



March 31, 2021

Mr. Tim Noger
New Mexico Environment Department
Petroleum Storage Tank Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Re: Baseline Groundwater Monitoring Report
Lovington 66 State Lead UST Site, Lovington, New Mexico
Facility #1489, Release ID #1182, WPID #4123

Mr. Noger:

Daniel B. Stephens & Associates, Inc. (DBS&A) is pleased to submit this report documenting groundwater monitoring activities conducted at the above-referenced site on June 15, 2020, and February 11, 22, and 23, 2021, in accordance with work plan identification (WPID) number 4123. All work was completed in accordance with the requirements of Part 119 of the New Mexico Petroleum Storage Tank Regulations and DBS&A standard operating procedures.

DBS&A plans to invoice a reduced amount of \$16,497.86 for deliverable identification 4123-3 (including New Mexico gross receipts tax), due to a reduction in the number of groundwater samples from 15 to 14 and light nonaqueous-phase liquid (LNAPL) samples from 6 to 3. Monitor wells MW-1, MW-3, and W-14 were not sampled due to lack of access on the Allsup's property. Monitor well W-2 was not sampled due to an obstruction.

Please contact us at (505) 822-9400 if you have any questions or require additional information.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Jason J. Raucci, P.G.
Project Geologist

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TG/ed
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**Baseline Groundwater Monitoring and
LNAPL Recovery Report
Lovington 66 UST Site**

**424 South Main Street, Lovington, New Mexico
Facility #1489, Release ID #1182, WPID #4123**

Prepared for

**New Mexico Environment Department
Petroleum Storage Tank Bureau
Santa Fe, New Mexico**

March 31, 2021



Daniel B. Stephens & Associates, Inc.

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Site Information

1. **Site name:** Lovington 66

2. **Responsible party:** State Lead

3. **Responsible party mailing address (list contact person if different):**
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505

4. **Facility number:** 1489 (Release ID #1182)

5. **Address/legal description:**
424 South Main Street
Lovington, New Mexico

6. **Author/consulting company:** Daniel B. Stephens & Associates, Inc.

7. **Date of report:** March 31, 2021

8. **Date of confirmation of release or date PSTB was notified of the release:**
1991



**Baseline Groundwater Monitoring and
LNAPL Recovery Report
Lovington 66 UST Site
424 South Main Street, Lovington, New Mexico
Facility #1489, Release ID #1182, WPID #4123**

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this baseline groundwater monitoring report for the Lovington 66 State-Lead Underground Storage Tank (UST) site (the site). The report has been prepared in accordance with the New Mexico Petroleum Storage Tank Regulations and work plan identification (WPID) #4123. All field activities were conducted in accordance with part 119 of the petroleum storage tank regulations (20.5 NMAC), and the approved work plan.

1. Introduction and Background

The Lovington 66 site is located at 424 South Main Street, Lovington, New Mexico, (Figure 1). The property is currently occupied by a McDonald's franchise. The site occupies the northwest corner of the intersection of Main Street and Avenue D, and the surrounding properties are largely commercial in nature. Fuel is no longer being stored or dispensed at the site. A map showing site features and well locations is provided as Figure 2.

1.1 Site History

In 1991, AEI Tank, Inc. (AEI) was contracted to perform a minimum site assessment (MSA) on the existing UST system at the Phillips 66 gasoline station as part of a proposed property transaction between Jack Walstad Oil Company, Inc. (Walstad), and Queen Oil and Gas Company. At that time, AEI discovered contamination in soil samples collected near the five USTs and associated conveyance and dispensers. Walstad then contracted AEI to remove the USTs and ancillary piping and over-excavate the contaminated piping trenches and tank pits. AEI provided the results of shallow soil sampling to the New Mexico Environment Department (NMED) in December 1991. Per NMED's request, AEI coordinated installation of three monitor wells at the site in February and March 1992 (designated W-1 through W-3).



During the MSA investigations conducted by AEI, hydrocarbon impacts to soil and groundwater contamination above New Mexico Water Quality Control Commission (NMWQCC) standards were discovered on-site and extending off-site downgradient to the southeast. Soil impacts were noted in association with the former tank pit on the north side of the station building, the former diesel dispenser on the west side of the station building, and the former gasoline conveyance and dispensers to the southeast of the station building; these locations are presumed to be primary release sites (Figure 3). AEI reported removing approximately 90 percent of the impacted shallow soil from the vicinity of the identified release sites (AEI, 1991).

Soil and groundwater investigations completed by Billings & Associates, Inc. (BAI) in 1992 and 1993 indicated soil contamination to a depth of at least 40 feet below ground surface (bgs), a large light nonaqueous-phase (LNAPL) plume, and a dissolved-phase plume migrating off-site to the southeast, under the intersection of Main Street and Avenue D. BAI coordinated installation of monitor wells W-4 through W-18 during these initial characterization efforts (Figure 2).

Previous consultants coordinated investigation and monitoring activities from 2006 to 2018, including installation of three additional monitor wells (W-19 through W-21) 400 to 600 feet southeast of the Allsup's site (Golder, 2008). In 2015, a vertical multi-phase extraction well (MPE-1) was installed on-site, which was subsequently included in dual-phase extraction (DPE) pilot testing. In addition, DPE quick tests and LNAPL bail-down and recovery testing were completed on wells W-1, W-2, and W-3 (Golder, 2015). Groundwater monitoring and LNAPL recovery activities have continued intermittently since that time (Golder, 2018).

The on-site McDonald's restaurant was torn down in October 2018, which resulted in destruction of all the on-site surface completions. The construction contractor hired Atkins Engineering Associates, Inc. (AEA) of Roswell, New Mexico, to replace the surface completions. At that time, well W-4 (previously paved over) was recovered and repaired. In July 2020, AEA also recovered W-7, which had been paved over in the street adjacent to the curb. To date, 25 groundwater monitoring wells (W-1 through W-21, MPE-1, and MW-1 through MW-3) have been installed on-site and in the vicinity of the former Lovington 66 and Allsup's sites (Figure 2). Based on field reconnaissance conducted by the Petroleum Storage Tank Bureau (PSTB) and DBS&A in March and November 2019, respectively, and recent repair work, 21 of these wells



remain accessible. Wells MW-2, W-6, and W-10 appear to have been paved over, and well W-17 is reported to have been destroyed.

The site was included in a Responsible Party (RP)-Lead solicitation for remediation services, dated March 19, 2018. Although DBS&A was awarded the winner of that solicitation, the Request for Proposals (RFP) was revoked when the designated representative for the RP (Walstad) stated he no longer wished to participate in the cleanup process. The site was designated a State Lead site on November 1, 2018, and on April 22, 2019, the NMED PSTB issued a new RFP for State-Lead remediation services for the site. DBS&A responded to the RFP with a proposal submitted to the PSTB on May 28, 2019. DBS&A provided supplementary information to the proposal in a short list presentation to the PSTB on July 11, 2019. The DBS&A proposal was deemed to be the most responsive, and in a letter dated October 23, 2019, the PSTB requested preparation of a final remediation plan (FRP) to address the confirmed petroleum hydrocarbon release at the site. A work plan including a site visit, survey, baseline groundwater monitoring, and FRP preparation (DBS&A, 2019) was approved by the NMED-PSTB on January 19, 2020, under work plan identification (WPID) #4123 (NMED, 2020a).

The current baseline groundwater monitoring event was included in WPID #4123 with an original due date of May 20, 2020, but was postponed during negotiation with the City of Lovington (the City) for access to the public right-of-way (ROW) where many monitor wells are located. During this time, the FRP for the site was submitted to the PSTB (DBS&A, 2020) and accepted in revised form on October 20, 2020. An agreement was reached with the City in February 2021 to allow one-time only access under supervision of City staff for the purpose of completing the baseline monitoring event. This report documents LNAPL sampling, baseline groundwater monitoring, and LNAPL recovery activities conducted at the site under WPID #4123 on June 20, 2020, and February 11, 22, and 23, 2021.

1.2 Site Hydrogeology

The site is located in the Llano Estacado section of the Great Plains physiographic province, at an elevation of approximately 3,910 feet above mean sea level. The geology underlying the City is comprised of layered sedimentary deposits of the Pliocene-age Ogallala Formation. The



Ogallala Formation consists of fine-to-coarse-grained sand, silt, and clay; a weathering-resistant, carbonate-cemented “caprock” unit is present near the top of the formation. At the site, the caprock unit has been observed in borehole logs with a thickness of approximately 40 feet, and is underlain by a thick sequence of fine-grained sands. Regionally, the Ogallala Formation is bounded below by the fine-grained red beds of the Triassic-age Dockum Group (Cronin, 1969); this unit has not been encountered in borings at the site.

Groundwater is present at a depth of approximately 60 feet bgs. This water level represents the regional groundwater level of the Ogallala aquifer, from which the City of Lovington obtains its water supply. Based on regional geologic data, the saturated thickness of the Ogallala Aquifer in the site vicinity is approximately 150 feet (Cronin, 1969; Tillery, 2007). *The City of Lovington 40-Year Water Development Plan* published in 2014 (JSAI) states that “groundwater is being pumped out at a faster rate than it is being recharged.” This has been observed at the site with typical decreases in groundwater elevation of 5 to 6 feet in site wells since 2008. Groundwater flow beneath the site has consistently been to the southeast at an average gradient of approximately 0.004 foot per foot (ft/ft) (Figure 4).

1.3 Constituents of Concern

The primary contaminants of concern (COCs) are gasoline fuel constituents, including benzene, toluene, ethylbenzene, and total xylenes (BTEX), 1,2-dichloroethane (EDC), 1,2-dibromoethane (EDB), and naphthalenes. Multiple investigations conducted since 1992 indicate that soil and groundwater contamination are present at the site.

LNAPL accumulations have consistently been observed in site wells MPE-21, W-1, W-2, and W-3 at thicknesses up to 6.91 feet. An LNAPL plume extends downgradient and off-site to the southeast, under the intersection of Main Street and Avenue D, and comingling with a release associated with the Allsup's gas station and UST site. A dissolved-phase hydrocarbon plume further extends at least 700 feet downgradient from the known source areas and LNAPL accumulations.



1.4 Remediation System Operations and Performance

At the time of baseline monitoring and completion of this report, the installation of a soil vapor extraction (SVE) remediation system is pending implementation of the approved FRP, as accepted by the PSTB on October 20, 2020 (NMED, 2020b).

2. Scope of Work

The scope of work for this groundwater monitoring event included gauging fluid levels and collecting samples for laboratory analysis from all 21 accessible site monitor wells. Based on historical data, DBS&A assumed LNAPL would be recovered and sampled from the 6 wells (MPE-1, MW-3, W-1 through W-3, and W-14), and groundwater would be sampled from the remaining wells. LNAPL recovery would be performed at any wells with a measurable LNAPL thickness (greater than $\frac{1}{8}$ inch).

DBS&A subcontracted field sampling and LNAPL recovery activities to AEA. DBS&A and AEA did not have access to wells on the Allsup's UST Site on the southeast corner of Main Street and Avenue D, including Allsup's wells MW-1 and MW-3 and Lovington 66 well W-14. In addition, monitor well W-2 is currently obstructed above the water table. This reduced the number of sampled wells from 21 to 17, including 14 wells with groundwater samples and 3 wells with LNAPL samples.

Groundwater samples were analyzed for volatile organic compounds (VOCs), including BTEX, methyl tertiary-butyl ether (MTBE), EDB, EDC, and polycyclic aromatic hydrocarbons (PAHs [naphthalene plus methyl naphthalenes]) using U.S. Environmental Protection Agency (EPA) method 8260B (full list), and for EDB using EPA method 504.1. LNAPL samples were analyzed for total petroleum hydrocarbons (TPH) using EPA method 8015D.

2.1 Monitoring Highlights

The following groundwater monitoring activities were completed during this baseline event:

- Sampled 3 wells with LNAPL for laboratory analysis June 15, 2020



- Located and gauged fluid levels in 18 site wells February 11, 2021
- Sampled 14 site monitor wells for laboratory analysis February 21, 2021
- Performed LNAPL recovery from wells W-1, W-3, and MPE-1 February 22, 2021
- Prepared the baseline groundwater monitoring report March 2021

A severe winter storm and subsequent extended period of sub-freezing weather caused a 10-day gap between gauging and sampling of site wells. Wells on the Allsup's UST site (MW-1, MW-3, and W-14) could not be gauged or sampled due to access restriction by Allsup's, and well W-2 was obstructed above the water table. All other monitoring activities were conducted in accordance with the approved work plan.

2.2 Monitoring Activities

On June 15, 2020, CMB Environmental (CMB) of Roswell, New Mexico, collected LNAPL samples for laboratory analysis. Due to delays obtaining site access for sampling wells in the City ROW, this work was performed during an earlier mobilization so that the data could be factored into the remedial design presented in the FRP.

AEA personnel performed baseline groundwater monitoring and LNAPL recovery activities on February 11, 22, and 23, 2021.

2.2.1 Groundwater Monitoring

On February 11, 2021, AEA personnel gauged fluid levels in 18 site monitor wells using an electronic interface probe. Well W-2 was found to be collapsed or obstructed just above the water table. Table 1 provides a summary of fluid level measurements and groundwater elevations from this and previous monitoring events. Groundwater elevation data from the current monitoring event were used to prepare the potentiometric surface map provided as Figure 4. Groundwater potentiometric surface elevations are corrected for LNAPL thickness, where present, using a specific gravity of 0.75 corresponding to a gasoline release.



AEA personnel collected groundwater samples for laboratory analysis from 14 monitor wells on February 21, 2021. All samples were collected in accordance with the approved work plan and the groundwater sampling protocol (Appendix A). Field notes recorded during monitoring activities are included as Appendix B. Groundwater samples were analyzed for the constituents specified in the scope of work. All laboratory analyses were performed by Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico. The complete laboratory analytical report with chain of custody documentation is provided as Appendix C.

2.2.2 LNAPL Recovery and Sampling

On June 15, 2020, CMB collected LNAPL samples from monitor wells W-1, W-3, and MPE-1. Samples were submitted to HEAL and analyzed for the constituents specified in the scope of work. The complete laboratory analytical report with chain of custody documentation is provided as Appendix C.

On February 22, 2021, AEA personnel recovered LNAPL from monitor wells W-1 (3.40 gallons), W-3 (3.09 gallons), and MPE-1 (3.84 gallons) by hand-bailing. A cumulative total of approximately 496 gallons of LNAPL have been recovered at the site (Table 2).

3. Results

Laboratory results from LNAPL sampling indicate that the release at the Lovington 66 site was primarily a gasoline release (Table 4). Approximately 20 percent of each sample fell within the diesel range; however, DBS&A contacted the laboratory to discuss these findings. The laboratory manager stated that this data was at the tail end of the gasoline peaks on the chromatograph, and the samples looked like relatively fresh gasoline.

A summary of groundwater analytical organic chemistry data from this and previous monitoring events is provided in Table 3. Figure 5 shows the distribution of LNAPL and dissolved-phase petroleum hydrocarbons during the current monitoring event.



3.1 Containment of Release

LNAPL was detected in wells W-1, W-3, and MPE-1 at thicknesses of 6.12 feet, 6.29 feet, and 6.44 feet, respectively. Measurable LNAPL thicknesses have previously been detected in site well W-2 (which was found to be obstructed or collapsed during the current event), vapor extraction well V-1 (which was plugged and abandoned in 2008), and site well W-14 (which is located on the Allsup's property and was not gauged during the current event). LNAPL has also historically been present in Allsup's monitor well MW-3 (Figure 2), although that well was also not gauged during this monitoring event. The extent of LNAPL in groundwater is delineated by wells W-4, W-5, W-8, and W-11, as well as historical data from Allsup's well MW-1.

One or more dissolved-phase COCs were detected at concentrations exceeding the applicable standards in groundwater samples collected from wells W-4, W-5, W-8, W-9, W-12, and W-19 (Table 3, Figure 5). Dissolved-phase plume maps for benzene, MTBE, EDC, and PAHs are presented on Figures 6 through 9. Individual constituent plumes are generally coincident with each other, although EDC is the COC present in groundwater at actionable concentrations the furthest downgradient. The EDC plume extends at least 700 feet downgradient and past well W-19 (Figure 8).

Benzene and PAHs are also present at actionable concentrations in well W-12, located cross-gradient to the southwest of the site (Figures 5, 6 and 9). These concentrations appear to be related to a separate release. There are numerous historic gasoline service stations in the vicinity of Avenue D and Main Street, including an old Bell Gas station located immediately upgradient to the northwest from W-12. Based on the current monitor well network, it is not known if the distal edge of dissolved-phase contamination associated with the Lovington 66 site comingles with other potential releases.

Well W-7 provides upgradient delineation of the LNAPL and solute plumes. The extent of the dissolved-phase hydrocarbon plume is generally well-delineated for most constituents in the downgradient direction by wells W-19, W-20, and W-21, although some uncertainty remains regarding the full extent of the EDC plume to the southeast of well W-19, where the EDC concentration remains above the applicable standard (Figure 8). Solute concentrations



decrease markedly toward the southwest and northeast, at well locations farther away from known source areas and LNAPL accumulations (wells W-11, W-13, W-15, W-16, and W-18).

3.2 Trends or Changes in Site Conditions

The Lovington 66 site was completely regraded and repaved in late 2018 and early 2019. During that time, AEA personnel conducted wellhead recovery and repair operations on all on-site wells. Wellheads were modified during repair and recovery operations at wells W-1, W-2, W-3, and W-5. Well MPE-1 was not modified during recovery. Repaving operations uncovered well W-4, which had been previously paved over and believed lost, and it was recovered without modification. In July 2020, previously paved-over well W-7, located upgradient of the site to the northwest, was recovered and repaired by AEA. In August 2020, AEA re-surveyed all site wells to a common datum.

A graph showing changes in groundwater elevations in site monitor wells over time is provided in Appendix D. DBS&A did not include wells where both the measuring point and the vertical datum have changed since the previous monitoring event in the comparison to previous water level data. This includes wells W-1, W-2, W-3, W-5, and W-7. Fluid levels were not measured in wells W-4 or W-12 during the previous monitoring event. Fluid levels were not measured at wells on the Allsup's site during the current event (MW-1, MW-3, and W-14). At wells for which comparisons could be made, groundwater levels generally decreased since the previous monitoring event in March 2018 by an overall average of approximately 1.3 feet. Decreases ranged from 1.02 feet in well MPE-1 to 1.5 feet in well W-20 (Table 1). Water level elevations across the site have decreased by approximately 4 feet since wells were first installed at the site in 1992. Following a period of higher water levels around 2006 to 2008, water levels generally have been falling at a rate of about 0.5 foot/year.

Groundwater flow is currently to the southeast at an average gradient of approximately 0.005 foot per foot (Figure 4). The direction and gradient of groundwater flow have been generally consistent over time.

LNAPL continued to be present in wells W-1, W-3, and MPE-3. Graphs of LNAPL thicknesses observed in site wells over time are provided in Appendix D.



During this monitoring event, groundwater samples were collected from 14 of the 20 viable monitor wells in the site vicinity. Table 3 presents a summary of analytical organic chemistry data from this and previous groundwater monitoring events conducted at the site. Time-series graphs showing changes in benzene, MTBE, EDC, and PAHs concentrations in selected site wells are presented in Appendix D. Field activities for the previous groundwater monitoring event were performed in March 2018. Notable changes or trends in groundwater quality conditions include (Appendix D):

- LNAPL thicknesses in wells MPE-1, W-1, and W-3 changed little since the previous event. LNAPL accumulations in these wells, and nearby well W-2 (obstructed), have been consistent between 6 and 7 feet since 2014.
- W-4: This well was paved over prior to 2006 and was considered lost. The well was recovered by AEA during recent repaving of the McDonald's parking lot, but it had not been sampled since 1993. The detected benzene concentration of 860 micrograms per liter ($\mu\text{g/L}$) is below historical levels but remains above the NMWQCC standard. Concentrations of other BTEX constituents and MTBE were similar to those in the historical data. EDB, EDC, and PAHs were analyzed for the first time; EDB and EDC were not detected above the laboratory reporting limits, and the PAHs concentration of 88 $\mu\text{g/L}$ is above the NMWQCC standard.
- W-5: The benzene concentration decreased from 9.9 to 7.6 $\mu\text{g/L}$ and remains slightly above the NMWQCC standard. Benzene concentrations in this well have fluctuated near the NMWQCC standard since 2006. Other COCs have remained below their applicable standards or laboratory reporting limits since 2008.
- W-8: Although concentrations of BTEX constituents decreased since the previous event and are at historical lows, they remain well above their respective NMWQCC standards. The MTBE concentration increased from 12,000 to 15,000 $\mu\text{g/L}$, but has fluctuated generally in this range since 2014. The EDC concentration decreased from 230 to 71 $\mu\text{g/L}$, but remains above the standard. The PAHs concentration of 501 $\mu\text{g/L}$ changed little since the previous event and has generally fluctuated in a narrow range since 2009. EDB was detected at a concentration of 0.033 $\mu\text{g/L}$, below the NMWQCC standard.



- W-9: With the exception of EDB, concentrations of all COCs increased significantly since the previous monitoring event, and are at historical highs for all detected constituents. Benzene (11,000 µg/L), toluene (2,300 µg/L), ethylbenzene (1,400 µg/L), total xylenes (2,200 µg/L), MTBE (10,000 µg/L), EDC (1,200 µg/L), and PAHs (581 µg/L) all increased by an order of magnitude or more and are well above applicable NMWQCC standards.
- W-11: COC concentrations decreased since the previous monitoring event and were below laboratory reporting limits or applicable standards. EDC had previously been above the NMWQCC standard at a concentration of 40 µg/L, and had fluctuated only slightly since at least 2006. EDC decreased to below reporting limits during the current monitoring event.
- W-12: Well W-12 is located cross-gradient to the southwest of the site and has not been sampled since 2006, at which time all COC concentrations were below the laboratory reporting limits. During the current monitoring event, BTEX constituents and PAHs were detected, with the concentrations of benzene (140 µg/L) and PAHs (428 µg/L) exceeding their applicable NMWQCC standards.
- W-19: The EDC concentration decreased from 71 to 48 µg/L, the lowest EDC concentration at this location since 2009. EDC has fluctuated between 9.2 and 130 µg/L since the well was installed in 2007. Other COC concentrations remained near or below laboratory reporting limits.
- All COCs remained below laboratory report limits or applicable NMWQCC standards in wells W-7, W-13, W-15, W-16, W-18, W-20, and W-21. Wells W-13, W-15, and W-18 had not been sampled since 2006.

4. Conclusions and Recommendations

Based on the results of the monitoring activities summarized in this report, DBS&A offers the following conclusions regarding conditions at the site:



- Significant LNAPL accumulations at the water table continue to be persistent at the southeastern portion of the former Lovington 66 facility, near the northwest corner of Main Street and Avenue D. Although wells on the Allsup's property were not monitored during this event, it is assumed that the LNAPL plume continues to extend southeastward under the intersection and comingling with the Allsup's release. The extent of LNAPL is otherwise well-defined by the monitor well network.
- An elongate dissolved-phase contaminant plume extends at least 700 feet to the southeast of the LNAPL source area and is largely well-delineated, although the full extent of the EDC plume to the southeast of well W-19 remains undefined. The overall plume extent has remained largely stable since 2006; however, a significant increase in COC concentrations at well W-9 during the current monitoring event suggests downgradient movement of hydrocarbon mass from the original source areas (LNAPL plumes).
- Results from well W-12 indicate elevated solute concentrations above applicable NMWQCC standards. The well is hydrologically cross-gradient from the site and any known or suspected release points, and is a significant distance (approximately 400 feet) from the LNAPL plume. These observations support the possibility of an additional hydrocarbon source in this vicinity.

Based on assessment of the monitoring network, historical data, and current site conditions, DBS&A also offers the following additional recommendations:

- The site FRP was approved by NMED PSTB on October 20, 2020. DBS&A recommends that installation of the SVE remediation system be prioritized in order to remove the persistent LNAPL source at the water table and mitigate ongoing impacts to groundwater downgradient of the site.
- LNAPL recovery and groundwater monitoring should continue at the site due to the presence of LNAPL in monitor wells W-1, W-3, and MPE-1, and dissolved-phase hydrocarbon concentrations above NMWQCC standards in monitor wells on-site and downgradient to the southeast.



