COVER PAGE
FORM 1216
WELL INSTALLATION, QUARTERLY NAPL RECOVERY AND GROUNDWATER MONITORING REPORT

Please include the following information:

1. **Site name:** Shamrock #63

2. **Responsible party:** Polk Oil Company

3. **Responsible party mailing address** (list contact person if different):

   Jim Polk, President

   1200 N. Paseo De Onate

   Espanola NM, 87532

4. **Facility number:** 29206 (Release ID #:4509)

5. **Address/legal description:**

   3624 Cerrillos Road

   Santa Fe, New Mexico

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

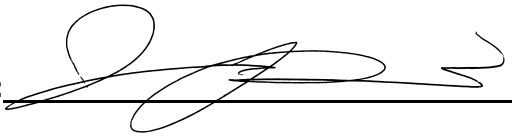
7. **Date of report:** May 21, 2015

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

   April 19, 2006

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: 

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Affiliation: Daniel B. Stephens & Associates, Inc.

Title: Geologist

Date: May 21, 2015

I. INTRODUCTION

On behalf of Polk Oil Company, responsible party (RP) for Shamrock #63 (the site), Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this well installation and first quarterly monitoring report. The report has been prepared in accordance with the New Mexico Petroleum Storage Tank Regulations and work plan identification (WPID) number 17381. The site is located at 3624 Cerrillos Road in Santa Fe, New Mexico (Figure 1). A used car dealership is currently occupying the property. Fuel is no longer being stored or dispensed at the site.

The UST system was removed from the site on April 19, 2006. Results of soil sampling revealed minor impacts to soil in the northwest corner of the former UST nest and near the diesel fuel dispensing island. Soil samples were collected from two borings that were advanced in the area of the former UST nest in December 2006. The samples showed impacts to soil at depths of up to 75 feet below ground surface (bgs).

During May 2014, Basin Engineering, Inc. (Basin) installed three new groundwater monitor wells and completed a semi-annual groundwater monitoring event at the site. Results of groundwater monitoring completed after well installation showed non-aqueous phase liquid (NAPL) to be present for the first time at the site in newly installed monitor well MW-6 (0.83 foot). Analytical results from groundwater samples collected from the other site wells showed numerous contaminants of concern (COCs) to be present at concentrations above New Mexico Groundwater Quality Control Commission (NMWQCC) and New Mexico Environmental improvement Board (NMEIB) standards, including benzene in monitor wells MW-1, MW-2, MW-3, MW-5, MW-7, and MW-8; toluene in monitor wells MW-5 and MW-7; ethylbenzene in monitor well MW-5; total xylenes in monitor wells MW-1, MW-5, and MW-7; methyl tert-butyl ether (MTBE) in monitor wells MW-1, MW-2, and MW-3; polycyclic aromatic hydrocarbons (PAHs) in monitor wells MW-1, MW-5, and MW-7; 1,2-dibromoethane (EDB) in monitor wells MW-1, MW-5, and MW-7; and 1,2-dichloroethane (EDC) in monitor wells MW-1, MW-2, MW-5, and MW-7 (Basin, 2014).

Basin was acquired by DBS&A in June 2014. DBS&A completed a subsequent second semiannual monitoring event in September 2014, with broadly consistent results (DBS&A, 2014a). DBS&A began monthly NAPL recovery at well MW-6 in November 2014, under WPID # 17296. At the request of the PSTB Project Manager, DBS&A submitted a work plan for installation of six new monitor wells, along with two quarterly monitoring and NAPL recovery events, and an indoor air survey of structures currently present at the site and on the adjacent parcel to the west (DBS&A, 2014b). The work plan was submitted to the NMED PSTB on December 16, 2014 and received technical approval on December 22, 2014 under WPID # 17381 (NMED, 2014).

This report documents well installation, first quarterly groundwater monitoring and NAPL recovery, and the indoor air vapor survey, performed at the site by DBS&A during March 2 through April 10, 2015.

I. INTRODUCTION (Continued)

A. Scope of Work

The scope of work included the installation of monitor wells MW-9 through MW-14, first quarter groundwater monitoring of all existing and newly installed monitor wells, NAPL recovery, and an indoor air vapor survey. Groundwater monitoring included gauging fluid levels in all accessible site monitor wells and collecting groundwater samples from monitor wells MW-1 through MW-14 for laboratory analysis. Groundwater samples were analyzed for volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and total xylenes (BTEX), MTBE, EDC, and PAHs (naphthalene plus methylnaphthalenes) using U.S. Environmental Protection Agency (EPA) method 8260B (full list), and EDB by EPA method 504.1. All activities were completed in accordance with DBS&A standard operating procedures and the NMED Underground Storage Tank Bureau Guidelines for Corrective Action (Guidelines).

