	46.82	0	86.7	57	142			
Surr: DNOP	4.4		4.682		93.4	70	130			

Sample ID: **1912436-004AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS11@0.75'** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234554** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	9.0	45.00	0	90.1	57	142	0.136	20	
Surr: DNOP	4.2		4.500		92.5	70	130	0	0	

Sample ID: **LCS-49263** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234585** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	10	50.00	0	126	63.9	124			S
Surr: DNOP	6.0		5.000		119	70	130			

Sample ID: **MB-49263** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234586** Units: **mg/Kg**

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **1912436**
16-Dec-19

Client: Harvest
Project: Milagro Amine Release

Sample ID: **MB-49263** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49263** RunNo: **65091**
Prep Date: **12/10/2019** Analysis Date: **12/11/2019** SeqNo: **2234586** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		107	70	130			

Sample ID: **1912436-010AMS** SampType: **MS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS09@0.5'** Batch ID: **49315** RunNo: **65131**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2235412** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	120	9.2	46.13	96.14	52.1	57	142			S
Surr: DNOP	4.4		4.613		94.6	70	130			

Sample ID: **1912436-010AMSD** SampType: **MSD** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SS09@0.5'** Batch ID: **49315** RunNo: **65131**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2235414** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	150	9.8	49.02	96.14	102	57	142	19.4	20	
Surr: DNOP	4.7		4.902		96.7	70	130	0	0	

Sample ID: **LCS-49315** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **49315** RunNo: **65131**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2235429** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.3	63.9	124			
Surr: DNOP	4.5		5.000		89.7	70	130			

Sample ID: **MB-49315** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **49315** RunNo: **65131**
Prep Date: **12/12/2019** Analysis Date: **12/12/2019** SeqNo: **2235430** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		101	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Harvest** Work Order Number: **1912436** RcptNo: 1

Received By: **Leah Baca** **12/10/2019 8:40:00 AM** Leah Baca

Completed By: **Daniel Marquez** **12/10/2019 9:20:03 AM**

Reviewed By: YG 12/10/19

Chain of Custody

1. Is Chain of Custody sufficiently complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: ENM 12/10/19

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good				

Chain-of-Custody Record

LB 12/10/19

Client: Harvest Four Corners
Monica Sandoval
Mailing Address: 1755 Arroyo Drive
Bloomfield, NM 87413
Phone #: 505-947-1852
email or Fax#: msandoval@harvestmidstream.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☐ Standard ☒ Rush TAT Due 12/13/19
Project Name: Milagro Amine Release per Monica Sandoval
Project #: 090319039
Project Manager: Stuart Hyde
Sampler: Mary Mrdjenovich
On Ice: ☑ Yes ☐ No
# of Coolers: (1)
Cooler Temp(including CF): 5.4+0.6=5.4C

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1912436	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/9/19	10:36	S	SS10@0.25'	2, 4 oz jars	cool	001		X								
	10:41		SS10@0.75'			002										
	11:05		SS11@0.25'			003										
	11:10		SS11@0.75'			004										
	10:13		SS12@0.25'			005										
	10:27		SS12@0.75'			006										
	11:15		SS13@0.25'			007										
	11:18		SS13@0.75'			008										
			NFS													

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/9/19	12:25	Mary Mrdjenovich				
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			Leah	~~UPS~~ courier	12/10/19	0840
					~~12/9/19~~	~~1225~~

Remarks: DRO only
Please cc: shyde@ltenv.com and mmrdjenovich@ltenv.com with result

LB 12/10/19

Chain-of-Custody Record

Client: Harvest Four Corners
Monica Sandoval
Mailing Address: 1755 Arroyo Drive
Bloomfield, NM 87413
Phone #: 505-947-1852
email or Fax#: msandoval@harvestmidstream.com
QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☒ EDD (Type) PDF

Turn-Around Time:
☐ Standard ☒ Rush TAT
Done 12/13/19 per Monica Sandoval 2B 12/10/19
Project Name: Milagro Amine Release
Project #: 090319039
Project Manager: Stuart Hyde
Sampler: Marymrdjenovich
On Ice: ☒ Yes ☐ No
# of Coolers: (1)
Cooler Temp(including CF): 5.4 - 0.0 = 5.4C