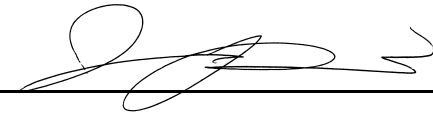
- DBS&A and the NMED PSTB should continue to pursue negotiations to obtain access to monitor wells on the Allsup's convenience store property, to better define the extent of the LNAPL plume during future remedial operations.
- Well W-2 should be cleared of the apparent obstruction above the water table, or be properly abandoned.
- Monitoring results indicate that the EDC plume is not fully delineated to the east of well W-19. Additional monitor wells may help to better define the extent of the dissolved-phase hydrocarbon plume in this area. Previous DBS&A efforts to obtain access to the large property southeast of W-19 were not successful and will likely require a formal written request from NMED.



Daniel B. Stephens & Associates, Inc.

Statement of Familiarity

I, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.

Signature: 

Authorized Representative: Jason J. Raucci, P.G.

Affiliation: Daniel B. Stephens & Associates, Inc.

Title: Project Geologist

Date: March 31, 2021



References

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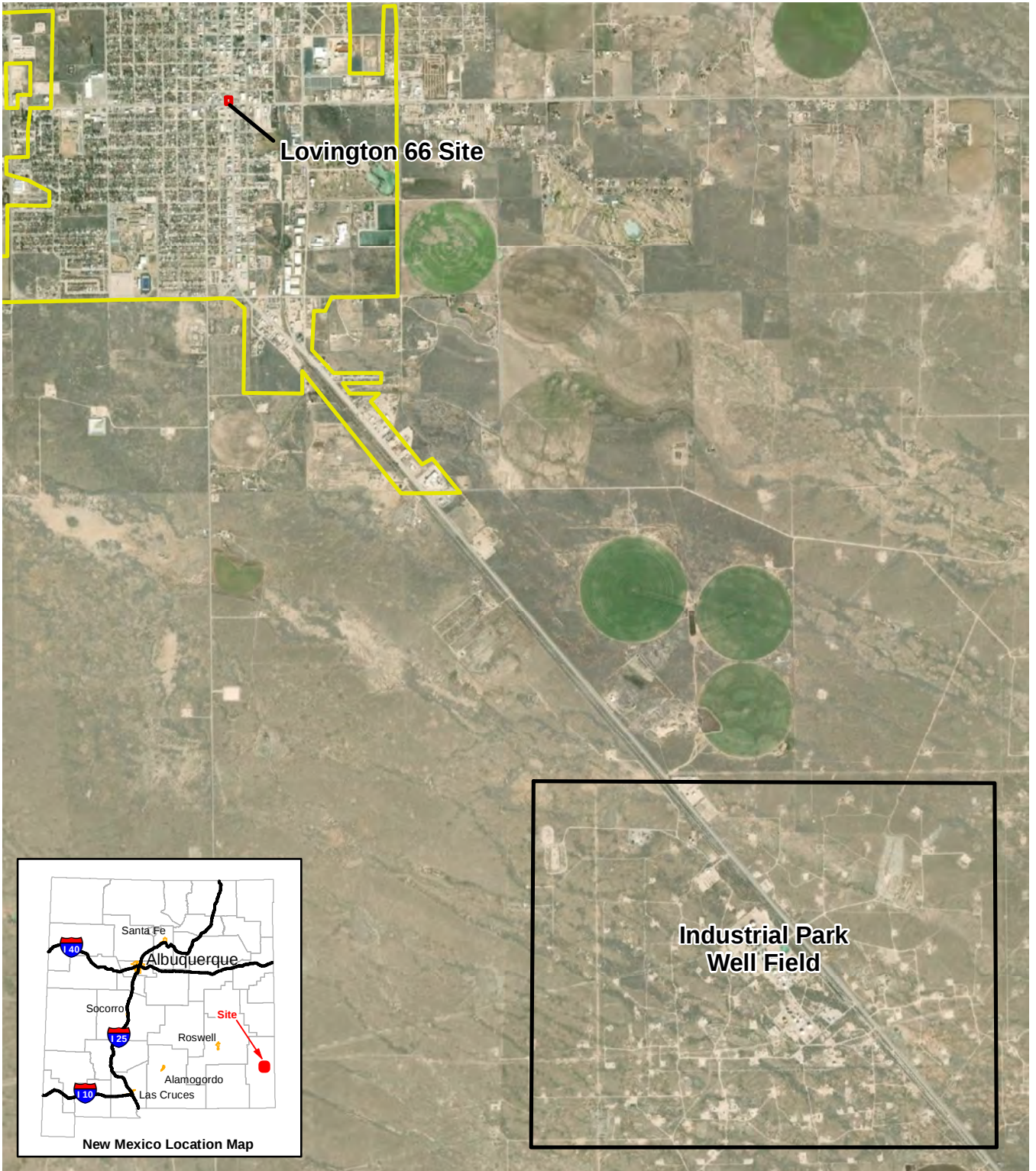
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Figures



0 2000 4000
Feet

Explanation

Lovington city limits

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO
Area Map



Daniel B. Stephens & Associates, Inc.
 8/24/2020 JN DB19.1395

Figure 1

S:\PROJECTS\191395_LOVINGTON_66\GIS\MXD\SITE_MAP\MXD



Explanation

- Monitor well
- Monitor well - destroyed or inaccessible
- Monitor well - plugged and abandoned
- Approximate parcel block boundaries



Daniel B. Stephens & Associates, Inc.
8/27/2020 JN DB19.1395

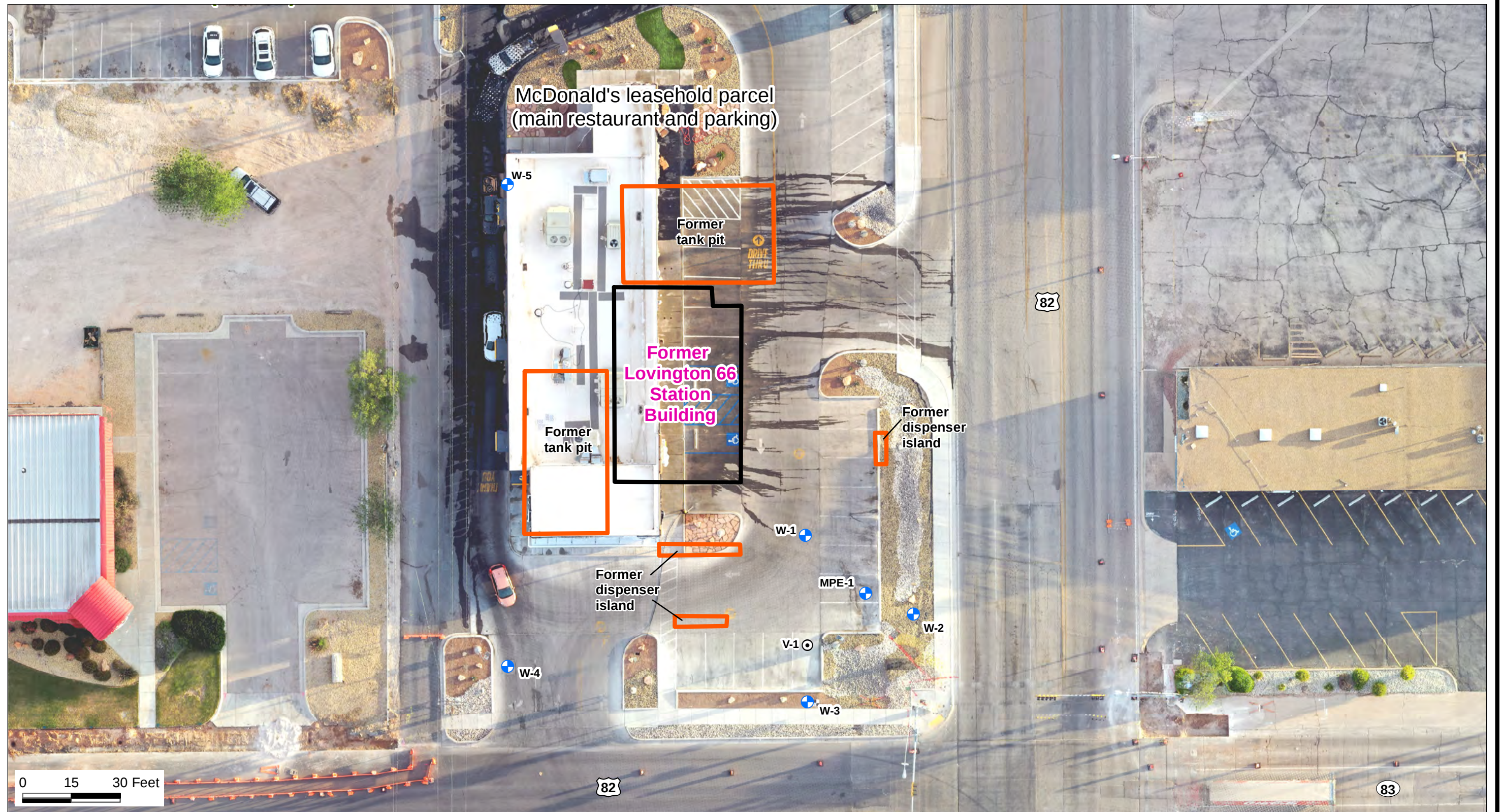
Source: AEA: 5/12/2020
Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO

Site Map

Figure 2

S:\PROJECTS\B19.1395_LOVINGTON_66\GIS\MXD\ENGINEERING\SITE_DETAIL.MXD



Source: AEA: 5/12/2020



Explanation

- Monitor well
- Monitor well - destroyed or inaccessible
- Monitor well - plugged and abandoned



Daniel B. Stephens & Associates, Inc.
8/21/2020 JN DB19.1395

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO
Site Detail

Figure 3

S:\PROJECTS\B191395_LOVINGTON_66\GIS\MXD\FLUID LEVELS\POT_MAP_2021-02.MXD



Explanation

- Monitor well
- Monitor well - destroyed or inaccessible
- Monitor well - plugged and abandoned
- Potentiometric surface elevation (ft msl)

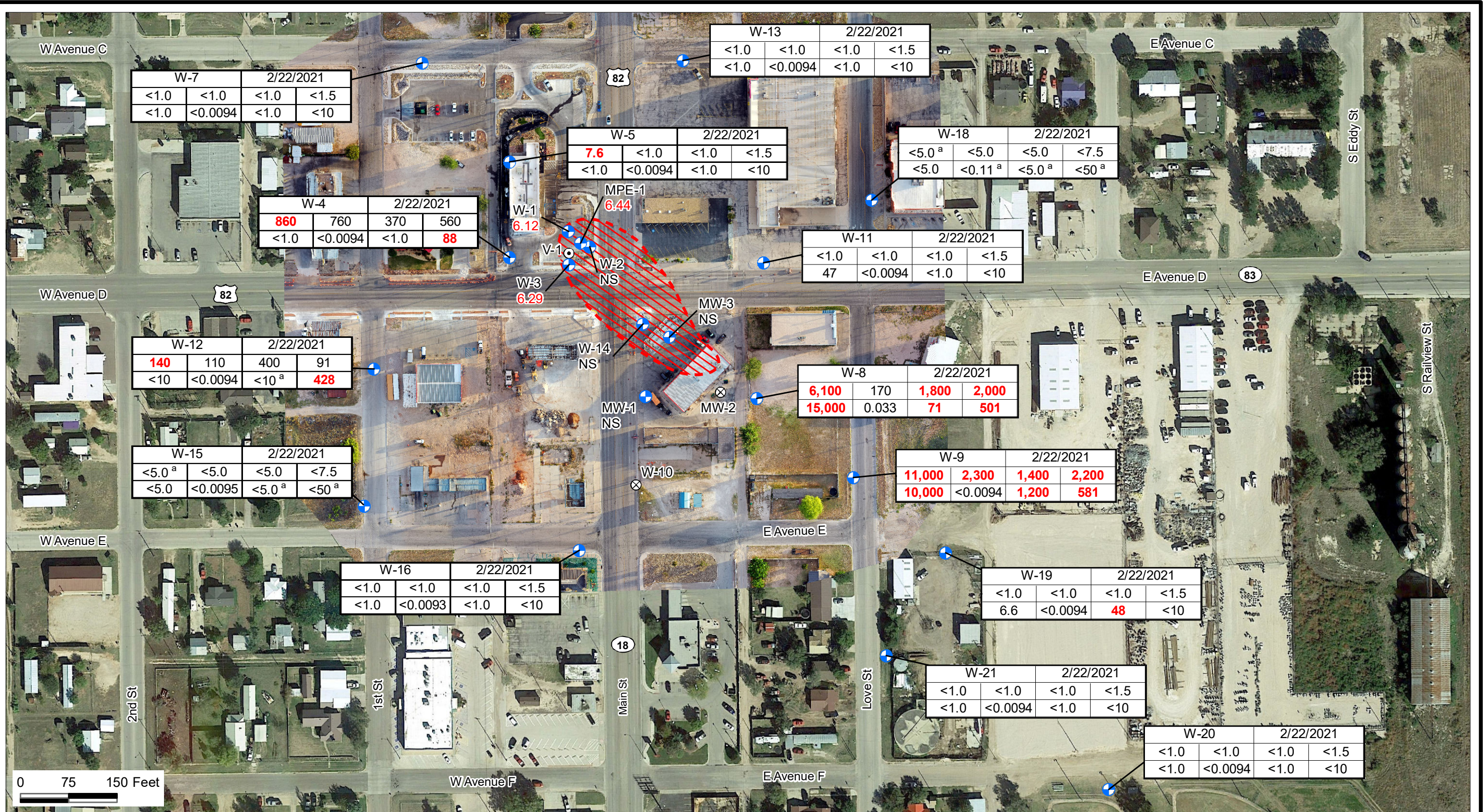
W-8 Monitor well designation
3847.74 Potentiometric surface elevation (ft msl)
NS = Not surveyed
NM = Not measured
OB = Obstructed

Source: Adapted from Golder, 2018
AEA: 5/12/2020, Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO
Potentiometric Surface Elevations
February 2021

Figure 4

S:\PROJECTS\B191395_LOVINGTON_66\GIS\MXD\CHEMISTRY\DP_C 2021-02.MXD



Explanation

- Monitor well
- Monitor well - destroyed
- Monitor well - plugged and abandoned

Approximate extent of LNAPL
MPE-1 Monitor well designation
6.44 LNAPL thickness (feet)
NS = Not sampled

Location designation		Sample date	
Benzene	Toluene	Ethylbenzene	Total Xylenes
MTBE	EDB	EDC	PAHs

- Notes: 1. All concentrations reported in µg/L, unless otherwise noted
2. RED indicates concentration that exceeds applicable standard
3. ^a Laboratory reporting limit is equal to or above the applicable standard

Source: Adapted from Golder, 2018
AEA: 5/12/2020, Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO

Distribution of Dissolved-Phase Contaminants
February 22, 2021

Figure 5



Explanation

- Monitor well
- Monitor well - destroyed or inaccessible
- Monitor well - plugged and abandoned

Benzene isocontour (µg/L) (dashed where inferred)

Approximate extent of LNAPL

W-4 Monitor well designation
860 Benzene concentration in micrograms per liter (µg/L)
6.44 LNAPL thickness (feet)

Source: Adapted from Golder, 2018
AEA: 5/12/2020, Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO

LNAPL and Dissolved-Phase Benzene Isoconcentration Map February 22, 2021



Daniel B. Stephens & Associates, Inc.
3/30/2021 JN DB19.1395

S:\PROJECTS\B191395_LOVINGTON_66\GIS\MXD\CHEMISTRY\MTBE\MTBE_2021-02.MXD



- Explanation**
- Monitor well
 - Monitor well - destroyed or inaccessible
 - Monitor well - plugged and abandoned

- MTBE isocontour ($\mu\text{g/L}$) (dashed where inferred)
- Approximate extent of LNAPL
- W-8 Monitor well designation
- 15,000 MTBE concentration in micrograms per liter ($\mu\text{g/L}$)
- 6.44 LNAPL thickness (feet)

Source: Adapted from Golder, 2018
AEA: 5/12/2020, Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO

MTBE Dissolved-Phase Isoconcentration Map

February 22, 2021

Figure 7

S:\PROJECTS\191395_LOVINGTON_66\GIS\MXDS\CHEMISTRY\EDC\EDC_2021-02.MXD



- Explanation**
- Monitor well
 - Monitor well - destroyed or inaccessible
 - Monitor well - plugged and abandoned

- EDC isocontour (µg/L) (dashed where inferred)
- Approximate extent of LNAPL
- W-8 Monitor well designation
- 71 EDC concentration in micrograms per liter (µg/L)
- 6.44 LNAPL thickness (feet)



Daniel B. Stephens & Associates, Inc.
3/30/2021 JN DB19.1395

Source: Adapted from Golder, 2018
AEA: 5/12/2020, Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO
EDC Dissolved-Phase Isoconcentration Map
February 22, 2021

Figure 8

S:\PROJECTS\B191395_LOVINGTON_66\GIS\MXD\CHEMISTRY\PAH\PAHS_2021-02.MXD



Explanation

- Monitor well
- Monitor well - destroyed or inaccessible
- Monitor well - plugged and abandoned

- PAHs isocontour ($\mu\text{g/L}$) (dashed where inferred)
- Approximate extent of LNAPL
- W-8** Monitor well designation
- 501** PAH concentration in micrograms per liter ($\mu\text{g/L}$)
- 6.44** LNAPL thickness (feet)



Daniel B. Stephens & Associates, Inc.
3/30/2021 JN DB19.1395

Source: Adapted from Golder, 2018
AEA: 5/12/2020, Google Earth Pro: 11/2/2020

LOVINGTON 66
424 SOUTH MAIN STREET
LOVINGTON, NEW MEXICO

PAH Dissolved-Phase Isoconcentration Map

February 22, 2021

Figure 9

Tables



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
MW-1	3909.08	08/06/05	55.07	—	—	3854.01
		08/08/06	54.36	—	—	3854.72
		11/07/07	53.93	—	—	3855.15
		05/12/08	54.36	—	—	3854.72
		08/07/08	54.86	—	—	3854.22
		01/28/09	54.91	—	—	3854.17
		07/10/09	55.12	—	—	3853.96
		02/12/14	58.47	—	—	3850.61
		10/07/14	58.86	—	—	3850.22
		06/23/16	59.19	—	—	3849.89
		01/02/17	No access - vault bolts ground off and filled with epoxy			
		09/12/17	No access - well vault cemented shut			
		02/11/21	Access not granted by Allsup's store			
MW-2	3910.05	08/06/05	55.74	—	—	3854.31
		08/08/06	55.04	—	—	3855.01
		11/07/07	54.58	—	—	3855.47
		05/12/08	55.05	—	—	3855.00
		08/07/08	55.54	—	—	3854.51
		01/28/09	55.56	—	—	3854.49
		07/10/09	55.79	—	—	3854.26
		02/12/14	Well covered by new cement			
MW-3	3909.46	08/06/05	55.33	—	—	3854.13
		08/08/06	54.65	—	—	3854.81
		11/07/07	54.22	—	—	3855.24
		05/13/08	54.76	—	—	3854.70
		08/07/08	55.15	—	—	3854.31
		01/28/09	55.16	—	—	3854.30
		07/10/09	55.42	—	—	3854.04
		02/12/14	Bolts on vault are cemented in place			
		06/23/16	63.42	58.28	5.14	3846.04
		01/02/17	63.47	58.36	5.11	3845.99
		09/12/17	60.67	60.16	0.51	3848.79
		03/01/18	62.30	59.75	2.55	3847.16
		02/11/21	Access not granted by Allsup's store			
V-1	3910.67	08/29/92	56.68	—	—	3853.99
		05/25/93	56.74	—	—	3853.93
		08/08/06	57.91	53.32	4.59	3856.20
		11/07/07	57.59	53.01	4.58	3856.52
		02/13/08	57.58	53.01	4.57	3856.52



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
V-1 (cont.)	3910.67 (cont.)	05/13/08	57.98	53.41	4.57	3856.12
		08/07/08	58.30	53.75	4.55	3855.78
		Well plugged and abandoned				
MPE-1	3909.76	06/15/16	63.75	57.43	6.32	3850.75
		11/08/16	64.19	57.62	6.57	3850.50
		01/02/17	63.95	57.51	6.44	3850.64
		09/11/17	64.55	57.90	6.65	3850.20
		02/20/18	64.05	57.70	6.35	3850.47
		02/11/21	65.14	58.70	6.44	3849.45
W-1	3911.33 ^c	02/12/92	0.125" of LNAPL present			
		06/08/92	>30" of LNAPL present			
		06/24/92	>30" of LNAPL present			
		05/24/93	L'NAPL present			
		08/28/93	LNAPL present			
		08/08/06	57.38	54.23	3.15	3856.31
		11/07/07	57.02	53.91	3.11	3856.64
		02/13/08	57.05	53.89	3.16	3856.65
		05/13/08	57.62	54.25	3.37	3856.24
		08/07/08	58.27	54.96	3.31	3855.54
		01/28/09	55.70	55.39	0.31	3855.86
		07/10/09	55.78	55.69	0.09	3855.62
		01/21/14	61.08	57.30	2.78	3852.34
		10/07/14	64.55	57.91	6.64	3851.76
		06/15/16	64.18	58.18	6.00	3851.65
		01/02/17	64.42	58.26	6.16	3851.53
		09/11/17	65.02	58.65	6.37	3851.09
		02/20/18	64.50	58.46	6.04	3851.36
	3910.51	02/11/21	65.50	59.38	6.12	3849.60
W-2	3910.19 ^c	03/13/92	0.125" of LNAPL present			
		06/08/92	>30" of LNAPL present			
		06/24/92	>30" of LNAPL present			
		08/28/92	L'NAPL present			
		05/24/93	L'NAPL present			
		08/08/06	58.55	53.21	5.34	3855.65
		11/07/07	56.20	52.88	3.32	3856.48
		02/13/08	53.88	53.57	0.31	3856.54
		05/13/08	54.36	53.98	0.38	3856.12
		08/07/08	54.78	54.34	0.44	3855.74
		01/28/09	54.47	54.44	0.03	3855.74



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-2 (cont.)	3910.19 (cont.)	07/10/09	54.80	54.69	0.11	3855.47
		01/21/14	63.23	56.23	7.00	3852.21
		10/07/14	63.85	56.87	6.98	3851.58
		06/15/16	63.60	57.11	6.49	3851.46
		01/02/17	63.75	57.22	6.53	3851.34
		09/11/17	64.33	57.61	6.72	3850.90
		02/20/18	63.82	57.43	6.39	3851.16
	3909.52	02/11/21	Well obstructed			
W-3	3910.29 ^c	03/13/92	0.125" of LNAPL present			
		06/08/92	>30" of LNAPL present			
		06/24/92	>30" of LNAPL present			
		08/28/92	LNAPL present			
		05/24/93	LNAPL present			
		08/08/06	56.5	53.3	3.2	3856.19
		11/07/07	56.04	53.01	3.03	3856.52
		02/13/08	53.78	53.65	0.13	3856.61
		05/13/08	54.65	54.44	0.21	3855.80
		08/07/08	54.26	54.08	0.18	3856.17
		01/28/09	54.56	54.5	0.06	3855.78
		07/10/09	54.77	54.75	0.02	3855.54
		01/21/14	63.02	56.36	6.66	3852.27
		10/07/14	63.7	56.96	6.74	3851.65
		06/15/16	63.53	57.21	6.32	3851.50
		01/02/17	63.68	57.32	6.36	3851.38
		09/11/17	64.16	57.75	6.41	3850.94
		02/20/18	63.75	57.55	6.20	3851.19
	3910.04	02/11/21	65.29	59.00	6.29	3849.47
W-4	3910.23	06/24/92	57.04	—	—	3853.19
		08/28/92	56.69	—	—	3853.54
		05/25/93	56.48	—	—	3853.75
		08/08/06	Well not found, covered by asphalt			
		02/11/21	60.30	—	—	3849.93
W-5	3911.71 ^c	06/24/92	57.59	—	—	3854.12
		08/28/92	57.24	—	—	3854.47
		05/26/93	57.02	—	—	3854.69
		08/08/06	54.88	—	—	3856.83
		11/07/07	54.61	—	—	3857.10
		02/13/08	54.63	—	—	3857.08
		05/12/08	54.87	—	—	3856.84