B. Monitoring Highlights

The principal accomplishments of this reporting period include the following:

• Installation of new monitor wells MW-9 through MW-14	March 2-8, 2015
• Gauged fluid levels in wells MW-1 through MW-14	March 16, 2015
• Recovered NAPL from well MW-6	March 8 and March 17, 2015
• Recovered NAPL from wells MW-9 and MW-10	April 10, 2015
• Collected groundwater samples from MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-11, MW-12, MW-13, and MW-14 for laboratory analysis	March 17, 2015
• Surveying Control, Inc. completed well survey	March 17, 2015
• Indoor Air Vapor Survey conducted at the Best Western and Manny's Auto Sales properties	March 17, 2015
• Prepared Form 1216 quarterly report	May 2015

Monitor wells MW-6, MW-9 and MW-10 contained NAPL and were not sampled. NAPL was recovered from well MW-6 on two occasions during this investigation, under the auspices of WPID# 17296. No other significant deviations from the approved work plan occurred during this event.

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT

A. Remediation System

No remediation system is in place at this site.

B. System Operation

No remediation system is in place at this site.

C. Well Installation

Six new monitor wells, designated MW-9 through MW-14, were installed at the locations shown on Figure 2. Wells MW-9 through MW-11 were installed to delineate the extent of the NAPL and dissolved-phase contaminant plumes in the vicinity of former pump islands on the parcel adjacent to the Shamrock 63 site. MW-12 was installed downgradient of the former pump islands and in the vicinity of a former above-ground storage tank (AST) installation noted on historical aerial photography of the parcel adjacent to the Shamrock 63 site. Wells MW-13 and MW-14 were installed to delineate the extent of the dissolved-phase contaminant plume cross-gradient to the northeast and east of existing site monitor wells MW-2 and MW-3.

Prior to drilling, property access agreements were obtained for the parcels to the east and west of the site, controlled by The Lofts condominium homeowners association and the owners of the Best Western hotel, respectively. Well permits were obtained from the New Mexico Office of the State Engineer (OSE; Appendix 1). Utility clearances were provided by New Mexico One Call.

Drilling and Soil Sampling

DBS&A contracted with National EWP, Inc (National) to perform drilling and well installation. Boreholes were advanced using a CME-85 hollow-stem auger drill rig. A DBS&A geologist was on-site during installation of the wells to provide oversight, field screening, logging of soils, and collection of soil samples for laboratory analysis. Photos of the drilling and well installation activities are included in Appendix 2. Field notes documenting drilling and well installation activities are provided in Appendix 3.

Soil samples were typically collected from the boreholes during drilling at approximate 2.5-foot intervals using a decontaminated split spoon sampler. Sub-samples were collected from each interval for lithologic description, field screening, and possible laboratory analysis. A geologic log for each well boring is provided in Appendix 4.

Field screening of soils was performed by the geologist using a photoionization detector (PID) in accordance with the steps outlined in Section 1.4.1.1 of the Guidelines. PID readings from soil samples recorded during drilling are shown on the geologic logs (Appendix 4) and summarized as follows:

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT (Continued)

- MW-9: PID readings ranged from 978.9 parts per million by volume (ppmv) to 3,579 ppmv in field screening samples. The highest reading was recorded in the 15 to 17.5 feet below ground surface (bgs) sample interval. PID readings above the NMED PSTB action level of 100 ppmv were observed in all field screened samples.

- MW-10: PID readings ranged from 0.0 ppmv to 3,617 ppmv in field screening samples. The highest reading was recorded in the 50 to 52.5 feet bgs sample interval. PID readings above the NMED PSTB action level of 100 ppmv were observed in all field screened samples collected below 37.5 feet bgs.

- MW-11: PID readings ranged from 7.4 ppmv to 7,694 ppmv in field screening samples. The highest reading was recorded in the 62.5 to 65 feet bgs sample interval. PID readings above the NMED PSTB action level of 100 ppmv were observed in all field screened samples collected below 37.5 feet bgs.

- MW-12: PID readings ranged from 0.0 ppmv to 16.7 ppmv in field screening samples. None of the field-screened samples exceeded the NMED PSTB action level of 100 ppmv.

- MW-13: PID readings ranged from 0.0 ppmv to 1.4 ppmv in field screening samples. None of the field-screened samples exceeded the NMED PSTB action level of 100 ppmv.