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

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1912436 (TAT from 12/10/19)	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO/DRO/MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
12/9/19	10:50	S	SS09@0.25'	2,4oz jars	cool	009		X								
↓	10:56	S	SS09@0.5'	↓	↓	009 010		↓								

NFS

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12/9/19		Mary mrdjenovich				
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
			Leah	Courier	12/10/19	0840

Remarks: DRO only
Please cc: shyde@ltenv.com and mmrdjenovich@ltenv.com with results

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

ATTACHMENT 2: LITHOLOGIC/SOIL SAMPLING LOGS

ATTACHMENT 2
LITHOLOGIC/SOIL SAMPLING LOG

MILAGRO GAS PLANT
SAN JUAN COUNTY, NEW MEXICO
HARVEST FOUR CORNERS, LLC

Sample Location	Sample ID	Date	Time	PID (ppm)	Depth (ft bgs)	Soil Description
5-Point Composite Excavation Confirmation Soil Samples						
SS01	SS01	10/25/2019	10:30	17.8	0.5	SILTY SAND, with gravel, moist, brown, no odor, no staining
SS02	SS02	10/25/2019	10:32	12.5	0.5	SILTY SAND, with gravel, moist, brown, no odor, no staining
SS03	SS03	10/25/2019	10:35	282.9	0.5	SILTY SAND, with gravel, moist, brown, slight chemical odor, no staining
SS04	SS04	10/25/2019	10:40	144.7	0.5	SILTY SAND, with gravel, moist, brown, slight chemical odor, no staining
SS05	SS05	10/25/2019	10:45	37.8	0.5	SILTY SAND, with gravel, moist, brown, no odor, no staining
SS06	SS06	10/25/2019	10:47	15.2	0.5	SILTY SAND, with gravel, moist, brown, no odor, no staining
SS07	SS07	10/25/2019	10:50	75.6	0.5	SILTY SAND, with gravel, moist, brown, slight chemical odor, no staining
Discrete Delineation Soil Samples						
SS08	SS08@0.25'	11/21/2019	13:05	0.0	0.25	SILTY SAND, with gravel, moist, brown, no odor, no staining
	SS08@0.5'	11/21/2019	13:08	0.0	0.5	SILTY SAND, with gravel, moist, brown, no odor, no staining
SS09	SS09@0.25'	12/9/2019	10:50	0.9	0.25	SAND, with gravel, moist, brown, no odor, no staining
	SS09@0.5'	12/9/2019	10:56	0.6	0.5	SILTY SAND, moist, gray, no odor, no staining
SS10	SS10@0.25'	12/9/2019	10:36	0.0	0.25	SAND, with gravel, moist, brown, no odor, no staining
	SS10@0.75'	12/9/2019	10:41	0.0	0.75	SILTY SAND, moist, gray-brown mottled, no odor, no staining
SS11	SS11@0.25'	12/9/2019	11:05	0.0	0.25	SAND, with gravel, moist, brown, no odor, no staining
	SS11@0.75'	12/9/2019	11:10	0.0	0.75	SILTY SAND, moist, gray, no odor, no staining
SS12	SS12@0.25'	12/9/2019	10:13	0.6	0.25	SAND, with gravel, moist, brown, no odor, no staining
	SS12@0.75'	12/9/2019	10:27	0.9	0.75	SILTY SAND, moist, gray, no odor, no staining
SS13	SS13@0.25'	12/9/2019	11:15	0.7	0.25	SAND, with gravel, wet, brown, no odor, no staining
	SS13@0.75'	12/9/2019	11:18	0.8	0.75	SILTY SAND, moist, gray-brown mottled, no odor, no staining

Notes:
bgs- below ground surface
ft- feet
PID- photoionization detector
ppm- parts per million

ATTACHMENT 3: PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Photograph 1: View looking West at relief tank where amine/water solution was released.

Photograph 2: View from southwest corner of the release area looking North.

PHOTOGRAPHIC LOG

Photograph 3: View from southeast corner of the release area looking North.

Photograph 4: View on North side of the relief tank looking West.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
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 3434

CONDITIONS

Operator: Harvest Four Corners, LLC 1111 Travis Street Houston, TX 77002	OGRID: 373888
	Action Number: 3434
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Deferral approved. Required to remediate & reclaim after decommissioning per 19.15.29.12C (2) & 19.15.29.13D (1).	5/18/2022