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-5 (cont.)	3911.71 (cont.)	08/07/08	55.36	—	—	3856.35
		01/28/09	55.36	—	—	3856.35
		07/09/09	55.54	—	—	3856.17
		01/21/14	58.51	—	—	3853.20
		10/07/14	59.24	—	—	3852.47
		06/23/16	59.39	—	—	3852.32
		01/02/17	59.38	—	—	3852.33
		09/12/17	59.88	—	—	3851.83
		03/01/18	59.55	—	—	3852.16
	Not Surveyed	02/11/21	61.64	—	—	—
W-6	99.48	06/24/92	56.97	—	—	—
		08/28/92	56.64	—	—	—
		05/26/93	56.49	—	—	—
		08/08/06	Well destroyed			
W-7	3910.88 ^c	08/28/92	56.29	—	—	3854.59
		05/25/93	55.96	—	—	3854.92
		08/08/06	53.74	—	—	3857.14
		11/07/07	53.48	—	—	3857.40
		02/12/08	53.33	—	—	3857.55
		05/12/08	53.55	—	—	3857.33
		08/06/08	53.97	—	—	3856.91
		01/28/09	54.11	—	—	3856.77
		07/09/09	54.23	—	—	3856.65
		01/21/14	57.05	—	—	3853.83
		10/07/14	57.92	—	—	3852.96
		06/23/16	Well occluded by roots above the water level (57.73 feet)			
		01/02/17	Well occluded by roots above the water level (57.72 feet)			
		09/12/17	58.48	—	—	3852.40
		03/01/18	58.16	—	—	3852.72
	3910.43	02/11/21	59.18	—	—	3851.25
W-8	3909.28	08/28/92	57.24	—	—	3852.04
		05/25/93	57.20	—	—	3852.08
		08/08/06	55.11	—	—	3854.17
		11/07/07	54.65	—	—	3854.63
		02/13/08	54.79	—	—	3854.49
		05/12/08	55.14	—	—	3854.14
		08/07/08	55.64	—	—	3853.64
		01/28/09	55.67	—	—	3853.61
		07/09/09	55.82	—	—	3853.46



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-8 (cont.)	3909.928 (cont.)	01/21/14	59.33	—	—	3849.95
		10/07/14	59.84	—	—	3849.44
		06/23/16	60.05	—	—	3849.23
		01/02/17	60.07	—	—	3849.21
		09/12/17	60.57	—	—	3848.71
		03/01/18	60.19	—	—	3849.09
		02/11/21	61.54	—	—	3847.74
W-9	3908.04	08/28/92	56.76	—	—	3851.28
		05/25/93	56.74	—	—	3851.30
		08/08/06	54.66	—	—	3853.38
		11/07/07	54.12	—	—	3853.92
		02/13/08	54.31	—	—	3853.73
		05/12/08	54.68	—	—	3853.36
		08/07/08	55.18	—	—	3852.86
		01/28/09	55.19	—	—	3852.85
		07/09/09	55.35	—	—	3852.69
		01/21/14	59.01	—	—	3849.03
		10/07/14	59.50	—	—	3848.54
		06/23/16	59.64	—	—	3848.40
		01/02/17	59.67	—	—	3848.37
		09/12/17	60.21	—	—	3847.83
		03/01/18	59.78	—	—	3848.26
		02/11/21	61.15	—	—	3846.89
W-10	3908.89	08/28/92	56.18	—	—	3852.71
		05/26/93	55.80	—	—	3853.09
		08/08/06	53.79	—	—	3855.10
		02/13/08	Unable to gauge well due to traffic constraints			
		05/12/08	Unable to gauge well due to traffic constraints			
		08/07/08	Unable to gauge well due to traffic constraints			
		01/28/09	Unable to gauge well due to traffic constraints			
		07/09/09	Unable to gauge well due to traffic constraints			
		01/21/14	No access to well, well vault broken			
		10/07/14	No access to well, well vault broken			
W-11	3909.24	02/11/21	Well not found, presumed lost			
		08/28/92	56.82	—	—	3852.42
		05/26/93	56.85	—	—	3852.39
		08/08/06	54.70	—	—	3854.54
		11/07/07	54.26	—	—	3854.98
		02/13/08	54.41	—	—	3854.83



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-11 (cont.)	3909.24(cont.)	05/12/08	54.71	—	—	3854.53
		08/06/08	55.14	—	—	3854.10
		01/28/09	55.26	—	—	3853.98
		07/09/09	55.46	—	—	3853.78
		01/21/14	58.80	—	—	3850.44
		10/07/14	59.41	—	—	3849.83
		06/23/16	59.53	—	—	3849.71
		01/02/17	59.54	—	—	3849.70
		09/12/17	60.05	—	—	3849.19
		03/01/18	59.63	—	—	3849.61
		02/11/21	61.00	—	—	3848.24
W-12	3910.15	08/29/92	56.28	—	—	3853.87
		05/26/93	55.96	—	—	3854.19
		08/08/06	53.55	—	—	3856.60
		11/07/07	53.72	—	—	3856.43
		02/12/08	53.29	—	—	3856.86
		05/12/08	54.05	—	—	3856.10
		08/06/08	54.50	—	—	3855.65
		01/28/09	54.09	—	—	3856.06
		07/09/09	54.23	—	—	3855.92
		01/21/14	57.81	—	—	3852.34
		10/07/14	58.07	—	—	3852.08
		06/23/16	58.69	—	—	3851.46
		01/02/17	58.75	—	—	3851.40
		09/12/17	59.13	—	—	3851.02
		03/01/18	Not measured			
		02/11/21	59.65	—	—	3850.50
W-13	3909.66	08/29/92	56.36	—	—	3853.30
		05/26/93	56.25	—	—	3853.41
		08/08/06	54.01	—	—	3855.65
		11/07/07	53.70	—	—	3855.96
		02/12/08	53.80	—	—	3855.86
		05/12/08	54.08	—	—	3855.58
		08/06/08	54.50	—	—	3855.16
		01/28/09	54.66	—	—	3855.00
		07/09/09	54.74	—	—	3854.92
		01/21/14	57.87	—	—	3851.79
		10/07/14	58.67	—	—	3850.99
		06/23/16	58.69	—	—	3850.97



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-13 (cont.)	3909.66(cont.)	01/02/17	58.76	—	—	3850.90
		09/12/17	59.24	—	—	3850.42
		03/01/18	58.85	—	—	3850.81
		02/11/21	60.00	—	—	3849.66
W-14	3909.08	05/26/93	56.26	—	—	3852.82
		08/08/06	54.15	—	—	3854.93
		11/07/07	53.72	—	—	3855.36
		02/13/08	53.80	—	—	3855.28
		05/13/08	54.24	—	—	3854.84
		08/07/08	54.65	—	—	3854.43
		01/28/09	54.67	—	—	3854.41
		07/10/09	54.90	—	—	3854.18
		01/21/14	58.15	—	—	3850.93
		10/07/14	58.65	—	—	3850.43
		06/23/16	58.93	—	—	3850.15
		01/02/17	58.98	—	—	3850.10
		09/12/17	60.01	59.27	0.74	3849.63
		03/01/18	63.45	57.93	5.52	3849.77
		02/11/21	Access not granted by Allsup's store			
W-15	3908.91	05/26/93	55.40	—	—	3853.51
		08/08/06	53.41	—	—	3855.50
		11/07/07	53.11	—	—	3855.80
		02/12/08	53.02	—	—	3855.89
		05/12/08	53.27	—	—	3855.64
		08/06/08	53.71	—	—	3855.20
		01/28/09	53.82	—	—	3855.09
		07/09/09	53.91	—	—	3855.00
		01/21/14	57.09	—	—	3851.82
		10/07/14	57.84	—	—	3851.07
		06/23/16	57.98	—	—	3850.93
		01/02/17	58.02	—	—	3850.89
		09/12/17	58.39	—	—	3850.52
		03/01/18	Not measured			
		02/11/21	59.46	—	—	3849.45
W-16	3907.99	05/26/93	55.52	—	—	3852.47
		08/08/06	53.49	—	—	3854.50
		11/07/07	53.06	—	—	3854.93
		02/13/08	53.20	—	—	3854.79
		05/12/08	53.52	—	—	3854.47



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-16 (cont.)	3907.99 (cont.)	08/07/08	54.03	—	—	3853.96
		01/28/09	53.52	—	—	3854.47
		07/09/09	54.23	—	—	3853.76
		01/21/14	57.61	—	—	3850.38
		10/07/14	58.24	—	—	3849.75
		06/23/16	58.40	—	—	3849.59
		01/02/17	58.42	—	—	3849.57
		09/12/17	58.86	—	—	3849.13
		03/01/18	58.50	—	—	3849.49
		02/11/21	59.90	—	—	3848.09
W-17	Not Surveyed	05/26/93	56.86	—	—	—
		08/08/06	Well destroyed			
W-18	3908.66	05/26/93	56.79	—	—	3851.87
		08/08/06	54.60	—	—	3854.06
		11/07/07	54.19	—	—	3854.47
		02/12/08	54.13	—	—	3854.53
		05/12/08	54.65	—	—	3854.01
		08/06/08	54.90	—	—	3853.76
		01/28/09	55.04	—	—	3853.62
		07/09/09	55.14	—	—	3853.52
		01/21/14	58.60	—	—	3850.06
		10/07/14	59.26	—	—	3849.40
		06/23/16	59.33	—	—	3849.33
		01/02/17	59.36	—	—	3849.30
		09/12/17	59.88	—	—	3848.78
		03/01/18	59.45	—	—	3849.21
		02/11/21	60.80	—	—	3847.86
W-19	3907.40	11/07/07	54.23	—	—	3853.17
		02/13/08	54.51	—	—	3852.89
		05/12/08	54.88	—	—	3852.52
		08/06/08	55.31	—	—	3852.09
		01/28/09	55.36	—	—	3852.04
		07/09/09	55.48	—	—	3851.92
		01/21/14	59.27	—	—	3848.13
		10/07/14	59.78	—	—	3847.62
		06/23/16	59.94	—	—	3847.46
		01/02/17	59.89	—	—	3847.51
		09/12/17	60.45	—	—	3846.95
		03/01/18	60.00	—	—	3847.40



**Table 1. Summary of Groundwater Elevation Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Top of Casing Elevation ^a (feet msl)	Date Measured	Depth to Water (feet btoc)	Depth to LNAPL (feet)	LNAPL Thickness (feet)	Groundwater Elevation ^b (feet msl)
W-19 (cont.)	3907.40 (cont.)	02/11/21	61.35	—	—	3846.05
W-20	3906.32	11/07/07	54.29	—	—	3852.03
		02/13/08	54.69	—	—	3851.63
		05/12/08	55.09	—	—	3851.23
		08/06/08	55.53	—	—	3850.79
		01/28/09	55.54	—	—	3850.78
		07/09/09	55.60	—	—	3850.72
		01/21/14	59.80	—	—	3846.52
		10/07/14	60.32	—	—	3846.00
		06/23/16	60.68	—	—	3845.64
		01/02/17	60.37	—	—	3845.95
		09/12/17	61.05	—	—	3845.27
		03/01/18	60.50	—	—	3845.82
		02/11/21	62.00	—	—	3844.32
W-21	3907.37	11/07/07	54.19	—	—	3853.18
		02/13/08	54.45	—	—	3852.92
		05/12/08	54.81	—	—	3852.56
		08/06/08	55.23	—	—	3852.14
		01/28/09	55.32	—	—	3852.05
		07/09/09	55.39	—	—	3851.98
		01/21/14	59.22	—	—	3848.15
		10/07/14	59.74	—	—	3847.63
		06/23/16	59.88	—	—	3847.49
		01/02/17	59.92	—	—	3847.45
		09/12/17	60.45	—	—	3846.92
		03/01/18	60.00	—	—	3847.37
		02/11/21	61.40	—	—	3845.97

Note: Data prior to February 2021 reported by Golder, 2018.

^a Wells surveyed by Atkins Engineering Associates, August 2020, unless otherwise noted

^b Corrected for LNAPL thickness using: GWE = TOC elevation - [DTW - (LNAPL thickness x 0.75)].

^c 2006 Survey elevation from Golder, 2018; see text for discussion

msl = Above mean sea level

btoc = Below top of casing

LNAPL = Light nonaqueous-phase liquid

GWE = Groundwater elevation

TOC = Top of casing

DTW = Depth to water



**Table 2. Light Nonaqueous-Phase Liquid Recovered
Lovington, New Mexico**

Monitor Well	Date Recovered	Prior to LNAPL Bailing Event (feet)			Post Bailing Event (feet)			Total LNAPL Recovered ^a (Gallons)	Comments
		Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness		
W-1	09/03/08	54.69	58.52	3.83	—	57.22	0.00	6.00	LNAPL bailing event
	01/27/09	54.69	58.22	3.53	—	56.25	0.00	6.00	LNAPL bailing event
	05/12/09	54.85	57.78	2.93	—	56.62	0.00	1.90	LNAPL bailing event
	07/10/09	55.33	56.99	1.66	—	56.69	0.00	1.08	LNAPL bailing event
	02/12/14	57.30	60.08	2.78	—	57.88	0.00	8.50	LNAPL bailing event
	06/09/14	57.72	64.31	6.59	—	59.85	0.00	4.18	LNAPL bailing event
	10/15/14	57.91	64.55	6.64	—	60.20	0.00	20.05	LNAPL bailing event
	06/02/15	58.11	64.89	6.78	60.41	60.51	0.10	5.75	LNAPL bail-down recovery test
	07/13/15	57.12	63.96	6.84	—	—	0.00	47.61	MPE pilot test
	06/15/16	58.18	64.18	6.00	61.30	61.31	0.01	4.24	LNAPL bailing event
	11/08/16	58.38	64.68	6.30	60.70	60.75	0.05	12.80	LNAPL bailing event
	12/21/16	58.26	64.42	6.16	61.27	61.28	0.01	6.88	LNAPL bailing event
	04/18/17	58.17	64.02	5.85	—	59.91	0.00	7.08	LNAPL bailing event
	09/11/17	58.65	65.02	6.37	—	61.63	0.00	4.14	LNAPL bailing event
	12/11/17	58.69	65.00	6.31	—	61.86	0.00	7.68	LNAPL bailing event
	02/20/18	58.46	64.50	6.04	—	61.21	0.00	7.20	LNAPL bailing event
	02/23/21	59.40	65.50	6.10	60.91	61.22	0.31	3.40	LNAPL bailing event
W-2	09/03/08	54.50	54.94	0.44	—	55.52	0.00	0.25	LNAPL bailing event
	01/27/09	54.48	54.81	0.33	—	55.55	0.00	0.25	LNAPL bailing event
	05/12/09	54.50	54.83	0.33	—	55.64	0.00	0.21	LNAPL bailing event
	07/10/09	54.68	54.96	0.28	—	55.50	0.00	0.18	LNAPL bailing event
	02/12/14	56.25	63.26	7.01	—	58.60	0.00	9.75	LNAPL bailing event
	06/09/14	56.67	63.64	6.97	—	58.87	0.00	9.15	LNAPL bailing event
	10/15/14	56.87	63.85	6.98	—	59.42	0.00	15.85	LNAPL bailing event
	06/02/15	57.07	64.26	7.19	59.30	59.32	0.02	6.20	LNAPL bail-down recovery test
	07/13/15	58.13	64.67	6.54	—	—	0.00	25.92	MPE pilot test
	06/15/16	57.11	63.60	6.49	59.81	59.82	0.01	5.88	LNAPL bailing event



**Table 2. Light Nonaqueous-Phase Liquid Recovered
Lovington, New Mexico**

Monitor Well	Date Recovered	Prior to LNAPL Bailing Event (feet)			Post Bailing Event (feet)			Total LNAPL Recovered ^a (Gallons)	Comments
		Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness		
W-2 (cont.)	11/08/16	57.32	64.01	6.69	59.93	59.95	0.02	8.27	LNAPL bailing event
	12/21/16	57.22	63.75	6.53	60.17	60.18	0.01	6.48	LNAPL bailing event
	04/18/17	57.13	63.28	6.15	—	59.63	0.00	5.08	LNAPL bailing event
	09/11/17	57.61	64.33	6.72	—	60.65	0.00	4.36	LNAPL bailing event
	12/11/17	57.63	64.26	6.63	—	60.37	0.00	10.28	LNAPL bailing event
	02/20/18	57.43	63.82	6.39	—	60.10	0.00	7.20	LNAPL bailing event
W-3	09/03/08	54.60	54.81	0.21	—	55.57	0.00	0.25	LNAPL bailing event
	01/27/09	54.56	54.69	0.13	—	55.52	0.00	0.25	LNAPL bailing event
	05/12/09	54.58	54.68	0.10	—	55.54	0.00	0.07	LNAPL bailing event
	07/10/09	54.78	54.85	0.07	—	55.64	0.00	0.05	LNAPL bailing event
	02/12/14	56.36	63.03	6.67	—	58.05	0.00	9.75	LNAPL bailing event
	06/09/14	56.78	63.43	6.65	—	59.07	0.00	9.30	LNAPL bailing event
	10/15/14	56.96	63.70	6.74	—	60.02	0.00	21.10	LNAPL bailing event
	06/02/15	57.17	64.10	6.93	59.80	59.95	0.15	7.00	LNAPL bail-down recovery test
	06/15/16	57.21	63.53	6.32	—	—	0.00	8.88	MPE pilot test
	11/08/16	57.42	63.90	6.48	60.12	60.17	0.05	12.00	LNAPL bailing event
	12/21/16	57.32	63.68	6.36	—	60.58	0.00	7.60	LNAPL bailing event
	04/18/17	57.22	63.28	6.06	—	60.06	0.00	6.88	LNAPL bailing event
	09/11/17	57.75	64.16	6.41	—	60.91	0.00	4.16	LNAPL bailing event
	12/11/17	57.76	64.17	6.41	—	60.58	0.00	10.88	LNAPL bailing event
	02/20/18	57.55	63.75	6.20	—	60.16	0.00	4.00	LNAPL bailing event
	02/23/21	59.00	65.29	6.29	60.62	60.90	0.28	3.09	LNAPL bailing event
MPE-1	07/12/15	57.40	64.08	6.68	61.61	61.65	0.04	67.10	MPE pilot test
	06/15/16	57.43	63.75	6.32	—	—	0.00	—	Not bailed
	11/08/16	57.62	64.19	6.57	60.03	60.07	0.04	8.28	LNAPL bailing event
	12/21/16	57.51	63.95	6.44	60.22	60.23	0.01	6.88	LNAPL bailing event
	04/18/17	57.44	63.58	6.14	—	59.85	0.00	9.28	LNAPL bailing event



**Table 2. Light Nonaqueous-Phase Liquid Recovered
Lovington, New Mexico**

Monitor Well	Date Recovered	Prior to LNAPL Bailing Event (feet)			Post Bailing Event (feet)			Total LNAPL Recovered ^a (Gallons)	Comments
		Depth to LNAPL	Depth to Water	LNAPL Thickness	Depth to LNAPL	Depth to Water	LNAPL Thickness		
MPE-1 (cont.)	09/11/17	57.90	64.55	6.65	—	67.30	0.00	4.37	LNAPL bailing event
	12/11/17	57.93	64.50	6.57	—	64.70	0.00	13.08	LNAPL bailing event
	02/20/18	57.70	64.05	6.35	—	60.25	0.00	7.20	LNAPL bailing event
	02/23/21	58.70	65.44	6.74	60.40	60.60	0.20	3.84	LNAPL bailing event
V-1	09/03/08	53.92	58.45	4.53	—	55.20	0.00	1.00	LNAPL bailing event
Cumulative total NAPL recovered at the site (gallons)								496.08	

^a Quantity is estimated based on the amount of nonaqueous-phase liquid (NAPL) in the purge fluid. Gallons of impacted water not reported on the table.
All NAPL recovered is temporarily stored in a 55-gallon drum on-site.

— = Not measured

LNAPL = Light nonaqueous-phase liquid

MPE = Multiphase extraction



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
MPE-1	02/23/21	Not sampled, 6.44 feet NAPL present							
W-1	02/23/21	Not sampled, 6.12 feet NAPL present							
W-2	03/13/92	29,878	28,953	3,874	13,109	5,921	NA		
W-3	03/13/92	10,493	8,961	1,253	5,320	5,150	NA		
	02/23/21	Not sampled, 6.29 feet NAPL present							
W-4	06/24/92	200	53	21	40	<5.0	NA		
	08/28/92	1,400	430	95	300	<2.5	NA		
	05/25/93	2,500	980	310	470	<63	NA		
	08/08/06	Well paved over							
	02/22/21	860	760	370	560	<1.0	<0.0094 ^b	<1.0	88
W-5	06/24/92	470	250	41	290	<10	NA		
	08/28/92	850	400	58	450	3.3	NA		
	08/09/06	2.0	<1.0	3.7	<3.0	22	<1.0 ^c	<1.0	<2.0
	11/07/07	45	8.5	29	15	170	<1.0 ^c	<1.0	4.9
	02/13/08	26	1.1	24	<1.5	140	<1.0 ^c	<1.0	4.5
	05/12/08	16	<1.0	7.6	<1.5	65	<1.0 ^c	<1.0	<2.0
	08/07/08	5.2	<1.0	3.7	<1.5	39	<1.0 ^c	<1.0	<2.0
	01/28/09	<1.0	<1.0	<1.0	<1.5	18	<1.0 ^c	<1.0	<2.0
	07/09/09	<1.0	<1.0	<1.0	<1.5	21	<1.0 ^c	<1.0	<2.0
	01/21/14	8.5	1.0	2.7	2.5	3.8	<1.0 ^c	<1.0	<2.0
	10/07/14	8.5	<2.0	<2.0	<3.0	2.5	<2.0 ^c	<2.0	<4.0
	06/23/16	17	<1.0	7.5	7.0	2.1	<1.0 ^c	<1.0	<2.0
	01/02/17	37	1.9	9.6	12	12	<1.0 ^c	<1.0	<2.0
	09/12/17	42	<2.0	5.6	10	3.2	<1.0 ^c	<1.0	<8.0
	03/01/18	9.9	<1.0	2.3	2.7	1.5	<1.0 ^c	<1.0	<10



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
W-5 (cont.)	02/22/21	7.6	<1.0	<1.0	<1.5	<1.0	<0.0094 ^b	<1.0	<10
W-6	06/24/92	1,400	1,200	48	500	<25	NA		
	08/28/92	3,000	2,700	93	860	<2.5	NA		
	08/08/06	NA	NA	NA	NA	NA	NA		
W-7	08/28/92	<0.5	<0.5	<0.5	<0.5	<2.5	NA		
	05/25/93	<0.5	<0.5	<0.5	<0.5	<2.5	NA		
	08/08/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0 ^c	<1.0	<2.0
	11/07/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	02/22/21	<1.0	<1.0	<1.0	<1.5	<1.0	<0.0094 ^b	<1.0	<10
W-8	08/28/92	8,000	9,500	690	5,200	<2.5	NA		
	05/25/93	12,000	8,300	1,500	8,800	<250 ^b	NA		
	08/04/05	27,000	35,000	3,800	18,000	3,700	1,100	4,300	622
	08/09/06	21,000	29,000	2,600	13,000	6,300	<500 ^c	3,700	1,100
	11/07/07	20,000	27,000	3,200	15,000	5,900	440	4,100	770
	02/13/08	27,000	39,000	4,800	16,000	8,600	670	4,000	1,350
	05/12/08	19,000	22,000	1,800	8,000	4,900	250	2,100	400
	08/07/08	20,000	24,000	2,400	11,000	8,600	270	2,900	670
	01/28/09	19,000	26,000	2,500	11,000	9,800	290	3,000	570
	07/09/09	18,000	26,000	2,400	11,000	13,000	230	2,300	500
	01/21/14	14,000	8,800	2,300	7,900	25,000	<100 ^c	610	610
	10/07/14	14,000	7,000	2,400	7,600	28,000	<100 ^c	440	590
	06/23/16	16,000	7,300	2,100	6,000	16,000	<200 ^c	320	540
	01/02/17	15,000	7,200	2,100	5,700	16,000	<200 ^c	350	430
	09/12/17	15,000	6,100	2,100	4,900	14,000	<200 ^c	260	594
	03/01/18	12,000	5,200	2,200	4,900	12,000	<100 ^c	230	480



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
W-8 (cont.)	02/22/21	6,100	170	1,800	2,000	15,000	0.033 ^b	71	501
W-9	08/28/92	130	8.2	16	140	<2.5	NA		
	05/25/93	100	6.3	2.5	170	<5.0	NA		
	08/04/05	4,300	180	850	830	<1.0	<0.01	320	29
	08/09/06	6,700	560	1,200	1,400	<150 ^c	<100 ^c	650	250
	11/07/07	6,500	120	620	450	<10	<10 ^c	360	51
	02/13/08	7,500	130	910	590	<10	<10 ^c	450	129
	05/12/08	3,000	63	800	360	<10	<10 ^c	480	228
	08/07/08	5,100	<100	830	300	<100 ^c	<100 ^c	520	<200 ^c
	01/28/09	4,800	<10	370	380	<10	<10 ^c	580	120
	07/09/09	6,400	<5.0	1,100	460	<5.0	<5.0 ^c	570	139
	01/21/14	7,500	<10	1,200	250	100	<10 ^c	910	180
	10/07/14	8,000	<50	1,200	210	150	<50 ^c	960	180
	06/23/16	3,800	<50	290	<7.5	300	<50 ^c	410	<100 ^c
	01/02/17	10	<1.0	1.5	<1.5	51	<1.0 ^c	60	<2.0
	09/12/17	2,500	<1.0	110	61	420	<1.0 ^c	510	43
	03/01/18	4,100	<1.0	35	38	660	<20 ^c	600	120
	02/22/21	11,000	2,300	1,400	2,200	10,000	<0.0094 ^b	1,200	581
W-10	08/28/92	1,100	11	120	440	<2.5	NA	NA	NA
	08/04/05	940	2.6	930	140	2,400	0.1	48	27
	08/09/06	420	<1.0	31	<3.0	22	<1.0 ^c	12	121
	10/07/14	Well lost or destroyed							
W-11	08/28/92	770	13	13	280	<2.5	NA		
	08/09/06	5.0	<1.0	62	44	88	<1.0 ^c	33	<2.0
	11/07/07	18	<1.0	38	13	540	<1.0 ^c	35	<2.0



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
W-11 (cont.)	02/13/08	3.2	<1.0	41	5.1	540	<1.0 ^c	37	<2.0
	05/12/08	3.0	<1.0	31	3.7	740	<1.0 ^c	36	<2.0
	08/06/08	3.2	<1.0	28	2.5	610	<1.0 ^c	38	<2.0
	01/28/09	<1.0	<1.0	40	5.7	160	<1.0 ^c	44	<2.0
	07/09/09	<1.0	<1.0	34	7.2	160	<1.0 ^c	44	<2.0
	01/21/14	5.4	<1.0	25	1.8	44	<1.0 ^c	51	<2.0
	10/07/14	90	<5.0	150	<7.5	11	<5.0 ^c	57	<10
	06/23/16	1.7	<1.0	47	<1.5	34	<1.0 ^c	63	<2.0
	01/02/17	2.2	<1.0	27	4.2	46	<1.0 ^c	58	2.2
	09/12/17	5.1	<1.0	24	<1.5	35	<1.0 ^c	52	3.9
	03/01/18	1.0	<1.0	1.1	1.8	80	<1.0 ^c	40	<4.0
	02/22/21	<1.0	<1.0	<1.0	<1.5	47	<0.0094 ^b	<1.0	<10
W-12	08/29/92	87	6.1	2.6	180	<2.5	NA		
	08/08/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0 ^c	<1.0	<2.0
	02/22/21	140	110	400	91	<10	<0.0094 ^b	<10 ^c	428
W-13	08/29/92	<0.5	<0.5	<0.5	<0.5	<2.5	NA		
	08/08/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0 ^c	<1.0	<2.0
	02/22/21	<1.0	<1.0	<1.0	<1.5	<1.0	<0.0094 ^b	<1.0	<10
W-14	05/26/93	6,600	4,300	1,200	4,000	<125 ^c	NA		
	08/05/05	27,000	26,000	4,900	9,500	7,600	3.3	120	413
	08/09/06	25,000	23,000	4,000	9,500	4,700	<500 ^c	<500 ^c	1,200
	02/13/08	30,000	23,000	4,900	13,000	4,400	<50 ^c	210	1,270
	05/13/08	14,000	6,500	2,800	6,300	2,400	<10 ^c	170	1,001
	08/07/08	26,000	20,000	4,400	11,000	3,700	<100 ^c	160	840
	01/28/09	24,000	19,000	2,200	8,700	3,200	<100 ^c	150	640



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
W-14 (cont.)	07/10/09	26,000	24,000	4,000	11,000	2,600	<50 ^c	160	590
	01/21/14	28,000	27,000	4,000	12,000	1,700	<100 ^c	120	730
	10/07/14	31,000	31,000	4,200	11,000	1,600	<200 ^c	<200 ^c	700
	06/23/16	32,000	35,000	4,000	13,000	1,400	<200 ^c	<200 ^c	760
	01/02/17	28,000	31,000	3,800	12,000	1,900	<200 ^c	<200 ^c	620
	09/12/17	Not sampled, NAPL present							
	03/01/18	Not sampled, NAPL present							
	02/22/21	Not sampled, access not granted to Allsup's property							
W-15	05/26/93	<0.5	<0.5	<0.5	<0.5	<2.5	NA		
	08/08/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0 ^c	<1.0	<2.0
	02/22/21	<5.0 ^c	<5.0	<5.0	<7.5	<5.0	<0.0095 ^b	<5.0 ^c	<50 ^c
W-16	05/26/93	52	<0.5	7.9	15	<2.5	NA		
	08/08/06	1.3	14	2.9	<3.0	<1.5	<1.0 ^c	<1.0	<2.0
	11/07/07	640	<1.0	22	12	55	<1.0 ^c	23	363
	02/13/08	630	<1.0	12	8.6	47	<1.0 ^c	17	342
	05/12/08	690	<1.0	12	3.6	60	<1.0 ^c	21	327
	08/07/08	790	<1.0	5.4	<1.5	59	<1.0 ^c	17	352
	01/28/09	170	<1.0	<1.0	<1.5	39	<1.0 ^c	13	120
	07/09/09	35	<1.0	1.3	<1.5	11	<1.0 ^c	3.8	15
	01/21/14	<1.0	<1.0	<1.0	<1.5	4.3	<1.0 ^c	<1.0	<2.0
	10/07/14	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	06/23/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	01/02/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	09/12/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<4.0
	03/02/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<4.0



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
W-16 (cont.)	02/22/21	<1.0	<1.0	<1.0	<1.5	<1.0	<0.0093 ^b	<1.0	<10
W-17	05/26/93	<0.5	<0.5	<0.5	<0.5	<2.5	NA		
	08/08/06	Well destroyed							
W-18	05/26/93	1.6	1.8	<0.5	2.0	<2.5	NA		
	08/08/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0 ^c	<1.0	<2.0
	02/22/21	<5.0 ^c	<5.0	<5.0	<7.5	<5.0	<0.11 ^{b, c}	<5.0 ^c	<50 ^c
W-19	11/08/07	4.3	<1.0	<1.0	<1.5	<1.5	<1.0 ^c	23	<2.0
	02/13/08	2.4	<1.0	<1.0	<1.5	<1.5	<1.0 ^c	10	<2.0
	05/12/08	1.6	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	9.2	<2.0
	08/06/08	2.4	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	19	<2.0
	01/28/09	3.8	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	37	<2.0
	07/09/09	3.4	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	37	<2.0
	01/21/14	4.9	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	59	<2.0
	10/07/14	6.9	<2.0	<2.0	<3.0	<2.0	<2.0 ^c	100	<4.0
	06/23/16	4.5	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	79	<2.0
	01/02/17	4.2	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	97	<2.0
	09/12/17	3.1	1.3	<1.0	<1.5	<1.0	<1.0 ^c	130	<4.0
	03/02/18	1.4	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	71	<4.0
	02/22/21	<1.0	<1.0	<1.0	<1.5	6.6	<0.0094 ^b	48	<10
W-20	11/08/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	02/13/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	05/12/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	08/06/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	01/28/09	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	07/09/09	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Monitor Well	Date Sampled	Concentration ^a (µg/L)							
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDB	EDC	PAHs
NMWQCC Standard		5	1,000	700	620	100	0.05	5	30
W-20 (cont.)	01/21/14	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	10/07/14	<2.0	<2.0	<2.0	<3.0	<2.0	<2.0 ^c	<2.0	<4.0
	06/23/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	01/02/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	09/12/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<4.0
	03/02/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<4.0
	02/22/21	<1.0	<1.0	<1.0	<1.5	<1.0	<0.0094 ^b	<1.0	<10
W-21	11/08/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	02/12/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	05/12/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	08/06/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	01/28/09	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	07/09/09	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	01/21/14	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	10/07/14	<2.0	<2.0	<2.0	<3.0	<2.0	<2.0 ^c	<2.0	<4.0
	06/23/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	01/02/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<2.0
	09/12/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<4.0
	03/02/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0 ^c	<1.0	<4.0
	02/22/21	<1.0	<1.0	<1.0	<1.5	<1.0	<0.0094 ^b	<1.0	<10
V-1	08/29/92	250	680	240	810	<2.5	NA		
	05/25/93	5,000	14,000	3,000	10,000	600	NA		

Table footnotes and acronyms provided on next page



**Table 3. Summary of Groundwater Analytical Organic Chemistry Data
Lovington 66, Lovington, New Mexico**

Note: Data prior to February 2021 reported by Golder, 2018

Bold indicates value exceeds the New Mexico Water Quality Control Commission standard.

^a Samples analyzed in accordance with EPA method 8260B, unless otherwise noted

^c Sample analyzed in accordance with EPA method 504.1 for EDB

^b Laboratory reporting limit is equal to or greater than the applicable standard

µg/L = Micrograms per liter

MTBE = Methyl tertiary-butyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

PAHs = Polynuclear aromatic hydrocarbons
(naphthalene plus methylnaphthalenes)

NMWQCC = New Mexico Water Quality Control Commission

NA = Not analyzed

EPA = U.S. Environmental Protection Agency



**Table 4. Summary of Product Type Analysis
Lovington 66, Lovington, New Mexico**

Well Name	Date	Percent Composition ^a			
		DRO	MRO	GRO	TPH ^b
MPE-1	06/15/20	21	<3.9	110	131
W-1	06/15/20	22	<4.4	100	122
W-3	06/15/20	22	<4.4	85	107

^a Samples analyzed in accordance with U.S. Environmental Protection Agency (EPA) method 8015D.

^b Samples were analyzed separately for each hydrocarbon group, so total may not be 100 percent.

DRO = Diesel range organics

MRO = Motor oil range organics

GRO = Gasoline range organics

TPH = Total petroleum hydrocarbons

Appendix A

Sampling Protocol



Appendix A. Sampling Protocol

A.1 Fluid Level and Parameter Measurements

Prior to collection of groundwater samples, a Solinst interface probe will be used to determine depths to water and light nonaqueous-phase liquid (LNAPL), if present. Water level data will be used to construct a site potentiometric surface map. A YSI 556 MPS meter will be used to measure dissolved oxygen (DO), oxidation/reduction potential (ORP), specific conductivity, pH, and temperature. Field parameters will be measured at intervals of no less than once per casing volume during purging of a well for sampling.

A.2 Groundwater Monitor Well Sampling

To ensure a fresh flow of groundwater into the well bore, a minimum of three casing volumes will be removed from each well prior to sampling. If a well is purged dry, it will be sampled when the well has recharged. Wells will be purged and sampled using dedicated, disposable, polyethylene bailers. To minimize volatilization and ensure sample integrity, dedicated, disposable, polyethylene bottom-emptying devices will be used to transfer groundwater samples from the bailers to the appropriate sample containers.

Samples analyzed for volatile organic analytes (VOAs) will be collected in 40-milliliter (mL) glass vials containing hydrochloric acid or mercuric chloride preservative and capped with Teflon septa caps. VOA containers will be filled in a manner that prevents headspace in the vials. Samples analyzed for dissolved iron, lead, and manganese will be field-filtered with 0.45-micron disposable filters, collected in 250-mL plastic containers, and preserved with nitric acid to a pH of less than 2. Samples analyzed for nitrate and sulfate will be collected in 500-mL plastic containers containing no preservative.

Immediately after collection, the sample containers will be placed on ice in an insulated cooler for delivery to the laboratory for analyses. Groundwater samples will be accompanied by full chain of custody documentation at all times.

Appendix B

Field Notes



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DBA.1395.00 PROJECT TASKS Sample Date: 2/11/2021
Project Manager: JASON ROUCCI Sample Time: _____

Well #: MPE-1
Well Diameter: 2 (inches) Height of Water Column: 11.61 (feet)
Depth to NAPL: 58.70 (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 65.14 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 712.75 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington LeGe Sampler: KIA/AF
Project #: DB191395.00 Phase I Task B Sample Date: 2/11/2021
Project Manager: Tyson Raweci Sample Time: _____

Well #: W-1
Well Diameter: 4 (inches) Height of Water Column: 6.88 (feet)
Depth to NAPL: 59.38 (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 65.50 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 72.38 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Louington Le Ce Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2/11/2021
Project Manager: Jason Raveci Sample Time: _____

Well #: 2
Well Diameter: 4 (inches) Height of Water Column: 0 (feet)
Depth to NAPL: 1.17 (feet btoc) Casing Volume: _____ (gal)
Depth to Water: Dry (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 600.04 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: Well is dry, muddy on bottom

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2/11/2021
Project Manager: Jason Raucei Sample Time: _____

Well #: 2
Well Diameter: 4 (inches) Height of Water Column: 0 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: Dry (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 60.04 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: Well is dry. Mud on Bottom.

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Louington 66 Sampler: KA/AF
Project #: DB19.1395.00 Phase I Task 3 Sample Date: 2/11/2021
Project Manager: Jason Rowce Sample Time: _____

Well #: 3
Well Diameter: 4 (inches) Height of Water Column: 9.48 (feet)
Depth to NAPL: 59.00 (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 65.29 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 74.77 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lafayette Lele Sampler: KAIAF
Project #: DB191395.00 Phase 1 Task 3 Sample Date: 2/11/2021
Project Manager: Jason Paweci Sample Time: _____

Well #: 4
Well Diameter: 2 (inches) Height of Water Column: 51.47 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 100.30 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 105.77 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Well Sampler: KAI AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2-22-21
Project Manager: Jason Rucco Sample Time: 17:00

Well #: 4
Well Diameter: 2 (inches) Height of Water Column: 5.47 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.62 (gal)
Depth to Water: 60.30 (feet btoc) Purge Volume: 0.87 (gal)
Total Depth of Well: 65.77 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F) / °C	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.93	19.7	1157	-250.6	0.67	
1	6.90	19.7	1093	-207.0	1.34	
2	6.85	19.9	1172	-190.7	1.08	
3	6.91	19.8	1225	-166.7	1.16	

Sample Description: _____

Physical Observations: Strong HC odor

Analytical Method(s): 8260B, EDB 54.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Well Sampler: KA/AF
Project #: DB 19.1395.00 Phase Task 3 Sample Date: 2/11/2021
Project Manager: Jason Raveci Sample Time: _____

Well #: 5
Well Diameter: 2 (inches) Height of Water Column: 4.65 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 61.64 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 66.29 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DB19.1395.00 Phase 7 TASK 3 Sample Date: 2-22-21
Project Manager: Jason Raveci Sample Time: 17:13

Well #: 5
Well Diameter: 2 (inches) Height of Water Column: 4.65 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.23 (gal)
Depth to Water: 61.64 (feet btoc) Purge Volume: 0.74 (gal)
Total Depth of Well: 66.29 (feet) Purge Method: Bailer-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.58	19.1	1450	-208.3	0.80	
1	6.66	19.7	1455	-576.6	0.86	
2	6.68	19.5	1410	-185.5	1.22	
3	6.73	19.5	1364	-153.8	1.31	

Sample Description: _____

Physical Observations: Strong HC color / very dark color

Analytical Method(s): 8260B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 666 Sampler: KA/AF
Project #: DB 19,1395.00 Phase I TASK 3 Sample Date: 2/11/2021
Project Manager: Jason Raweci Sample Time: _____

Well #: 7
Well Diameter: 2 (inches) Height of Water Column: 6.55 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 59.18 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.73 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 task 3 Sample Date: 2-22-21
Project Manager: Jason Ravcci Sample Time: 14:30

Well #: 7
Well Diameter: 2 (inches) Height of Water Column: 6.55 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 3.14 (gal)
Depth to Water: 59.18 (feet btoc) Purge Volume: 1.04 (gal)
Total Depth of Well: 105.73 (feet) Purge Method: Bailer-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.05	19.6	1660	260.0	1.56	
1	7.06	19.6	1683	273.1	2.02	
2	7.12	19.3	1662	278.4	1.91	
3	7.08	19.6	1607	278.3	1.54	

Sample Description: _____

Physical Observations: _____

Analytical Method(s): 8260B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington C&G Sampler: KA1AF
Project #: DB19.1395.00Phase1Task3 Sample Date: 2/11/2021
Project Manager: Jason Raweci Sample Time: _____

Well #: 8
Well Diameter: 2 (inches) Height of Water Column: 3.96 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 61.54 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.50 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Well Sampler: KA/AF
Project #: DBA.1395.00 Phase 1 TASK 3 Sample Date: 2-22-21
Project Manager: JASON RAVOCCI Sample Time: 11:25

Well #: 8
Well Diameter: 2 (inches) Height of Water Column: 3.96 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 1.90 (gal)
Depth to Water: 61.54 (feet btoc) Purge Volume: 0.63 (gal)
Total Depth of Well: 65.50 (feet) Purge Method: bailler-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.81	19.8	1386	-124.0	1.07	
1	6.86	20.0	1365	-109.7	0.67	
2	6.88	19.9	1376	-111.6	1.03	
3	6.86	19.6	1407	-139.0	1.04	

Sample Description: _____

Physical Observations: HC odor

Analytical Method(s): 8260B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Lake Sampler: KAI AF
Project #: DB19.1395.00 Phase I Task 3 Sample Date: 2/11/2021
Project Manager: Jason Rawicki Sample Time: _____

Well #: 9
Well Diameter: 2 (inches) Height of Water Column: 3.48 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 66.15 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 64.63 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 660 Sampler: KA/AF
Project #: DB19.1395.00 Phase I Task 3 Sample Date: 2-22-21
Project Manager: Jason Pucci Sample Time: 11:06

Well #: 9
Well Diameter: 2 (inches) Height of Water Column: 3.48 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 1.67 (gal)
Depth to Water: 61.15 (feet btoc) Purge Volume: 0.56 (gal)
Total Depth of Well: 64.03 (feet) Purge Method: Barber - grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	<u>6.89</u>	<u>19.0</u>	<u>1460</u>	<u>-202.0</u>	<u>1.10</u>	
1	<u>6.89</u>	<u>19.2</u>	<u>1430</u>	<u>-156.5</u>	<u>1.85</u>	
2	<u>6.89</u>	<u>19.4</u>	<u>1409</u>	<u>-129.6</u>	<u>2.01</u>	
3	<u>6.89</u>	<u>19.3</u>	<u>1414</u>	<u>-126.1</u>	<u>2.16</u>	

Sample Description: _____

Physical Observations: Slight HC odors

Analytical Method(s): 82100B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DB#9.1395.00 Phase 1 task 3 Sample Date: 2/11/2021
Project Manager: Jason Ravucci Sample Time: _____

Well #: 11
Well Diameter: 2 (inches) Height of Water Column: 4.35 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 61.00 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.35 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Well Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: ~~2-11-2021~~ 2-22-21
Project Manager: Jason Pauci Sample Time: 15:38

Well #: 11
Well Diameter: 2 (inches) Height of Water Column: 4.35 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.08 (gal)
Depth to Water: 61.00 (feet btoc) Purge Volume: 0.69 (gal)
Total Depth of Well: 65.35 (feet) Purge Method: Bailer-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°C)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.77	21.0	1494	-74.6	1.08	
1	6.83	20.2	1526	-110.3	6.10	
2	6.80	20.6	1487	-59.3	2.44	
3	6.77	20.6	1458	-39.2	1.19	

Sample Description: _____

Physical Observations: _____

Analytical Method(s): 8260B, eDB 541.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Lc Sampler: KA/AF
Project #: DB19.13a5.00Phase1Task3 Sample Date: 2/1/2021
Project Manager: Jason Raveci Sample Time: _____

Well #: 12
Well Diameter: 2 (inches) Height of Water Column: _____ (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 59.65 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 64.72 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DB19.1935.00 Phase I Task 3 Sample Date: 2-22-21
Project Manager: Jason Puccio Sample Time: 13:32

Well #: 12
Well Diameter: 2 (inches) Height of Water Column: 4.07 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.91 (gal)
Depth to Water: 59.65 (feet btoc) Purge Volume: 0.97 (gal)
Total Depth of Well: 64.72 (feet) Purge Method: Boiler - Gravel

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.19	20.7	1393	-208.0	1.15	
1	7.31	20.5	1377	-189.6	1.34	
2	7.22	20.2	1370	-203.3	1.27	
3	7.25	20.3	1366	-184.0	1.33	

Sample Description: _____

Physical Observations: Clay on bottom. Dry well.
Slight H₂S odor

Analytical Method(s): 8260B, ED B 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Lake Sampler: KAIAF
Project #: DB19.1395.00 Phase 1 task 3 Sample Date: 2/11/2021
Project Manager: Jason Ravcci Sample Time: _____

Well #: 13
Well Diameter: 2 (inches) Height of Water Column: 5.16 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 60.00 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.15 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Lela Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2-22-21
Project Manager: Jason Raveci Sample Time: 14:25

Well #: 13
Well Diameter: 2 (inches) Height of Water Column: 5.15 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.47 (gal)
Depth to Water: 60.00 (feet btoc) Purge Volume: 0.82 (gal)
Total Depth of Well: 65.15 (feet) Purge Method: Roller-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (μS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.89	20.8	1107	-11.1	4.74	
1	6.93	20.8	1114	-22.1	4.93	
2	6.95	20.7	1110	-22.6	4.85	
3	6.96	20.6	1107	-26.3	5.07	

Sample Description: _____

Physical Observations: no bolts

Analytical Method(s): 820B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lo'ingalele Sampler: KA/AF
Project #: DB19.1395.00 Phase I TASK3 Sample Date: _____
Project Manager: JASON RANCI Sample Time: _____

Well #: 15
Well Diameter: 2 (inches) Height of Water Column: 5.99 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 59.46 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.45 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Cede Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 task 3 Sample Date: 2-22-21
Project Manager: Jason Rawl Sample Time: 13:40

Well #: 15
Well Diameter: 2 (inches) Height of Water Column: 5.99 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.87 (gal)
Depth to Water: 59.46 (feet btoc) Purge Volume: 0.95 (gal)
Total Depth of Well: 65.45 (feet) Purge Method: Bailer-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.29	19.4	1341	262.5	4.47	
1	7.31	19.6	1315	263.1	4.57	
2	7.38	19.4	1310	270.1	4.60	
3	7.34	19.5	1311	272.0	4.71	

Sample Description: _____

Physical Observations: _____

Analytical Method(s): 8260 B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Lece Sampler: KA/AC
Project #: DB19.1395.00PM&ETASKS Sample Date: 2/11/2021
Project Manager: JASON KAUCCI Sample Time: _____

Well #: 116
Well Diameter: 2 (inches) Height of Water Column: 5.31 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 59.90 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.21 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: Some silt on bottom

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Celc Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 task 3 Sample Date: 2/22/21
Project Manager: Jason Raveci Sample Time: 12:15

Well #: 116
Well Diameter: 2 (inches) Height of Water Column: 5.31 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.54 (gal)
Depth to Water: 59.90 (feet btoc) Purge Volume: 0.85 (gal)
Total Depth of Well: 65.21 (feet) Purge Method: bailer-grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (μS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	6.80 6.80	19.4	1740	269.6	0.96	
1	6.82	19.4	1724	263.6	0.97	
2	6.88	19.9	1693	260.9	1.27	
3	6.40	20.0	1684	243.7	1.16	

Sample Description: _____

Physical Observations: Some silt on bottom

Analytical Method(s): 8260B, EDB Sol.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Celc Sampler: KA/AF
Project #: DB19.1395.00 Phase I Task 3 Sample Date: 2/11/2021
Project Manager: Jason Paweci Sample Time: _____

Well #: 18
Well Diameter: 2 (inches) Height of Water Column: 4.16 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 100.80 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 104.96 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Cole Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2-22-21
Project Manager: Jason Raweci Sample Time: 15:45

Well #: 18
Well Diameter: 2 (inches) Height of Water Column: 4.16 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 1.99 (gal)
Depth to Water: 60.80 (feet btoc) Purge Volume: 0.66 (gal)
Total Depth of Well: 104.96 (feet) Purge Method: Boiler-Grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.47	20.6	782	247.1	0.87	
1	7.24	20.3	1667	198.1	0.47	
2	7.15	19.9	1778	183.3	2.11	
3	6.97	20.5	1796	172.1	2.05	

Sample Description: _____

Physical Observations: _____

Analytical Method(s): 8260B, SO4, EPB



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington CoCo Sampler: KA/AF
Project #: DBA.1395.00 Phase I TASK 3 Sample Date: 2/11/2021
Project Manager: Jason Ravecci Sample Time: _____

Well #: 19
Well Diameter: 2 (inches) Height of Water Column: 4.69 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 161.35 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 166.04 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Well Sampler: KA/AF
Project #: DBP1.1395.00 Phase 1 TASK 3 Sample Date: 2/11/21
Project Manager: Jason Rowen Sample Time: ~~9:00~~ 12:02

Well #: 19
Well Diameter: 2 (inches) Height of Water Column: 4.69 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.25 (gal)
Depth to Water: 61.35 (feet btoc) Purge Volume: 0.75 (gal)
Total Depth of Well: 66.04 (feet) Purge Method: Boiler-Grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	<u>6.81</u>	<u>19.4</u>	<u>1112</u>	<u>88 12.1</u>	<u>2.22</u>	
1	<u>6.80</u>	<u>19.6</u>	<u>1145</u>	<u>-135.2</u>	<u>1.82</u>	
2	<u>6.88</u>	<u>19.6</u>	<u>1154</u>	<u>-108.7</u>	<u>2.56</u>	
3	<u>6.78</u>	<u>19.6</u>	<u>1159</u>	<u>-102.6</u>	<u>1.86</u>	

Sample Description: _____

Physical Observations: good

Analytical Method(s): 8260B EDBSol.1



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington Lele Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2/11/2021
Project Manager: Jason Pawczi Sample Time: _____

Well #: 20
Well Diameter: 2 (inches) Height of Water Column: 3.82 (feet)
Depth to NAPL: NA (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 62.00 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 105.82 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: _____

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: LOVington 6ce Sampler: KA
Project #: DB19.1395.00 Phase 1 Task 3 Sample Date: 2/22/21
Project Manager: Jason Raucei Sample Time: 10:10

Well #: 20
Well Diameter: 2" (inches) Height of Water Column: 3.82 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: ~~1.84~~ 0.62 (gal)
Depth to Water: 62 (feet btoc) Purge Volume: ~~0.62~~ 1.84 (gal)
Total Depth of Well: 65.82 (feet) Purge Method: Bailer grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F) <u>°C</u>	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.22	17.3	1095	105.6	5.11	
1	7.27	17.4	1141	112.9	4.78	
2	7.25	18.0	1121	117.1	4.74	
3	7.18	18.2	1145	117.4	4.47	

Sample Description: _____

Physical Observations: _____

Analytical Method(s): 8260B, 504.1 EDB



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: LOUington 66 Sampler: KA/AF
Project #: DB19-1395.00 Phase 1 Task 3 Sample Date: 2/11/2021
Project Manager: Jason Raveci Sample Time: _____

Well #: 21
Well Diameter: 2 (inches) Height of Water Column: 4.45 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: _____ (gal)
Depth to Water: 61.40 (feet btoc) Purge Volume: _____ (gal)
Total Depth of Well: 65.85 (feet) Purge Method: _____

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial						
1						
2						
3						

Sample Description: _____

Physical Observations: some silt

Analytical Method(s): _____



Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Lovington 66 Sampler: KA/AF
Project #: DB19.1395.00 Phase 1 TASK 3 Sample Date: 2/22/21
Project Manager: Jason Ruccia Sample Time: 11:10

Well #: 21
Well Diameter: 2 (inches) Height of Water Column: 4.45 (feet)
Depth to NAPL: N/A (feet btoc) Casing Volume: 2.13 (gal)
Depth to Water: 61.40 (feet btoc) Purge Volume: 0.71 (gal)
Total Depth of Well: 65.85 (feet) Purge Method: Bailer-Grab

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Groundwater Parameters:

Casing Volume	pH	Temp (°F)	Conductivity (µS/cm)	ORP (mv)	D.O. (mg/L)	Turbidity (NTU)
Initial	7.13	18.4	1219	255.4	4.38	
1	7.14	18.8	1259	259.9	3.85	
2	7.11	18.8	1266	261.3	3.79	
3	7.09	19.0	1252	260.5	3.53	

Sample Description: _____

Physical Observations: Some silt.

Analytical Method(s): 8200B, EDB 504.1



Daniel B. Stephens & Associates, Inc.

NAPL RECOVERY DATA SHEET

Project Name: Livingston Co Sampler: KA / AF
 Project #: DB#91,395.00 Phase 1 TASK 3 Date: 2-23-2021
 Project Manager: JASON RAUCCI Time: _____
 Well #: W-2 Well Diameter: 4 (inches)
 Initial Depth to NAPL: 59.40 (feet btoc) Start Time: 8:40
 Initial Depth to Water: 65.50 (feet btoc) End Time: 9:40
 Initial NAPL Thickness: 72.38 (feet)

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
1	1.65	0.0	
2	2.45	0.0	
3	2.25	0.0	
4	1.00	1.25	
5	2.10	0.0	
6	3.00	0.60	
7	1.93	0.0	
8	1.25	2.20	
9	0.70	0.60	
10	0.72	1.76	
11	0.60	1.30	
12	0.56	1.90	
13	0.50	1.05	
14	0.50	1.95	
15	0.50	0.30	

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
16	0.30	2.15	
17	0.40	1.90	
18	0.20	2.45	
19	0.30	1.67	
20	0.30	0.17	
21	0.10	1.05	
22	0.20	1.35	
23	0.05	1.05	
24	0.02	3.20	
25			
26			
27			
28			
29			
30			

Totals:

NAPL Thickness: 21.22 (feet) Water Thickness: 27.73 (feet)
 Volume of NAPL: 10.00 (gal) Volume of Water: 5.00 (gal)
 Final Depth to Water: 60.96 (feet btoc) Final Depth to NAPL: 60.91 (feet btoc)
61.22



Daniel B. Stephens & Associates, Inc.

NAPL RECOVERY DATA SHEET

Project Name: Lovington 66

Sampler: AC

Project #: DB/9.1395.00 Phase 1 Task 3

Date: 2-23-2021

Project Manager: JASON ROWCE

Time: _____

Well #: MPE-1

Well Diameter: 2 (inches)

Initial Depth to NAPL: 58.70 (feet btoc)

Start Time: 10:15

Initial Depth to Water: 65.14 (feet btoc)

End Time: 11:15

Initial NAPL Thickness: 0.44 (feet)

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
1	1.49	0.0	
2	1.41	0.0	
3	2.38	0.0	
4	2.67	0.0	
5	2.51	0.0	
6	2.40	0.0	
7	2.14	0.0	
8	2.05	0.0	
9	1.30	0.68	
10	0.86	0.86	
11	0.72	1.05	
12	0.61	0.75	
13	0.50	1.70	
14	0.80	1.55	
15	0.32	1.36	

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
16	0.30	1.40	
17	0.28	1.37	
18	0.25	1.45	
19	0.18	0.96	
20	0.18	0.96	
21	0.19	0.96	
22	0.17	1.05	
23	0.66	1.55	
24	0.67	1.45	
25	0.07	1.50	
26	0.65	1.14	
27	0.06	1.08	
28	0.64	1.07	
29	0.05	1.06	
30	0.04	1.08	

Totals:

NAPL Thickness: 24.01 (feet)

Water Thickness: 23.01 (feet)

Volume of NAPL: 10 (gal)

Volume of Water: 5 (gal)

Final Depth to Water: 60.60 (feet btoc)

Final Depth to NAPL: 60.4 (feet btoc)



Daniel B. Stephens & Associates, Inc.

NAPL RECOVERY DATA SHEET

Project Name: Lovington C&C Sampler: KIA
 Project #: DB19.1395.00 Phase 1 TASK 3 Date: 2-23-2021
 Project Manager: Jason Raweci Time: _____
 Well #: W-3 Well Diameter: 4 (inches)
 Initial Depth to NAPL: 59.00 (feet btoc) Start Time: 10:15
 Initial Depth to Water: 65.29 (feet btoc) End Time: 11:15
 Initial NAPL Thickness: 6.29 (feet)

Note:

One casing volume (SCH 40 PVC): 2.0" ID casing = 0.16 gal/ft; 4.0" = 0.65 gal/ft; 6.0" = 1.47 gal/ft

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
1	1.50		
2	1.90		
3	1.90		
4	1.60		
5	2.40		
6	1.55		
7	2.20		
8	1.20	1.00	
9	.80		
10	.70	.40	
11	1.05	2.45	
12	1.00	0.90	
13	0.60	0.30	
14	0.30	1.00	
15	0.30	1.00	

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
16	0.50	1.00	
17	0.30	1.00	
18	0.20	1.00	
19	0.20	1.00	
20	0.02	2.55	
21	0.10	1.00	
22	0.02	2.20	
23			
24			
25			
26			
27			
28			
29			
30			

Totals:

NAPL Thickness: 19.34 (feet) Water Thickness: 16.60 (feet)
 Volume of NAPL: 18.10 (gal) Volume of Water: 9.5 (gal)
 Final Depth to Water: 60.90 (feet btoc) Final Depth to NAPL: 60.62 (feet btoc)

Appendix C

Laboratory Analytical Reports



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

June 24, 2020

Jason Raucci

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX: (505) 822-8877

RE: Lovington 66

OrderNo.: 2006969

Dear Jason Raucci:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/17/2020 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2006969

Date Reported: 6/24/2020

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-1

Project: Lovington 66

Collection Date: 6/15/2020 1:25:00 PM

Lab ID: 2006969-001

Matrix: PRODUCT

Received Date: 6/17/2020 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
DRO BY 8015D							Analyst: BRM
Diesel Range Organics (DRO)	22	0.88		wt%	20	6/20/2020 9:01:44 PM	53191
Motor Oil Range Organics (MRO)	ND	4.4	D	wt%	20	6/20/2020 9:01:44 PM	53191
Surr: DNOP	0	70-130	S	%Rec	20	6/20/2020 9:01:44 PM	53191
GRO BY 8015D							Analyst: NSB
Gasoline Range Organics (GRO)	100	2.5		wt%	1	6/20/2020 10:21:05 PM	53174
Surr: BFB	121	58.9-156		%Rec	1	6/20/2020 10:21:05 PM	53174

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2006969

Date Reported: 6/24/2020

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-3

Project: Lovington 66

Collection Date: 6/15/2020 2:20:00 PM

Lab ID: 2006969-002

Matrix: PRODUCT

Received Date: 6/17/2020 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
DRO BY 8015D							Analyst: BRM
Diesel Range Organics (DRO)	22	0.89		wt%	20	6/20/2020 9:25:57 PM	53191
Motor Oil Range Organics (MRO)	ND	4.4	D	wt%	20	6/20/2020 9:25:57 PM	53191
Surr: DNOP	0	70-130	S	%Rec	20	6/20/2020 9:25:57 PM	53191
GRO BY 8015D							Analyst: NSB
Gasoline Range Organics (GRO)	85	2.5		wt%	1	6/20/2020 11:08:14 PM	53174
Surr: BFB	120	58.9-156		%Rec	1	6/20/2020 11:08:14 PM	53174

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2006969**

Date Reported: **6/24/2020**

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: MPE-1

Project: Lovington 66

Collection Date: 6/15/2020 1:50:00 PM

Lab ID: 2006969-003

Matrix: PRODUCT

Received Date: 6/17/2020 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
DRO BY 8015D							Analyst: BRM
Diesel Range Organics (DRO)	21	0.79		wt%	20	6/20/2020 9:50:17 PM	53191
Motor Oil Range Organics (MRO)	ND	3.9	D	wt%	20	6/20/2020 9:50:17 PM	53191
Surr: DNOP	0	70-130	S	%Rec	20	6/20/2020 9:50:17 PM	53191
GRO BY 8015D							Analyst: NSB
Gasoline Range Organics (GRO)	110	2.5		wt%	1	6/20/2020 11:55:06 PM	53174
Surr: BFB	127	58.9-156		%Rec	1	6/20/2020 11:55:06 PM	53174

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order **2006969**

Date Reported: **6/24/2020**

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: Field Blank

Project: Lovington 66

Collection Date: 6/16/2020 9:10:00 AM

Lab ID: 2006969-004

Matrix: AQUEOUS

Received Date: 6/17/2020 12:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: GASOLINE RANGE						Analyst: NSB	
Gasoline Range Organics (GRO)	ND	0.050		mg/L	1	6/22/2020 1:29:27 PM	G69815
Surr: BFB	82.9	67.5-110		%Rec	1	6/22/2020 1:29:27 PM	G69815

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 Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2006969

24-Jun-20

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: LCS-53191	SampType: LCS				TestCode: DRO by 8015D					
Client ID: LCSW	Batch ID: 53191				RunNo: 69775					
Prep Date: 6/20/2020	Analysis Date: 6/20/2020				SeqNo: 2422483	Units: wt%				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	0.50	0.10	0.5000	0	99.8	70	130			
Surr: DNOP	0.051		0.05000		103	70	130			

Sample ID: LCSD-53191	SampType: LCSD				TestCode: DRO by 8015D					
Client ID: LCSS02	Batch ID: 53191				RunNo: 69775					
Prep Date: 6/20/2020	Analysis Date: 6/20/2020				SeqNo: 2422484	Units: wt%				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	0.51	0.10	0.5000	0	101	70	130	1.55	20	
Surr: DNOP	0.052		0.05000		104	70	130	0	0	

Sample ID: MB-53191	SampType: MBLK				TestCode: DRO by 8015D					
Client ID: PBW	Batch ID: 53191				RunNo: 69775					
Prep Date: 6/20/2020	Analysis Date: 6/20/2020				SeqNo: 2422485	Units: wt%				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	0.10								
Motor Oil Range Organics (MRO)	ND	0.50								
Surr: DNOP	0.10		0.1000		103	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 Quantitative 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#: 2006969

24-Jun-20

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb-53174	SampType: MBLK		TestCode: GRO by 8015D							
Client ID: PBW	Batch ID: 53174		RunNo: 69786							
Prep Date: 6/19/2020	Analysis Date: 6/20/2020		SeqNo: 2422999		Units: wt%					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	2.5								
Surr: BFB	810		1000		80.7	58.9	156			

Sample ID: lcs-53174	SampType: LCS		TestCode: GRO by 8015D							
Client ID: LCSW	Batch ID: 53174		RunNo: 69786							
Prep Date: 6/19/2020	Analysis Date: 6/20/2020		SeqNo: 2423000		Units: wt%					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	2.5	25.00	0	89.6	75.2	120			
Surr: BFB	940		1000		93.6	58.9	156			

Sample ID: lcsd-53174	SampType: LCSD		TestCode: GRO by 8015D							
Client ID: LCSS02	Batch ID: 53174		RunNo: 69786							
Prep Date: 6/19/2020	Analysis Date: 6/20/2020		SeqNo: 2423001		Units: wt%					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	22	2.5	25.00	0	88.5	75.2	120	1.26	20	
Surr: BFB	940		1000		94.0	58.9	156	0	0	

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 Quantitative 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#: 2006969

24-Jun-20

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb1	SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: PBW	Batch ID: G69815		RunNo: 69815							
Prep Date:	Analysis Date: 6/22/2020		SeqNo: 2424124		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	0.050								
Surr: BFB	16		20.00		79.3	67.5	110			

Sample ID: 2.5ug gro lcs	SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range							
Client ID: LCSW	Batch ID: G69815		RunNo: 69815							
Prep Date:	Analysis Date: 6/22/2020		SeqNo: 2424125		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	0.40	0.050	0.5000	0	80.9	70.8	121			
Surr: BFB	18		20.00		91.3	67.5	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 Quantitative 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

Sample Log-In Check List

Client Name: **Daniel B. Stephens & Assoc.**

Work Order Number: **2006969**

RcptNo: 1

Received By: **Isaiah Ortiz**

6/17/2020 12:00:00 PM

IOX

Completed By: **Emily Mocho**

6/18/2020 11:35:41 AM

Reviewed By: *SPA 6.18.20*

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: *myralet/8/12*

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.0	Good	Not Present			



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

March 08, 2021

Jason Raucci

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX: (505) 822-8877

RE: Lovington 66

OrderNo.: 2102A60

Dear Jason Raucci:

Hall Environmental Analysis Laboratory received 15 sample(s) on 2/24/2021 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-4

Project: Lovington 66

Collection Date: 2/22/2021 5:00:00 PM

Lab ID: 2102A60-001

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 5:53:49 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	860	20		µg/L	20	2/27/2021 12:45:56 AM	C75554
Toluene	760	20		µg/L	20	2/27/2021 12:45:56 AM	C75554
Ethylbenzene	370	20		µg/L	20	2/27/2021 12:45:56 AM	C75554
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2,4-Trimethylbenzene	120	20		µg/L	20	2/27/2021 12:45:56 AM	C75554
1,3,5-Trimethylbenzene	35	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Naphthalene	46	2.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1-Methylnaphthalene	15	4.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
2-Methylnaphthalene	27	4.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Acetone	ND	10		µg/L	1	2/25/2021 8:00:41 PM	C75554
Bromobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Bromodichloromethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Bromoform	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Bromomethane	ND	3.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
2-Butanone	ND	10		µg/L	1	2/25/2021 8:00:41 PM	C75554
Carbon disulfide	ND	10		µg/L	1	2/25/2021 8:00:41 PM	C75554
Carbon Tetrachloride	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Chlorobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Chloroethane	ND	2.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Chloroform	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Chloromethane	ND	3.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
2-Chlorotoluene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
4-Chlorotoluene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
cis-1,2-DCE	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Dibromochloromethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Dibromomethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1-Dichloroethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1-Dichloroethene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2-Dichloropropane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-4

Project: Lovington 66

Collection Date: 2/22/2021 5:00:00 PM

Lab ID: 2102A60-001

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
2,2-Dichloropropane	ND	2.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1-Dichloropropene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Hexachlorobutadiene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
2-Hexanone	ND	10		µg/L	1	2/25/2021 8:00:41 PM	C75554
Isopropylbenzene	23	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
4-Isopropyltoluene	1.3	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
4-Methyl-2-pentanone	ND	10		µg/L	1	2/25/2021 8:00:41 PM	C75554
Methylene Chloride	ND	3.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
n-Butylbenzene	6.4	3.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
n-Propylbenzene	46	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
sec-Butylbenzene	4.3	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Styrene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
tert-Butylbenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
trans-1,2-DCE	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Trichlorofluoromethane	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Vinyl chloride	ND	1.0		µg/L	1	2/25/2021 8:00:41 PM	C75554
Xylenes, Total	560	30		µg/L	20	2/27/2021 12:45:56 AM	C75554
Surr: 1,2-Dichloroethane-d4	82.7	70-130		%Rec	1	2/25/2021 8:00:41 PM	C75554
Surr: 4-Bromofluorobenzene	94.6	70-130		%Rec	1	2/25/2021 8:00:41 PM	C75554
Surr: Dibromofluoromethane	82.2	70-130		%Rec	1	2/25/2021 8:00:41 PM	C75554
Surr: Toluene-d8	107	70-130		%Rec	1	2/25/2021 8:00:41 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-5

Project: Lovington 66

Collection Date: 2/22/2021 5:13:00 PM

Lab ID: 2102A60-002

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 6:08:51 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	7.6	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Toluene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Ethylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Naphthalene	ND	2.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1-Methylnaphthalene	ND	4.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
2-Methylnaphthalene	ND	4.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Acetone	ND	10		µg/L	1	2/26/2021 11:24:12 PM	C75554
Bromobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Bromodichloromethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Bromoform	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Bromomethane	ND	3.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
2-Butanone	ND	10		µg/L	1	2/26/2021 11:24:12 PM	C75554
Carbon disulfide	ND	10		µg/L	1	2/26/2021 11:24:12 PM	C75554
Carbon Tetrachloride	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Chlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Chloroethane	ND	2.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Chloroform	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Chloromethane	ND	3.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
2-Chlorotoluene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
4-Chlorotoluene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
cis-1,2-DCE	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Dibromochloromethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Dibromomethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1-Dichloroethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1-Dichloroethene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2-Dichloropropane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-5

Project: Lovington 66

Collection Date: 2/22/2021 5:13:00 PM

Lab ID: 2102A60-002

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
2,2-Dichloropropane	ND	2.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1-Dichloropropene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Hexachlorobutadiene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
2-Hexanone	ND	10		µg/L	1	2/26/2021 11:24:12 PM	C75554
Isopropylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
4-Isopropyltoluene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
4-Methyl-2-pentanone	ND	10		µg/L	1	2/26/2021 11:24:12 PM	C75554
Methylene Chloride	ND	3.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
n-Butylbenzene	ND	3.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
n-Propylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
sec-Butylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Styrene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
tert-Butylbenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
trans-1,2-DCE	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Trichlorofluoromethane	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Vinyl chloride	ND	1.0		µg/L	1	2/26/2021 11:24:12 PM	C75554
Xylenes, Total	ND	1.5		µg/L	1	2/26/2021 11:24:12 PM	C75554
Surr: 1,2-Dichloroethane-d4	92.2	70-130		%Rec	1	2/26/2021 11:24:12 PM	C75554
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	2/26/2021 11:24:12 PM	C75554
Surr: Dibromofluoromethane	94.3	70-130		%Rec	1	2/26/2021 11:24:12 PM	C75554
Surr: Toluene-d8	103	70-130		%Rec	1	2/26/2021 11:24:12 PM	C75554

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 Quantitative Limit
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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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-7

Project: Lovington 66

Collection Date: 2/22/2021 2:30:00 PM

Lab ID: 2102A60-003

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 6:23:53 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Toluene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Ethylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Naphthalene	ND	2.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1-Methylnaphthalene	ND	4.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
2-Methylnaphthalene	ND	4.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Acetone	ND	10		µg/L	1	2/25/2021 11:10:52 PM	C75554
Bromobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Bromodichloromethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Bromoform	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Bromomethane	ND	3.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
2-Butanone	ND	10		µg/L	1	2/25/2021 11:10:52 PM	C75554
Carbon disulfide	ND	10		µg/L	1	2/25/2021 11:10:52 PM	C75554
Carbon Tetrachloride	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Chlorobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Chloroethane	ND	2.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Chloroform	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Chloromethane	ND	3.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
2-Chlorotoluene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
4-Chlorotoluene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
cis-1,2-DCE	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Dibromochloromethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Dibromomethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1-Dichloroethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1-Dichloroethene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2-Dichloropropane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-7

Project: Lovington 66

Collection Date: 2/22/2021 2:30:00 PM

Lab ID: 2102A60-003

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
2,2-Dichloropropane	ND	2.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1-Dichloropropene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Hexachlorobutadiene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
2-Hexanone	ND	10		µg/L	1	2/25/2021 11:10:52 PM	C75554
Isopropylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
4-Isopropyltoluene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
4-Methyl-2-pentanone	ND	10		µg/L	1	2/25/2021 11:10:52 PM	C75554
Methylene Chloride	ND	3.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
n-Butylbenzene	ND	3.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
n-Propylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
sec-Butylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Styrene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
tert-Butylbenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
trans-1,2-DCE	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Trichlorofluoromethane	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Vinyl chloride	ND	1.0		µg/L	1	2/25/2021 11:10:52 PM	C75554
Xylenes, Total	ND	1.5		µg/L	1	2/25/2021 11:10:52 PM	C75554
Surr: 1,2-Dichloroethane-d4	95.2	70-130		%Rec	1	2/25/2021 11:10:52 PM	C75554
Surr: 4-Bromofluorobenzene	100	70-130		%Rec	1	2/25/2021 11:10:52 PM	C75554
Surr: Dibromofluoromethane	96.0	70-130		%Rec	1	2/25/2021 11:10:52 PM	C75554
Surr: Toluene-d8	98.7	70-130		%Rec	1	2/25/2021 11:10:52 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-8

Project: Lovington 66

Collection Date: 2/22/2021 4:25:00 PM

Lab ID: 2102A60-004

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	0.033	0.0094		µg/L	1	3/2/2021 6:38:53 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	6100	200		µg/L	200	2/27/2021 3:29:36 AM	C75554
Toluene	170	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Ethylbenzene	1800	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Methyl tert-butyl ether (MTBE)	15000	200		µg/L	200	2/27/2021 3:29:36 AM	C75554
1,2,4-Trimethylbenzene	1200	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,3,5-Trimethylbenzene	350	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2-Dichloroethane (EDC)	71	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2-Dibromoethane (EDB)	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Naphthalene	410	40		µg/L	20	2/27/2021 3:56:52 AM	C75554
1-Methylnaphthalene	ND	80		µg/L	20	2/27/2021 3:56:52 AM	C75554
2-Methylnaphthalene	91	80		µg/L	20	2/27/2021 3:56:52 AM	C75554
Acetone	ND	200		µg/L	20	2/27/2021 3:56:52 AM	C75554
Bromobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Bromodichloromethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Bromoform	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Bromomethane	ND	60		µg/L	20	2/27/2021 3:56:52 AM	C75554
2-Butanone	ND	200		µg/L	20	2/27/2021 3:56:52 AM	C75554
Carbon disulfide	ND	200		µg/L	20	2/27/2021 3:56:52 AM	C75554
Carbon Tetrachloride	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Chlorobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Chloroethane	ND	40		µg/L	20	2/27/2021 3:56:52 AM	C75554
Chloroform	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Chloromethane	ND	60		µg/L	20	2/27/2021 3:56:52 AM	C75554
2-Chlorotoluene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
4-Chlorotoluene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
cis-1,2-DCE	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
cis-1,3-Dichloropropene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2-Dibromo-3-chloropropane	ND	40		µg/L	20	2/27/2021 3:56:52 AM	C75554
Dibromochloromethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Dibromomethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2-Dichlorobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,3-Dichlorobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,4-Dichlorobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Dichlorodifluoromethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1-Dichloroethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1-Dichloroethene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2-Dichloropropane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-8

Project: Lovington 66

Collection Date: 2/22/2021 4:25:00 PM

Lab ID: 2102A60-004

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
2,2-Dichloropropane	ND	40		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1-Dichloropropene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Hexachlorobutadiene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
2-Hexanone	ND	200		µg/L	20	2/27/2021 3:56:52 AM	C75554
Isopropylbenzene	72	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
4-Isopropyltoluene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
4-Methyl-2-pentanone	ND	200		µg/L	20	2/27/2021 3:56:52 AM	C75554
Methylene Chloride	ND	60		µg/L	20	2/27/2021 3:56:52 AM	C75554
n-Butylbenzene	ND	60		µg/L	20	2/27/2021 3:56:52 AM	C75554
n-Propylbenzene	180	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
sec-Butylbenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Styrene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
tert-Butylbenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1,1,2-Tetrachloroethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1,2,2-Tetrachloroethane	ND	40		µg/L	20	2/27/2021 3:56:52 AM	C75554
Tetrachloroethene (PCE)	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
trans-1,2-DCE	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
trans-1,3-Dichloropropene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2,3-Trichlorobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2,4-Trichlorobenzene	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1,1-Trichloroethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,1,2-Trichloroethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Trichloroethene (TCE)	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Trichlorofluoromethane	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
1,2,3-Trichloropropane	ND	40		µg/L	20	2/27/2021 3:56:52 AM	C75554
Vinyl chloride	ND	20		µg/L	20	2/27/2021 3:56:52 AM	C75554
Xylenes, Total	2000	30		µg/L	20	2/27/2021 3:56:52 AM	C75554
Surr: 1,2-Dichloroethane-d4	98.9	70-130		%Rec	20	2/27/2021 3:56:52 AM	C75554
Surr: 4-Bromofluorobenzene	99.0	70-130		%Rec	20	2/27/2021 3:56:52 AM	C75554
Surr: Dibromofluoromethane	101	70-130		%Rec	20	2/27/2021 3:56:52 AM	C75554
Surr: Toluene-d8	99.8	70-130		%Rec	20	2/27/2021 3:56:52 AM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-9

Project: Lovington 66

Collection Date: 2/22/2021 11:06:00 AM

Lab ID: 2102A60-005

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 6:53:51 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	11000	500		µg/L	500	3/1/2021 1:33:30 PM	A75610
Toluene	2300	100		µg/L	100	2/27/2021 4:51:28 AM	C75554
Ethylbenzene	1400	100		µg/L	100	2/27/2021 4:51:28 AM	C75554
Methyl tert-butyl ether (MTBE)	10000	100		µg/L	100	2/27/2021 4:51:28 AM	C75554
1,2,4-Trimethylbenzene	1200	100		µg/L	100	2/27/2021 4:51:28 AM	C75554
1,3,5-Trimethylbenzene	320	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2-Dichloroethane (EDC)	1200	100		µg/L	100	2/27/2021 4:51:28 AM	C75554
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Naphthalene	510	20		µg/L	10	2/27/2021 5:18:40 AM	C75554
1-Methylnaphthalene	ND	40		µg/L	10	2/27/2021 5:18:40 AM	C75554
2-Methylnaphthalene	71	40		µg/L	10	2/27/2021 5:18:40 AM	C75554
Acetone	ND	100		µg/L	10	2/27/2021 5:18:40 AM	C75554
Bromobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Bromodichloromethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Bromoform	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Bromomethane	ND	30		µg/L	10	2/27/2021 5:18:40 AM	C75554
2-Butanone	ND	100		µg/L	10	2/27/2021 5:18:40 AM	C75554
Carbon disulfide	ND	100		µg/L	10	2/27/2021 5:18:40 AM	C75554
Carbon Tetrachloride	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Chlorobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Chloroethane	ND	20		µg/L	10	2/27/2021 5:18:40 AM	C75554
Chloroform	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Chloromethane	ND	30		µg/L	10	2/27/2021 5:18:40 AM	C75554
2-Chlorotoluene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
4-Chlorotoluene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
cis-1,2-DCE	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
cis-1,3-Dichloropropene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	2/27/2021 5:18:40 AM	C75554
Dibromochloromethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Dibromomethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2-Dichlorobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,3-Dichlorobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,4-Dichlorobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Dichlorodifluoromethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1-Dichloroethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1-Dichloroethene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2-Dichloropropane	37	10		µg/L	10	2/27/2021 5:18:40 AM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-9

Project: Lovington 66

Collection Date: 2/22/2021 11:06:00 AM

Lab ID: 2102A60-005

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
2,2-Dichloropropane	ND	20		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1-Dichloropropene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Hexachlorobutadiene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
2-Hexanone	ND	100		µg/L	10	2/27/2021 5:18:40 AM	C75554
Isopropylbenzene	45	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
4-Isopropyltoluene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
4-Methyl-2-pentanone	ND	100		µg/L	10	2/27/2021 5:18:40 AM	C75554
Methylene Chloride	ND	30		µg/L	10	2/27/2021 5:18:40 AM	C75554
n-Butylbenzene	ND	30		µg/L	10	2/27/2021 5:18:40 AM	C75554
n-Propylbenzene	120	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
sec-Butylbenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Styrene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
tert-Butylbenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	2/27/2021 5:18:40 AM	C75554
Tetrachloroethene (PCE)	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
trans-1,2-DCE	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
trans-1,3-Dichloropropene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2,3-Trichlorobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2,4-Trichlorobenzene	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1,1-Trichloroethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,1,2-Trichloroethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Trichloroethene (TCE)	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Trichlorofluoromethane	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
1,2,3-Trichloropropane	ND	20		µg/L	10	2/27/2021 5:18:40 AM	C75554
Vinyl chloride	ND	10		µg/L	10	2/27/2021 5:18:40 AM	C75554
Xylenes, Total	2200	15		µg/L	10	2/27/2021 5:18:40 AM	C75554
Surr: 1,2-Dichloroethane-d4	96.3	70-130		%Rec	10	2/27/2021 5:18:40 AM	C75554
Surr: 4-Bromofluorobenzene	99.6	70-130		%Rec	10	2/27/2021 5:18:40 AM	C75554
Surr: Dibromofluoromethane	103	70-130		%Rec	10	2/27/2021 5:18:40 AM	C75554
Surr: Toluene-d8	103	70-130		%Rec	10	2/27/2021 5:18:40 AM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-11

Project: Lovington 66

Collection Date: 2/22/2021 3:38:00 PM

Lab ID: 2102A60-006

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 7:08:51 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Toluene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Ethylbenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Methyl tert-butyl ether (MTBE)	47	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2,4-Trimethylbenzene	1.3	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,3,5-Trimethylbenzene	1.1	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Naphthalene	ND	2.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1-Methylnaphthalene	ND	4.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
2-Methylnaphthalene	ND	4.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Acetone	ND	10		µg/L	1	2/26/2021 11:51:24 PM	C75554
Bromobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Bromodichloromethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Bromoform	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Bromomethane	ND	3.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
2-Butanone	ND	10		µg/L	1	2/26/2021 11:51:24 PM	C75554
Carbon disulfide	ND	10		µg/L	1	2/26/2021 11:51:24 PM	C75554
Carbon Tetrachloride	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Chlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Chloroethane	ND	2.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Chloroform	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Chloromethane	ND	3.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
2-Chlorotoluene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
4-Chlorotoluene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
cis-1,2-DCE	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Dibromochloromethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Dibromomethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1-Dichloroethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1-Dichloroethene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2-Dichloropropane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-11

Project: Lovington 66

Collection Date: 2/22/2021 3:38:00 PM

Lab ID: 2102A60-006

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
2,2-Dichloropropane	ND	2.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1-Dichloropropene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Hexachlorobutadiene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
2-Hexanone	ND	10		µg/L	1	2/26/2021 11:51:24 PM	C75554
Isopropylbenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
4-Isopropyltoluene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
4-Methyl-2-pentanone	ND	10		µg/L	1	2/26/2021 11:51:24 PM	C75554
Methylene Chloride	ND	3.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
n-Butylbenzene	ND	3.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
n-Propylbenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
sec-Butylbenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Styrene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
tert-Butylbenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
trans-1,2-DCE	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Trichlorofluoromethane	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Vinyl chloride	ND	1.0		µg/L	1	2/26/2021 11:51:24 PM	C75554
Xylenes, Total	ND	1.5		µg/L	1	2/26/2021 11:51:24 PM	C75554
Surr: 1,2-Dichloroethane-d4	92.6	70-130		%Rec	1	2/26/2021 11:51:24 PM	C75554
Surr: 4-Bromofluorobenzene	99.3	70-130		%Rec	1	2/26/2021 11:51:24 PM	C75554
Surr: Dibromofluoromethane	96.6	70-130		%Rec	1	2/26/2021 11:51:24 PM	C75554
Surr: Toluene-d8	99.0	70-130		%Rec	1	2/26/2021 11:51:24 PM	C75554

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-12

Project: Lovington 66

Collection Date: 2/22/2021 1:32:00 PM

Lab ID: 2102A60-007

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 7:23:45 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	140	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Toluene	110	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Ethylbenzene	400	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Methyl tert-butyl ether (MTBE)	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2,4-Trimethylbenzene	170	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,3,5-Trimethylbenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Naphthalene	360	20		µg/L	10	2/27/2021 3:02:26 AM	C75585
1-Methylnaphthalene	ND	40		µg/L	10	2/27/2021 3:02:26 AM	C75585
2-Methylnaphthalene	68	40		µg/L	10	2/27/2021 3:02:26 AM	C75585
Acetone	ND	100		µg/L	10	2/27/2021 3:02:26 AM	C75585
Bromobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Bromodichloromethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Bromoform	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Bromomethane	ND	30		µg/L	10	2/27/2021 3:02:26 AM	C75585
2-Butanone	ND	100		µg/L	10	2/27/2021 3:02:26 AM	C75585
Carbon disulfide	ND	100		µg/L	10	2/27/2021 3:02:26 AM	C75585
Carbon Tetrachloride	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Chlorobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Chloroethane	ND	20		µg/L	10	2/27/2021 3:02:26 AM	C75585
Chloroform	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Chloromethane	ND	30		µg/L	10	2/27/2021 3:02:26 AM	C75585
2-Chlorotoluene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
4-Chlorotoluene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
cis-1,2-DCE	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
cis-1,3-Dichloropropene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	2/27/2021 3:02:26 AM	C75585
Dibromochloromethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Dibromomethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2-Dichlorobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,3-Dichlorobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,4-Dichlorobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Dichlorodifluoromethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1-Dichloroethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1-Dichloroethene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2-Dichloropropane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-12

Project: Lovington 66

Collection Date: 2/22/2021 1:32:00 PM

Lab ID: 2102A60-007

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
2,2-Dichloropropane	ND	20		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1-Dichloropropene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Hexachlorobutadiene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
2-Hexanone	ND	100		µg/L	10	2/27/2021 3:02:26 AM	C75585
Isopropylbenzene	20	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
4-Isopropyltoluene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
4-Methyl-2-pentanone	ND	100		µg/L	10	2/27/2021 3:02:26 AM	C75585
Methylene Chloride	ND	30		µg/L	10	2/27/2021 3:02:26 AM	C75585
n-Butylbenzene	ND	30		µg/L	10	2/27/2021 3:02:26 AM	C75585
n-Propylbenzene	43	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
sec-Butylbenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Styrene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
tert-Butylbenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1,2,2-Tetrachloroethane	ND	20		µg/L	10	2/27/2021 3:02:26 AM	C75585
Tetrachloroethene (PCE)	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
trans-1,2-DCE	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
trans-1,3-Dichloropropene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2,3-Trichlorobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2,4-Trichlorobenzene	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1,1-Trichloroethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,1,2-Trichloroethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Trichloroethene (TCE)	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Trichlorofluoromethane	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
1,2,3-Trichloropropane	ND	20		µg/L	10	2/27/2021 3:02:26 AM	C75585
Vinyl chloride	ND	10		µg/L	10	2/27/2021 3:02:26 AM	C75585
Xylenes, Total	91	15		µg/L	10	2/27/2021 3:02:26 AM	C75585
Surr: 1,2-Dichloroethane-d4	96.5	70-130		%Rec	10	2/27/2021 3:02:26 AM	C75585
Surr: 4-Bromofluorobenzene	94.0	70-130		%Rec	10	2/27/2021 3:02:26 AM	C75585
Surr: Dibromofluoromethane	98.6	70-130		%Rec	10	2/27/2021 3:02:26 AM	C75585
Surr: Toluene-d8	98.1	70-130		%Rec	10	2/27/2021 3:02:26 AM	C75585

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

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E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-13

Project: Lovington 66

Collection Date: 2/22/2021 2:25:00 PM

Lab ID: 2102A60-008

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 7:38:48 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Toluene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Ethylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Naphthalene	ND	2.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
2-Methylnaphthalene	ND	4.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Acetone	ND	10		µg/L	1	2/27/2021 12:18:42 AM	C75585
Bromobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Bromodichloromethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Bromoform	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Bromomethane	ND	3.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
2-Butanone	ND	10		µg/L	1	2/27/2021 12:18:42 AM	C75585
Carbon disulfide	ND	10		µg/L	1	2/27/2021 12:18:42 AM	C75585
Carbon Tetrachloride	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Chlorobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Chloroethane	ND	2.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Chloroform	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Chloromethane	ND	3.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
2-Chlorotoluene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
4-Chlorotoluene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
cis-1,2-DCE	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Dibromochloromethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Dibromomethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,3-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,4-Dichlorobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Dichlorodifluoromethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1-Dichloroethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1-Dichloroethene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2-Dichloropropane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-13

Project: Lovington 66

Collection Date: 2/22/2021 2:25:00 PM

Lab ID: 2102A60-008

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
2,2-Dichloropropane	ND	2.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1-Dichloropropene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Hexachlorobutadiene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
2-Hexanone	ND	10		µg/L	1	2/27/2021 12:18:42 AM	C75585
Isopropylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
4-Isopropyltoluene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
4-Methyl-2-pentanone	ND	10		µg/L	1	2/27/2021 12:18:42 AM	C75585
Methylene Chloride	ND	3.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
n-Butylbenzene	ND	3.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
n-Propylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
sec-Butylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Styrene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
tert-Butylbenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
trans-1,2-DCE	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1,1-Trichloroethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,1,2-Trichloroethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Trichloroethene (TCE)	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Trichlorofluoromethane	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
1,2,3-Trichloropropane	ND	2.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Vinyl chloride	ND	1.0		µg/L	1	2/27/2021 12:18:42 AM	C75585
Xylenes, Total	ND	1.5		µg/L	1	2/27/2021 12:18:42 AM	C75585
Surr: 1,2-Dichloroethane-d4	93.8	70-130		%Rec	1	2/27/2021 12:18:42 AM	C75585
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	2/27/2021 12:18:42 AM	C75585
Surr: Dibromofluoromethane	99.5	70-130		%Rec	1	2/27/2021 12:18:42 AM	C75585
Surr: Toluene-d8	100	70-130		%Rec	1	2/27/2021 12:18:42 AM	C75585

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-15

Project: Lovington 66

Collection Date: 2/22/2021 1:40:00 PM

Lab ID: 2102A60-009

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0095		µg/L	1	3/2/2021 7:53:42 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Toluene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Ethylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Methyl tert-butyl ether (MTBE)	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2,4-Trimethylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,3,5-Trimethylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2-Dichloroethane (EDC)	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2-Dibromoethane (EDB)	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Naphthalene	ND	10	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1-Methylnaphthalene	ND	20	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
2-Methylnaphthalene	ND	20	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Acetone	ND	50	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Bromobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Bromodichloromethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Bromoform	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Bromomethane	ND	15	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
2-Butanone	ND	50	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Carbon disulfide	ND	50	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Carbon Tetrachloride	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Chlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Chloroethane	ND	10	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Chloroform	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Chloromethane	ND	15	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
2-Chlorotoluene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
4-Chlorotoluene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
cis-1,2-DCE	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
cis-1,3-Dichloropropene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2-Dibromo-3-chloropropane	ND	10	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Dibromochloromethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Dibromomethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2-Dichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,3-Dichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,4-Dichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Dichlorodifluoromethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1-Dichloroethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1-Dichloroethene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2-Dichloropropane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-15

Project: Lovington 66

Collection Date: 2/22/2021 1:40:00 PM

Lab ID: 2102A60-009

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
2,2-Dichloropropane	ND	10	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1-Dichloropropene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Hexachlorobutadiene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
2-Hexanone	ND	50	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Isopropylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
4-Isopropyltoluene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
4-Methyl-2-pentanone	ND	50	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Methylene Chloride	ND	15	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
n-Butylbenzene	ND	15	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
n-Propylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
sec-Butylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Styrene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
tert-Butylbenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1,1,2-Tetrachloroethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1,2,2-Tetrachloroethane	ND	10	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Tetrachloroethene (PCE)	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
trans-1,2-DCE	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
trans-1,3-Dichloropropene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2,3-Trichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2,4-Trichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1,1-Trichloroethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,1,2-Trichloroethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Trichloroethene (TCE)	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Trichlorofluoromethane	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
1,2,3-Trichloropropane	ND	10	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Vinyl chloride	ND	5.0	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Xylenes, Total	ND	7.5	D	µg/L	5	3/1/2021 6:13:02 PM	A75610
Surr: 1,2-Dichloroethane-d4	98.6	70-130	D	%Rec	5	3/1/2021 6:13:02 PM	A75610
Surr: 4-Bromofluorobenzene	101	70-130	D	%Rec	5	3/1/2021 6:13:02 PM	A75610
Surr: Dibromofluoromethane	101	70-130	D	%Rec	5	3/1/2021 6:13:02 PM	A75610
Surr: Toluene-d8	96.7	70-130	D	%Rec	5	3/1/2021 6:13:02 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-16

Project: Lovington 66

Collection Date: 2/22/2021 12:15:00 PM

Lab ID: 2102A60-010

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0093		µg/L	1	3/2/2021 8:23:32 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Toluene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Ethylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Naphthalene	ND	2.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Acetone	ND	10		µg/L	1	3/1/2021 6:40:15 PM	A75610
Bromobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Bromoform	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Bromomethane	ND	3.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
2-Butanone	ND	10		µg/L	1	3/1/2021 6:40:15 PM	A75610
Carbon disulfide	ND	10		µg/L	1	3/1/2021 6:40:15 PM	A75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Chlorobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Chloroethane	ND	2.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Chloroform	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Chloromethane	ND	3.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Dibromomethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-16

Project: Lovington 66

Collection Date: 2/22/2021 12:15:00 PM

Lab ID: 2102A60-010

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
2-Hexanone	ND	10		µg/L	1	3/1/2021 6:40:15 PM	A75610
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2021 6:40:15 PM	A75610
Methylene Chloride	ND	3.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Styrene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Vinyl chloride	ND	1.0		µg/L	1	3/1/2021 6:40:15 PM	A75610
Xylenes, Total	ND	1.5		µg/L	1	3/1/2021 6:40:15 PM	A75610
Surr: 1,2-Dichloroethane-d4	96.8	70-130		%Rec	1	3/1/2021 6:40:15 PM	A75610
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	3/1/2021 6:40:15 PM	A75610
Surr: Dibromofluoromethane	104	70-130		%Rec	1	3/1/2021 6:40:15 PM	A75610
Surr: Toluene-d8	95.0	70-130		%Rec	1	3/1/2021 6:40:15 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-18

Project: Lovington 66

Collection Date: 2/22/2021 3:45:00 PM

Lab ID: 2102A60-011

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.11		µg/L	10	3/2/2021 8:38:29 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Toluene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Ethylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Methyl tert-butyl ether (MTBE)	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2,4-Trimethylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,3,5-Trimethylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2-Dichloroethane (EDC)	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2-Dibromoethane (EDB)	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Naphthalene	ND	10	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1-Methylnaphthalene	ND	20	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
2-Methylnaphthalene	ND	20	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Acetone	ND	50	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Bromobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Bromodichloromethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Bromoform	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Bromomethane	ND	15	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
2-Butanone	ND	50	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Carbon disulfide	ND	50	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Carbon Tetrachloride	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Chlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Chloroethane	ND	10	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Chloroform	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Chloromethane	ND	15	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
2-Chlorotoluene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
4-Chlorotoluene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
cis-1,2-DCE	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
cis-1,3-Dichloropropene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2-Dibromo-3-chloropropane	ND	10	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Dibromochloromethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Dibromomethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2-Dichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,3-Dichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,4-Dichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Dichlorodifluoromethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1-Dichloroethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1-Dichloroethene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2-Dichloropropane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-18

Project: Lovington 66

Collection Date: 2/22/2021 3:45:00 PM

Lab ID: 2102A60-011

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: BRM
1,3-Dichloropropane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
2,2-Dichloropropane	ND	10	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1-Dichloropropene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Hexachlorobutadiene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
2-Hexanone	ND	50	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Isopropylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
4-Isopropyltoluene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
4-Methyl-2-pentanone	ND	50	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Methylene Chloride	ND	15	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
n-Butylbenzene	ND	15	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
n-Propylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
sec-Butylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Styrene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
tert-Butylbenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1,1,2-Tetrachloroethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1,2,2-Tetrachloroethane	ND	10	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Tetrachloroethene (PCE)	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
trans-1,2-DCE	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
trans-1,3-Dichloropropene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2,3-Trichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2,4-Trichlorobenzene	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1,1-Trichloroethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,1,2-Trichloroethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Trichloroethene (TCE)	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Trichlorofluoromethane	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
1,2,3-Trichloropropane	ND	10	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Vinyl chloride	ND	5.0	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Xylenes, Total	ND	7.5	D	µg/L	5	3/1/2021 7:07:24 PM	A75610
Surr: 1,2-Dichloroethane-d4	95.8	70-130	D	%Rec	5	3/1/2021 7:07:24 PM	A75610
Surr: 4-Bromofluorobenzene	103	70-130	D	%Rec	5	3/1/2021 7:07:24 PM	A75610
Surr: Dibromofluoromethane	104	70-130	D	%Rec	5	3/1/2021 7:07:24 PM	A75610
Surr: Toluene-d8	99.6	70-130	D	%Rec	5	3/1/2021 7:07:24 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-19

Project: Lovington 66

Collection Date: 2/22/2021 12:02:00 PM

Lab ID: 2102A60-012

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 8:53:23 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Toluene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Ethylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Methyl tert-butyl ether (MTBE)	6.6	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2-Dichloroethane (EDC)	48	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Naphthalene	ND	2.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Acetone	ND	10		µg/L	1	3/1/2021 7:34:32 PM	A75610
Bromobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Bromoform	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Bromomethane	ND	3.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
2-Butanone	ND	10		µg/L	1	3/1/2021 7:34:32 PM	A75610
Carbon disulfide	ND	10		µg/L	1	3/1/2021 7:34:32 PM	A75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Chlorobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Chloroethane	ND	2.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Chloroform	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Chloromethane	ND	3.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Dibromomethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2-Dichloropropane	3.4	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-19

Project: Lovington 66

Collection Date: 2/22/2021 12:02:00 PM

Lab ID: 2102A60-012

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
2-Hexanone	ND	10		µg/L	1	3/1/2021 7:34:32 PM	A75610
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2021 7:34:32 PM	A75610
Methylene Chloride	ND	3.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Styrene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Vinyl chloride	ND	1.0		µg/L	1	3/1/2021 7:34:32 PM	A75610
Xylenes, Total	ND	1.5		µg/L	1	3/1/2021 7:34:32 PM	A75610
Surr: 1,2-Dichloroethane-d4	92.0	70-130		%Rec	1	3/1/2021 7:34:32 PM	A75610
Surr: 4-Bromofluorobenzene	98.4	70-130		%Rec	1	3/1/2021 7:34:32 PM	A75610
Surr: Dibromofluoromethane	98.2	70-130		%Rec	1	3/1/2021 7:34:32 PM	A75610
Surr: Toluene-d8	98.7	70-130		%Rec	1	3/1/2021 7:34:32 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-20

Project: Lovington 66

Collection Date: 2/22/2021 10:10:00 AM

Lab ID: 2102A60-013

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 9:08:16 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Toluene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Ethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Naphthalene	ND	2.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Acetone	ND	10		µg/L	1	3/1/2021 8:01:37 PM	A75610
Bromobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Bromoform	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Bromomethane	ND	3.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
2-Butanone	ND	10		µg/L	1	3/1/2021 8:01:37 PM	A75610
Carbon disulfide	ND	10		µg/L	1	3/1/2021 8:01:37 PM	A75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Chlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Chloroethane	ND	2.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Chloroform	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Chloromethane	ND	3.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Dibromomethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-20

Project: Lovington 66

Collection Date: 2/22/2021 10:10:00 AM

Lab ID: 2102A60-013

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
2-Hexanone	ND	10		µg/L	1	3/1/2021 8:01:37 PM	A75610
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2021 8:01:37 PM	A75610
Methylene Chloride	ND	3.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Styrene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Vinyl chloride	ND	1.0		µg/L	1	3/1/2021 8:01:37 PM	A75610
Xylenes, Total	ND	1.5		µg/L	1	3/1/2021 8:01:37 PM	A75610
Surr: 1,2-Dichloroethane-d4	97.4	70-130		%Rec	1	3/1/2021 8:01:37 PM	A75610
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	1	3/1/2021 8:01:37 PM	A75610
Surr: Dibromofluoromethane	106	70-130		%Rec	1	3/1/2021 8:01:37 PM	A75610
Surr: Toluene-d8	101	70-130		%Rec	1	3/1/2021 8:01:37 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-21

Project: Lovington 66

Collection Date: 2/22/2021 11:10:00 AM

Lab ID: 2102A60-014

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 9:23:08 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Toluene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Ethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Naphthalene	ND	2.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Acetone	ND	10		µg/L	1	3/1/2021 8:28:35 PM	A75610
Bromobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Bromoform	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Bromomethane	ND	3.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
2-Butanone	ND	10		µg/L	1	3/1/2021 8:28:35 PM	A75610
Carbon disulfide	ND	10		µg/L	1	3/1/2021 8:28:35 PM	A75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Chlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Chloroethane	ND	2.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Chloroform	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Chloromethane	ND	3.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Dibromomethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: W-21

Project: Lovington 66

Collection Date: 2/22/2021 11:10:00 AM

Lab ID: 2102A60-014

Matrix: AQUEOUS

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
2-Hexanone	ND	10		µg/L	1	3/1/2021 8:28:35 PM	A75610
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2021 8:28:35 PM	A75610
Methylene Chloride	ND	3.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Styrene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Vinyl chloride	ND	1.0		µg/L	1	3/1/2021 8:28:35 PM	A75610
Xylenes, Total	ND	1.5		µg/L	1	3/1/2021 8:28:35 PM	A75610
Surr: 1,2-Dichloroethane-d4	98.3	70-130		%Rec	1	3/1/2021 8:28:35 PM	A75610
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/1/2021 8:28:35 PM	A75610
Surr: Dibromofluoromethane	105	70-130		%Rec	1	3/1/2021 8:28:35 PM	A75610
Surr: Toluene-d8	102	70-130		%Rec	1	3/1/2021 8:28:35 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: Trip Blank

Project: Lovington 66

Collection Date:

Lab ID: 2102A60-015

Matrix: TRIP BLANK

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8011/504.1: EDB							Analyst: JME
1,2-Dibromoethane	ND	0.0094		µg/L	1	3/2/2021 9:37:59 PM	58383
EPA METHOD 8260B: VOLATILES							Analyst: BRM
Benzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Toluene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Ethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Naphthalene	ND	2.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
2-Methylnaphthalene	ND	4.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Acetone	ND	10		µg/L	1	3/1/2021 8:55:42 PM	A75610
Bromobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Bromodichloromethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Bromoform	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Bromomethane	ND	3.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
2-Butanone	ND	10		µg/L	1	3/1/2021 8:55:42 PM	A75610
Carbon disulfide	ND	10		µg/L	1	3/1/2021 8:55:42 PM	A75610
Carbon Tetrachloride	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Chlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Chloroethane	ND	2.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Chloroform	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Chloromethane	ND	3.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
2-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
4-Chlorotoluene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
cis-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Dibromochloromethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Dibromomethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1-Dichloroethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1-Dichloroethene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610

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 Quantitative 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, Inc.

Analytical Report

Lab Order 2102A60

Date Reported: 3/8/2021

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: Trip Blank

Project: Lovington 66

Collection Date:

Lab ID: 2102A60-015

Matrix: TRIP BLANK

Received Date: 2/24/2021 10:23:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: BRM	
1,3-Dichloropropane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
2,2-Dichloropropane	ND	2.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Hexachlorobutadiene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
2-Hexanone	ND	10		µg/L	1	3/1/2021 8:55:42 PM	A75610
Isopropylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
4-Isopropyltoluene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
4-Methyl-2-pentanone	ND	10		µg/L	1	3/1/2021 8:55:42 PM	A75610
Methylene Chloride	ND	3.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
n-Butylbenzene	ND	3.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
n-Propylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
sec-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Styrene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
tert-Butylbenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
trans-1,2-DCE	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Trichlorofluoromethane	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Vinyl chloride	ND	1.0		µg/L	1	3/1/2021 8:55:42 PM	A75610
Xylenes, Total	ND	1.5		µg/L	1	3/1/2021 8:55:42 PM	A75610
Surr: 1,2-Dichloroethane-d4	95.9	70-130		%Rec	1	3/1/2021 8:55:42 PM	A75610
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	3/1/2021 8:55:42 PM	A75610
Surr: Dibromofluoromethane	107	70-130		%Rec	1	3/1/2021 8:55:42 PM	A75610
Surr: Toluene-d8	101	70-130		%Rec	1	3/1/2021 8:55:42 PM	A75610

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 Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: MB-58383	SampType: MBLK		TestCode: EPA Method 8011/504.1: EDB							
Client ID: PBW	Batch ID: 58383		RunNo: 75646							
Prep Date: 3/2/2021	Analysis Date: 3/2/2021		SeqNo: 2675857		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: MB-58383	SampType: MBLK		TestCode: EPA Method 8011/504.1: EDB							
Client ID: PBW	Batch ID: 58383		RunNo: 75646							
Prep Date: 3/2/2021	Analysis Date: 3/2/2021		SeqNo: 2675860		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID: LCS-58383	SampType: LCS		TestCode: EPA Method 8011/504.1: EDB							
Client ID: LCSW	Batch ID: 58383		RunNo: 75646							
Prep Date: 3/2/2021	Analysis Date: 3/2/2021		SeqNo: 2675861		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.12	0.010	0.1000	0	117	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 Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: 100ng lcs		SampType: LCS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: LCSW		Batch ID: C75554		RunNo: 75554						
Prep Date:		Analysis Date: 2/25/2021		SeqNo: 2670605			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	96.0	70	130			
Toluene	20	1.0	20.00	0	99.4	70	130			
Chlorobenzene	19	1.0	20.00	0	94.7	70	130			
1,1-Dichloroethene	19	1.0	20.00	0	97.1	70	130			
Trichloroethene (TCE)	17	1.0	20.00	0	87.2	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		96.1	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.7	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.6	70	130			
Surr: Toluene-d8	9.6		10.00		95.7	70	130			

Sample ID: 2102a60-001a ms		SampType: MS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: W-4		Batch ID: C75554		RunNo: 75554						
Prep Date:		Analysis Date: 2/25/2021		SeqNo: 2670611			Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	750	1.0	20.00	763.0	-68.6	70	130			ES
Toluene	740	1.0	20.00	762.0	-125	70	130			ES
Chlorobenzene	16	1.0	20.00	0.4498	78.3	70	130			
1,1-Dichloroethene	13	1.0	20.00	0	67.4	70	130			S
Trichloroethene (TCE)	14	1.0	20.00	0	68.8	70	130			S
Surr: 1,2-Dichloroethane-d4	8.2		10.00		81.8	70	130			
Surr: 4-Bromofluorobenzene	9.9		10.00		98.6	70	130			
Surr: Dibromofluoromethane	8.0		10.00		80.1	70	130			
Surr: Toluene-d8	10		10.00		102	70	130			

Sample ID: 2102a60-001a msd	SampType: MSD		TestCode: EPA Method 8260B: VOLATILES							
Client ID: W-4	Batch ID: C75554		RunNo: 75554							
Prep Date:	Analysis Date: 2/25/2021		SeqNo: 2670612		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	710	1.0	20.00	763.0	-286	70	130	5.97	20	ES
Toluene	670	1.0	20.00	762.0	-462	70	130	9.58	20	ES
Chlorobenzene	15	1.0	20.00	0.4498	72.8	70	130	7.07	20	
1,1-Dichloroethene	13	1.0	20.00	0	64.6	70	130	4.38	20	S
Trichloroethene (TCE)	13	1.0	20.00	0	63.8	70	130	7.54	20	S
Surr: 1,2-Dichloroethane-d4	7.8		10.00		77.8	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.6		10.00		96.0	70	130	0	0	
Surr: Dibromofluoromethane	7.9		10.00		79.4	70	130	0	0	
Surr: Toluene-d8	10		10.00		101	70	130	0	0	

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 Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: C75554		RunNo: 75554							
Prep Date:	Analysis Date: 2/25/2021		SeqNo: 2670632		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: C75554		RunNo: 75554							
Prep Date:	Analysis Date: 2/25/2021		SeqNo: 2670632		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.5		10.00		95.5	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		105	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.0	70	130			
Surr: Toluene-d8	10		10.00		101	70	130			

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: C75585		RunNo: 75585							
Prep Date:	Analysis Date: 2/26/2021		SeqNo: 2671820		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	19	1.0	20.00	0	96.9	70	130			
Chlorobenzene	18	1.0	20.00	0	90.8	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 Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: VOLATILES							
Client ID: LCSW	Batch ID: C75585		RunNo: 75585							
Prep Date:	Analysis Date: 2/26/2021		SeqNo: 2671820		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	19	1.0	20.00	0	96.7	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	91.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		98.3	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.4	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.6		10.00		95.6	70	130			

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: C75585		RunNo: 75585							
Prep Date:	Analysis Date: 2/26/2021		SeqNo: 2671831		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

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 Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES							
Client ID: PBW	Batch ID: C75585		RunNo: 75585							
Prep Date:	Analysis Date: 2/26/2021		SeqNo: 2671831		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.9	70	130			

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 Quantitative 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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: C75585	RunNo: 75585								
Prep Date:	Analysis Date: 2/26/2021	SeqNo: 2671831 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	10		10.00		102	70	130			
Surr: Dibromofluoromethane	9.8		10.00		98.0	70	130			
Surr: Toluene-d8	10		10.00		105	70	130			

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch ID: A75610	RunNo: 75610								
Prep Date:	Analysis Date: 3/1/2021	SeqNo: 2673465 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	94.2	70	130			
Toluene	20	1.0	20.00	0	99.7	70	130			
Chlorobenzene	19	1.0	20.00	0	96.8	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	102	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	90.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.0		10.00		89.9	70	130			
Surr: 4-Bromofluorobenzene	11		10.00		112	70	130			
Surr: Dibromofluoromethane	9.3		10.00		92.7	70	130			
Surr: Toluene-d8	9.5		10.00		94.8	70	130			

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES								
Client ID: PBW	Batch ID: A75610	RunNo: 75610								
Prep Date:	Analysis Date: 3/1/2021	SeqNo: 2673537 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								

Qualifiers:

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D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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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#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A75610			RunNo: 75610						
Prep Date:	Analysis Date: 3/1/2021			SeqNo: 2673537		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								

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 Quantitative Limit
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J Analyte detected below quantitation limits
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RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2102A60

08-Mar-21

Client: Daniel B. Stephens & Assoc.

Project: Lovington 66

Sample ID: mb	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: A75610			RunNo: 75610						
Prep Date:	Analysis Date: 3/1/2021			SeqNo: 2673537		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.0		10.00		90.2	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.5	70	130			
Surr: Toluene-d8	10		10.00		100	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 Quantitative 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

Sample Log-In Check List

Client Name: **Daniel B. Stephens & Assoc.**

Work Order Number: **2102A60**

RcptNo: **1**

Received By: **Cheyenne Cason** **2/24/2021 10:23:00 AM**

Completed By: **Cheyenne Cason** **2/24/2021 11:07:56 AM**

Reviewed By: **DAD 2.24.21**

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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: SPA 2.24.21

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good				

Chain-of-Custody Record

Client: Daniel B. Stephens & Associates

Mailing Address: 6020 Academy Rd NE A1D

Phone #: (505) 822-9400

email or Fax#:

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

☐ Standard ☐ Rush

Project Name:

LOvingston Cele

Project #:

DB19.1395.00 Phase 1 Task 3

Project Manager:

Jason Rawcci

Sampler: KIA AF

On Ice: ☒ Yes ☐ No

of Coolers: 1

Cooler Temp (including CF): 2.6 ± 0.2 = 2.6 (°C)

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.
2/22/21	17:00	A9	W-4	5x40ml	na2S2O3 Agd2	001
	17:13		W-5	5x40ml	na2S2O3 Agd2	002
	14:30		W-7			003
	16:25		W-8			004
	11:00		W-9			005
	15:38		W-11			006
	13:32		W-12			007
	14:25		W-13			008
	13:40		W-15			009
	12:15		W-16			010
	15:45		W-18			011
						012

Date: 2/23/21 Time: 16:30 Relinquished by: [Signature]

Date: Time: Relinquished by:

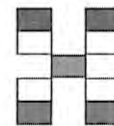
Received by: Via: Date Time

CM UPS 2/24/21 1023

Received by: Via: Date Time

Remarks:

2 of 2



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

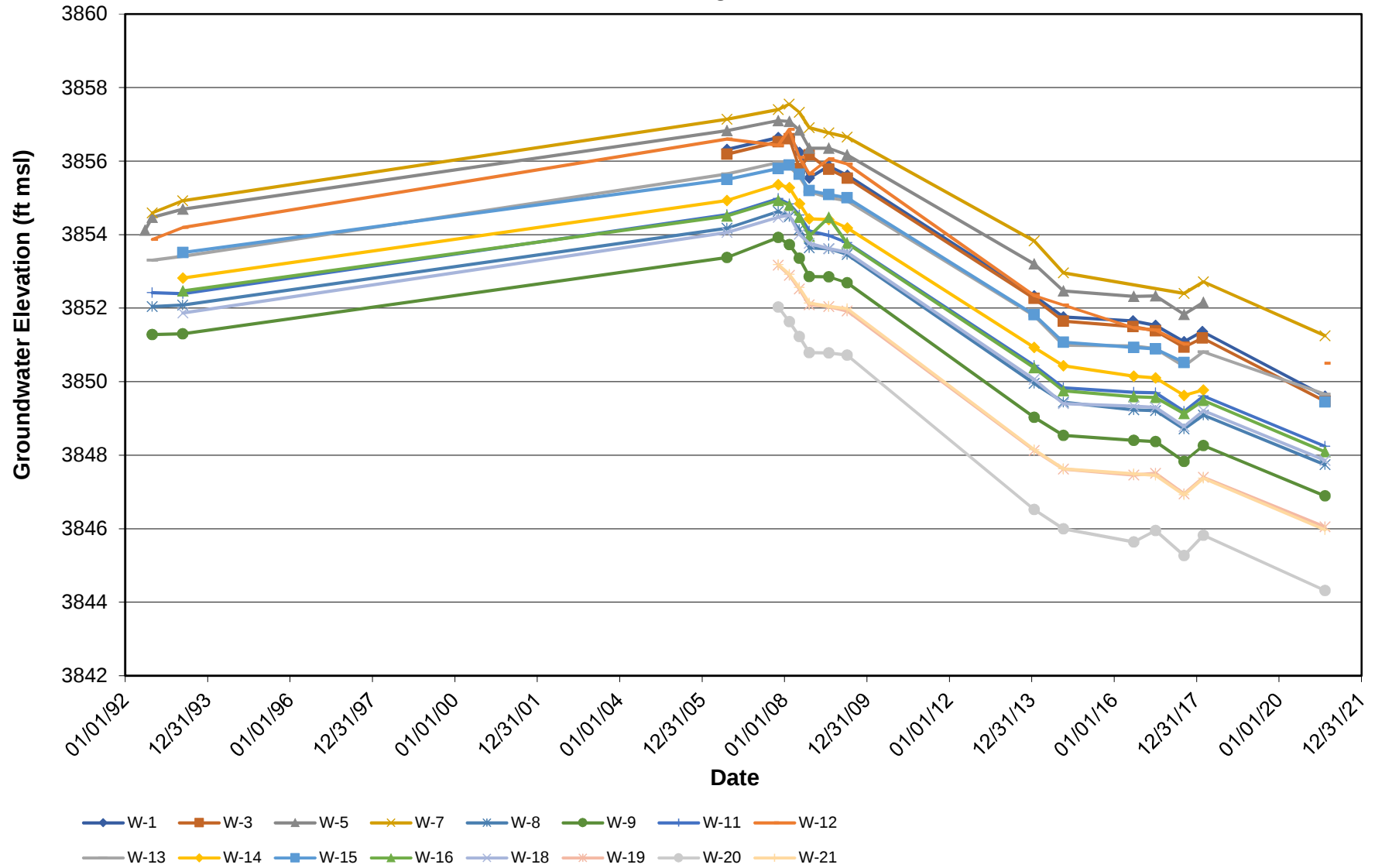
BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄	8260 (VOA) <u>8260B</u>	8270 (Semi-VOA)	Total Coliform (Present/Absent)										
			X				X												
			X				X												
			X				X												
			X				X												
			X				X												
			X				X												
			X				X												
			X				X												
			X				X												
			X				X												

Appendix D

Time-Series Graphs

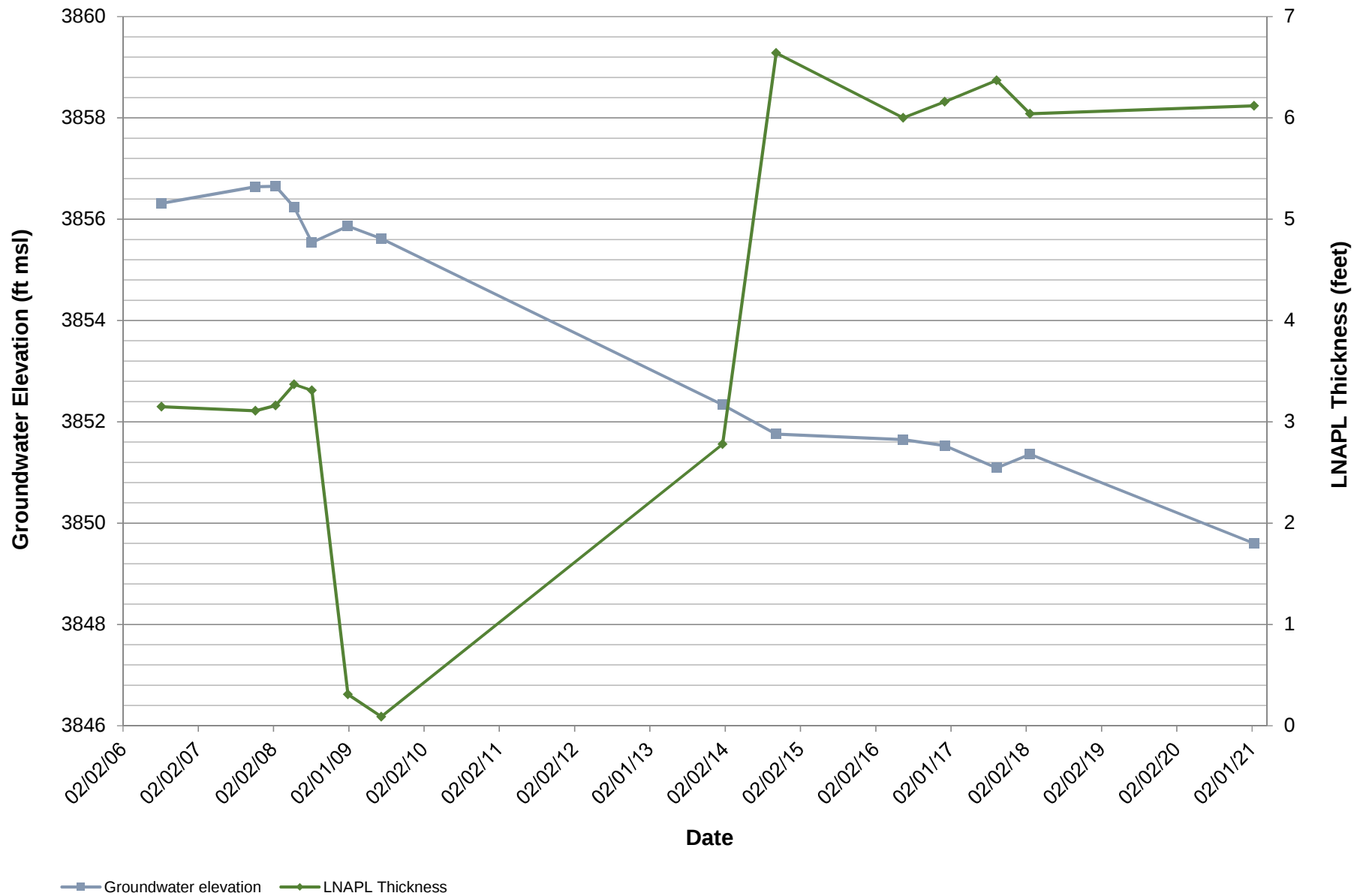
Groundwater Elevations

Lovington 66



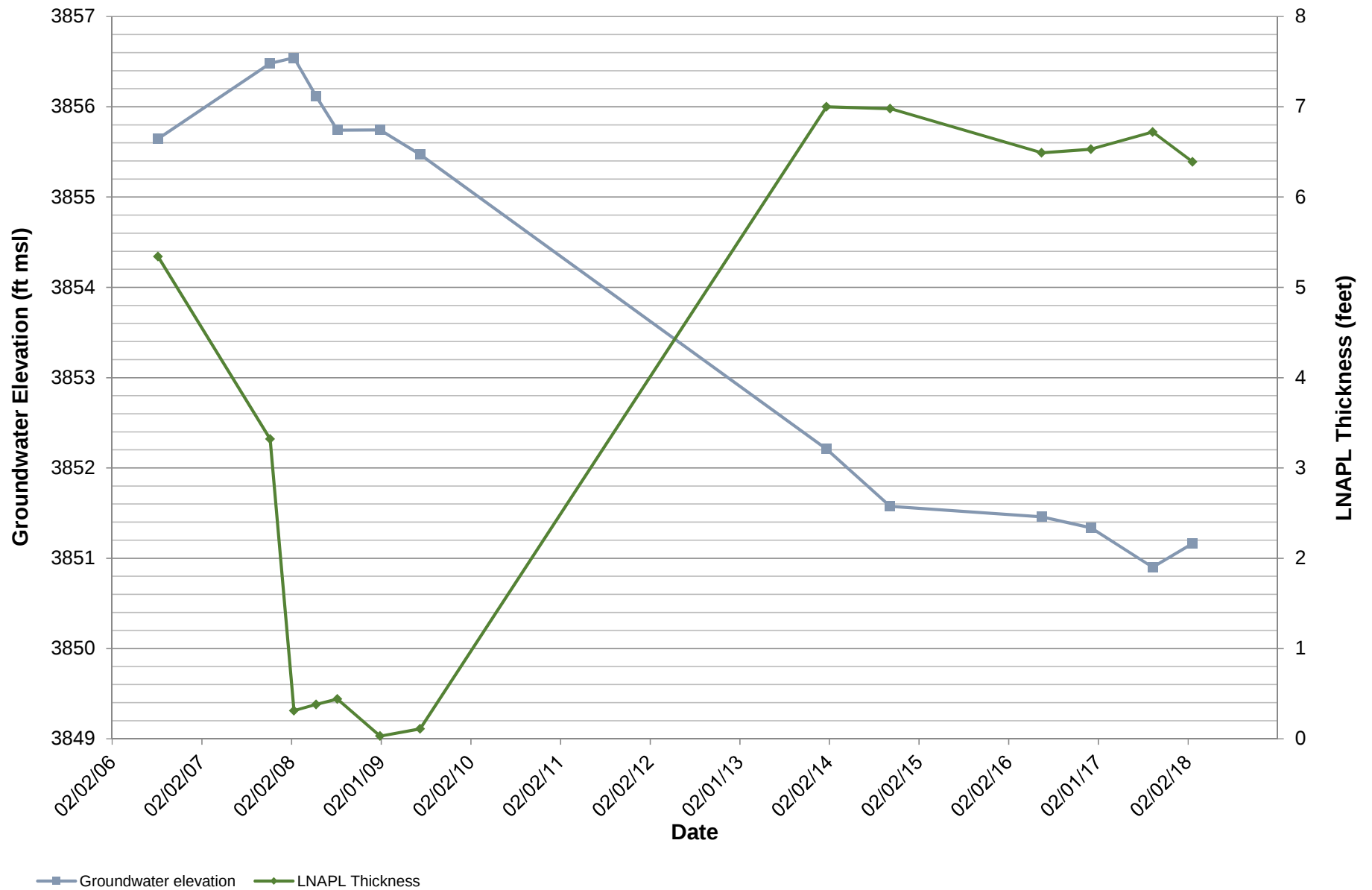
W-1 Fluid Levels

Lovington 66



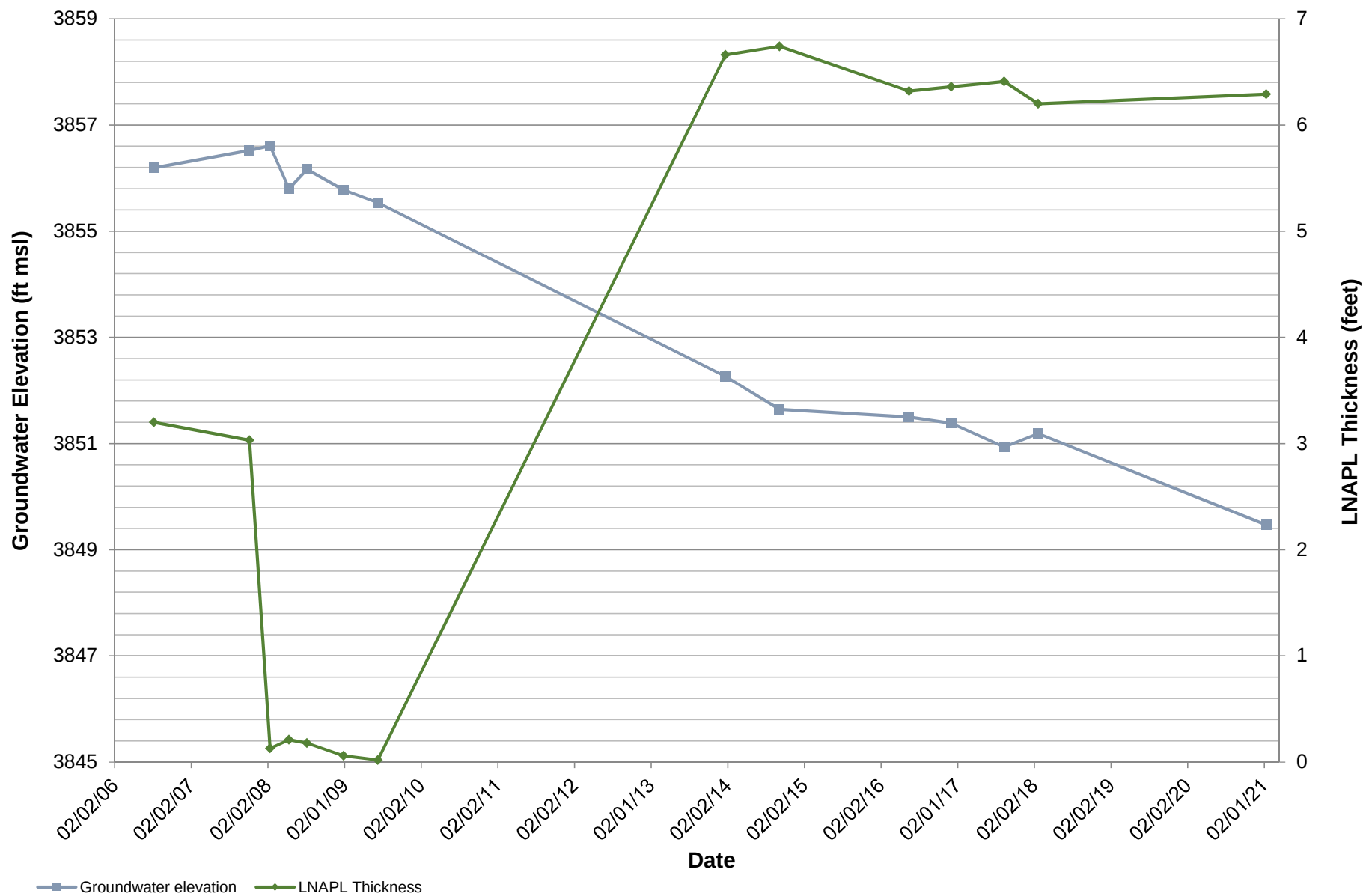
W-2 Fluid Levels

Lovington 66



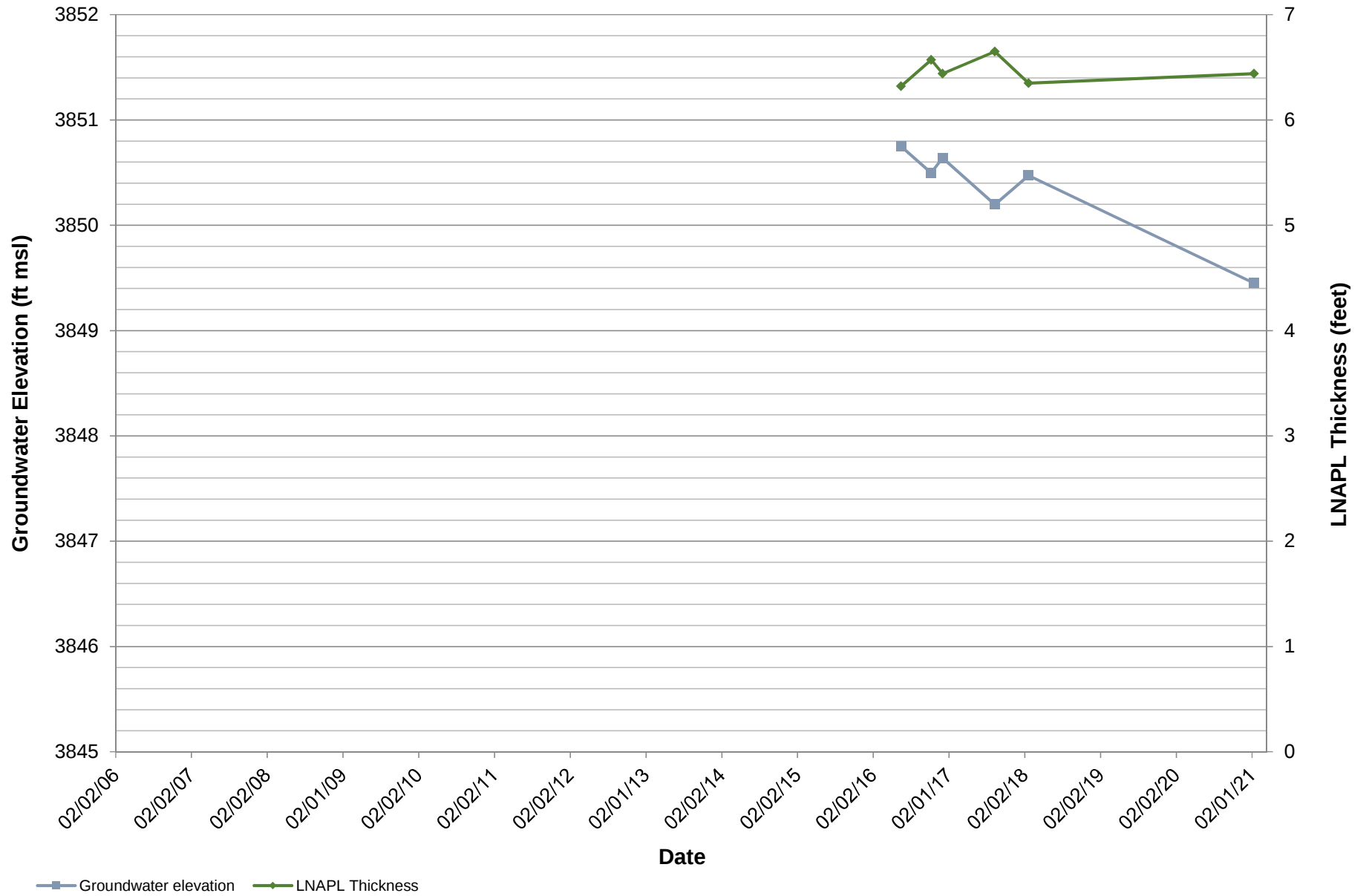
W-3 Fluid Levels

Lovington 66



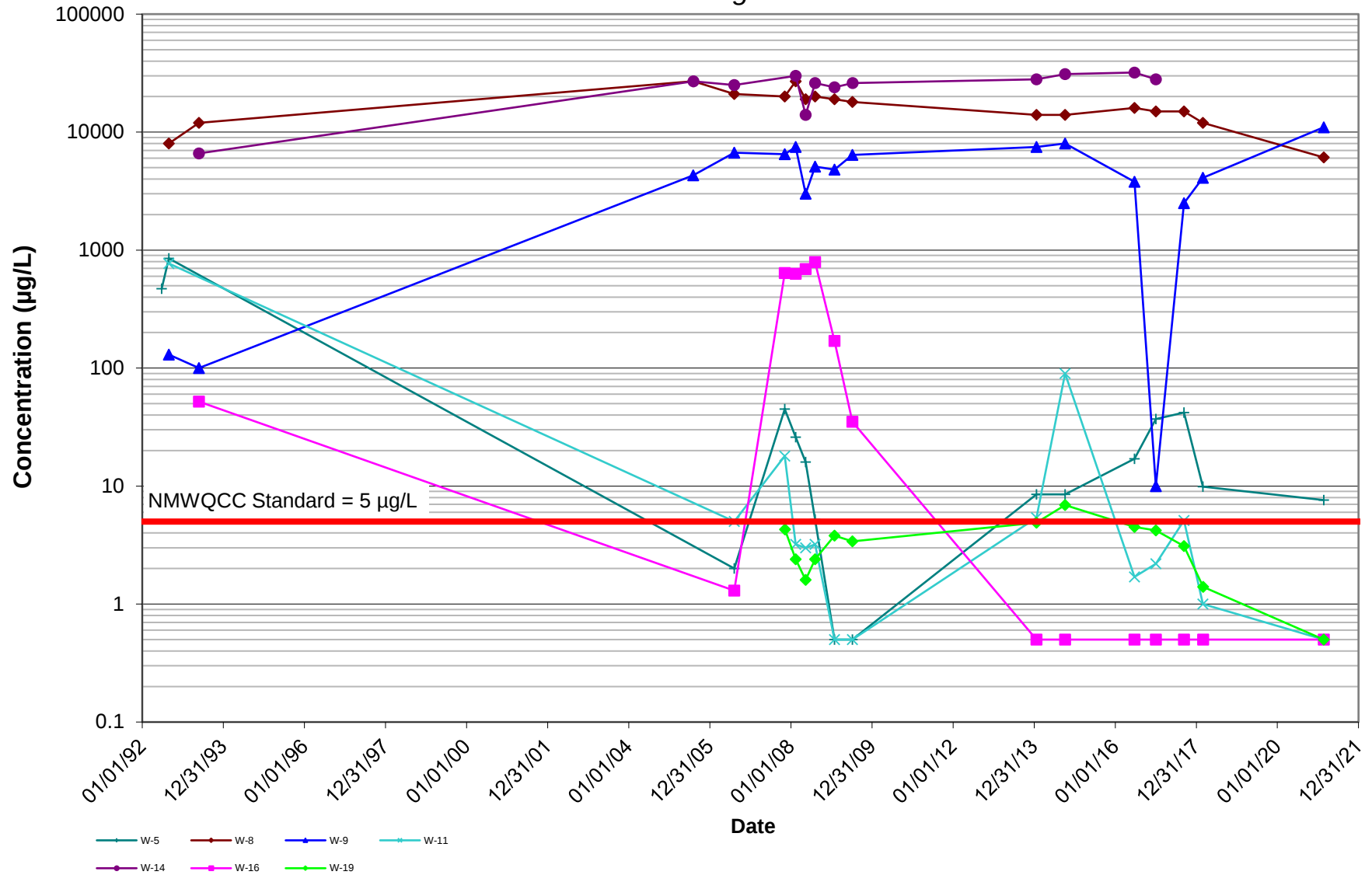
MPE-1 Fluid Levels

Lovington 66



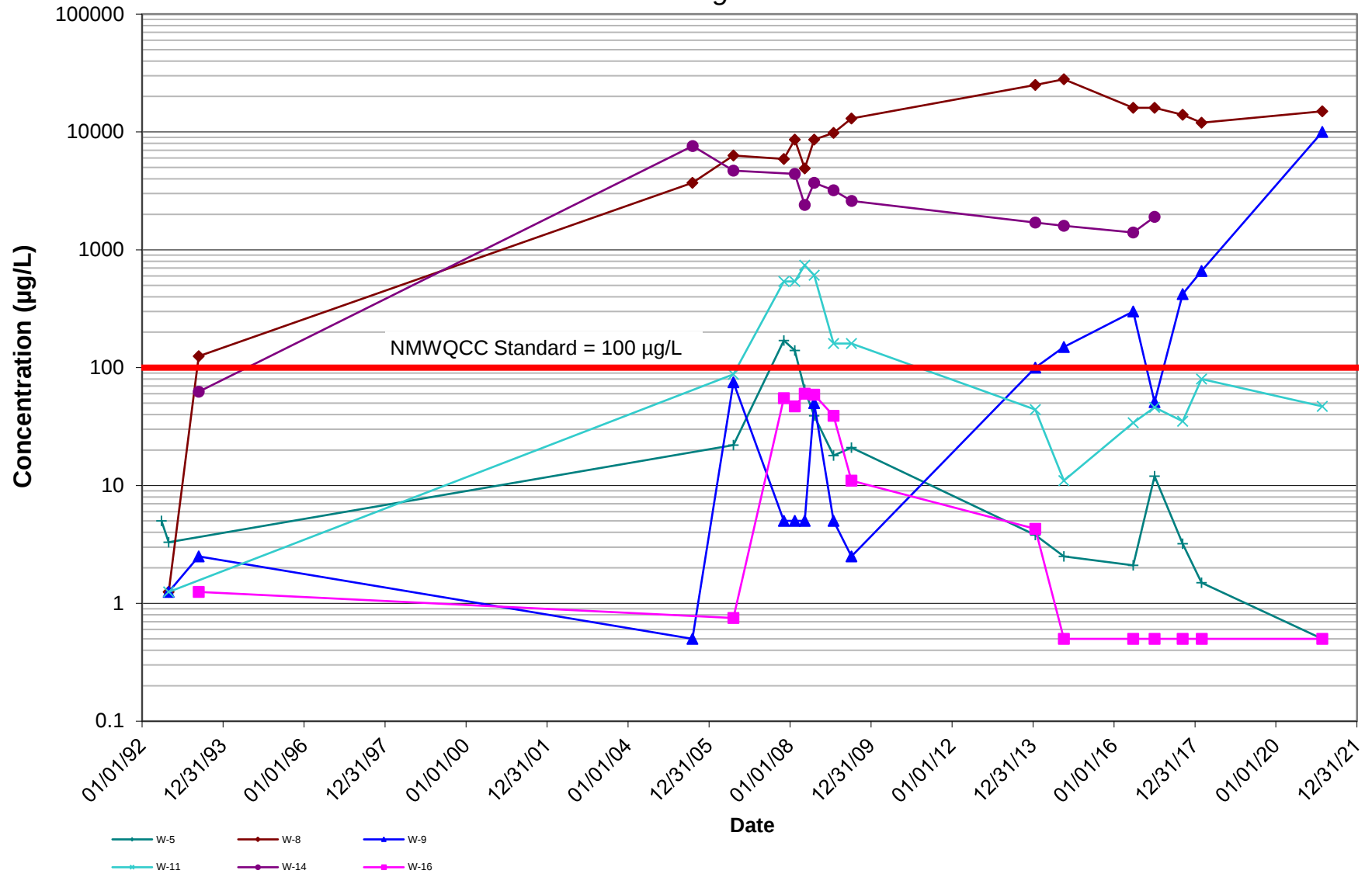
Benzene Concentrations

Lovington 66

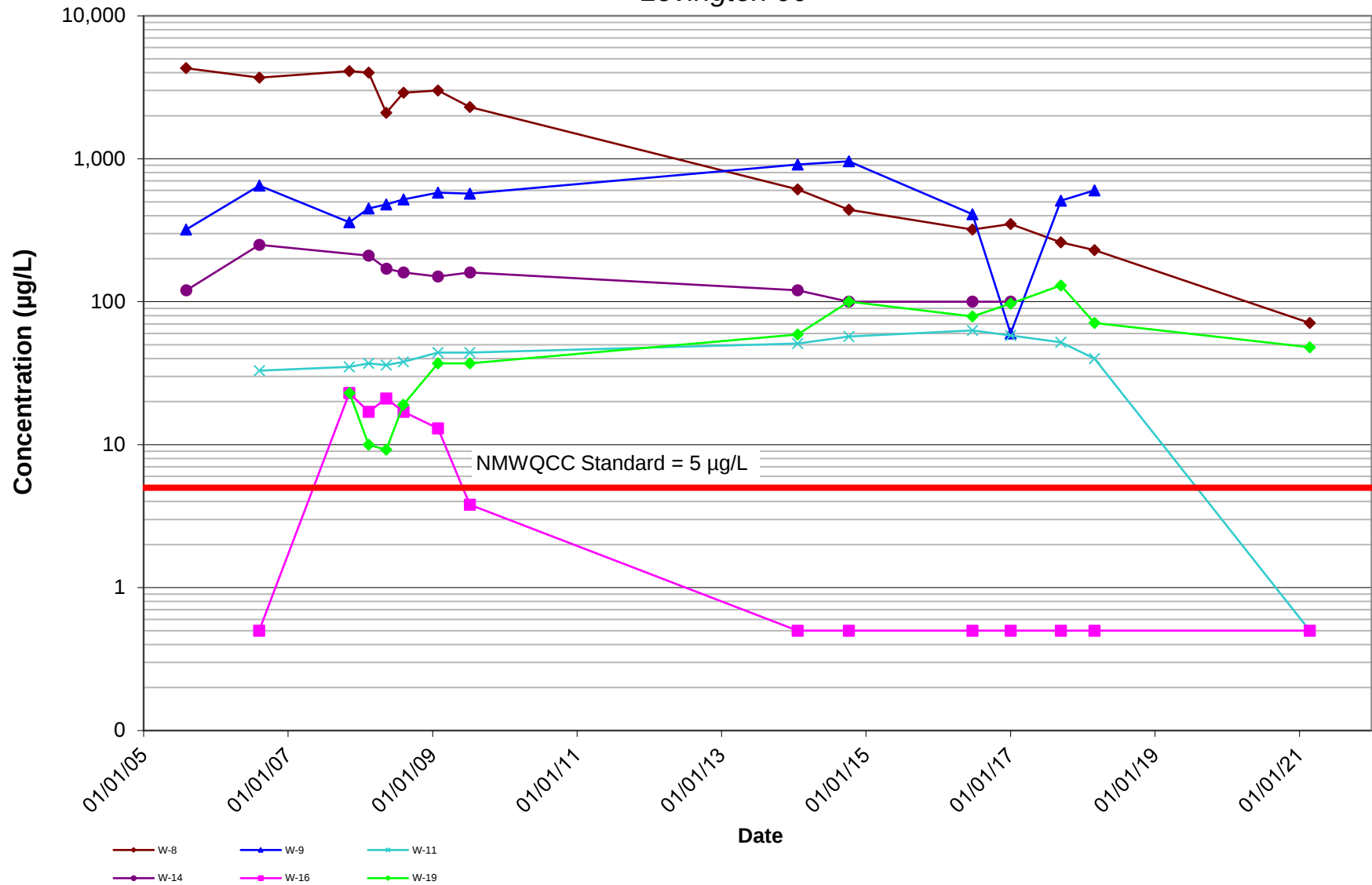


MTBE Concentrations

Lovington 66



EDC Concentrations *Lovington 66*



PAHS Concentrations

Lovington 66