- MW-14: PID readings ranged from 0.2 ppmv to 7.4 ppmv in field screening samples. None of the field-screened samples exceeded the NMED PSTB action level of 100 ppmv.

Well Completion and Development

Wells were installed according to the procedures specified in the Guidelines, Section 2: Procedures for Constructing Monitoring Wells. The wells were constructed with the following general specifications:

- 20 feet of 2-inch-diameter, 0.010-inch-slot, Schedule 40 (SCH 40) polyvinyl chloride (PVC), machine-cut, flush-threaded well screen, with blank 2-inch-diameter, SCH 40 PVC casing to the surface, and a threaded PVC end cap.

- Target well screen placement was approximately 5-10 feet above and 10-15 feet below the static water table, as observed during drilling.

- Filter pack consisting of 10/20 silica sand was installed in the well annulus from the bottom of the soil boring to approximately 2 feet above the top of the screen.

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT (Continued)

- A minimum 3-foot-thick activated bentonite chip seal was installed on top of the filter pack.

- The remaining annulus was filled with a cement/bentonite grout.

- Wells were completed with locking caps within 8-inch-diameter, flush-mount, traffic-grade well vaults. A 2-foot diameter by 6-inch-thick, high early strength concrete pad (minimum 3-day strength of 4,000 psi) was poured around each well vault to mitigate vehicular traffic and pedestrian disturbance.

Photographs documenting well drilling and installation activities are provided in Appendix 2. As-built diagrams presenting well completion information are provided with the geologic logs in Appendix 4. The driller's well records submitted to OSE are provided in Appendix 1.

The wells were developed by bailing during March 4-8, 2015. Well development was conducted pursuant to Section 1.5.1 of the Guidelines, by purging the well until temperature, pH, and conductivity stabilized and turbidity was reduced to the extent practicable. Because the site is developed with commercial businesses, and wells MW-9 and MW-10 were suspected to contain NAPL at the time of well installation, water discharged during well development was containerized in NMDOT-approved 55-gallon steel drums, and stored on-site for pick-up and disposal with the remainder of the investigation-derived waste (see below).

Soil Analytical Results

Two soil samples were submitted for laboratory analysis from borings MW-9 through MW-11: one from the vadose zone interval yielding the highest PID reading, and another from the water table interface. Because PID readings for all soil screening samples from boreholes MW-12 through MW-14 were below the NMED PSTB action level of 100 ppmv, a single sample collected from near the water table interface observed during drilling was submitted for laboratory analysis. Specific sampling depths for samples submitted to the analytical laboratory are provided in Table 1.

The samples selected for laboratory analysis were extracted with methanol in the field pursuant to Sections 1.4.1.2 and 1.4.1.3 of the Guidelines. The samples were submitted to TestAmerica, Inc. (TestAmerica) in Nashville, Tennessee for VOC analysis including benzene, toluene, ethylbenzene, and total xylenes (BTEX), methyl tertiary butyl ether (MTBE), and naphthalene using EPA method 8260B (full list), and total petroleum hydrocarbons, gasoline range organics (TPH-GRO) and diesel range organics (TPH-DRO) using EPA method 8015B.

With the exception of total xylenes and TPH-DRO, laboratory reporting limits for COCs were above the applicable NMED 2012 Soil Screening Levels (SSLs). There is no NMED SSL for TPH-GRO. Analytical results for soil samples collected from the borings showed the following detections of constituents of concern (COCs):

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT (Continued)

- MW-9: Benzene (5.73 milligrams per kilogram [mg/Kg] in the 77.5-80 ft bgs sample), toluene (2.39 mg/Kg in the 15-17.5 ft bgs sample and 13.3 mg/Kg in the 77.5-80 ft bgs sample), ethylbenzene (2.19mg/Kg in the 15-17.5 ft bgs sample and 8.03 mg/Kg in the 77.5-80 ft bgs sample), total xylenes (12.6 mg/Kg in the 15-17.5 ft bgs sample and 47.0 mg/Kg in the 77.5-80 ft bgs sample), and naphthalene (2.29 mg/Kg in the 15-17.5 ft bgs sample and 9.80 mg/Kg in the 77.5-80 ft bgs sample). Toluene, ethylbenzene, total xylenes, and naphthalene exceed their respective SSLs in both the 15-17.5 ft bgs and the 77.5-80 ft bgs samples; benzene also exceeded the SSL in the 77.5-80 ft bgs sample.

  TPH-GRO was detected at concentrations of 294 and 1,150 mg/Kg in the 15-17.5 ft bgs and the 77.5-80 ft bgs samples, respectively. TPH-DRO was detected at concentrations of 127 and 3,770 mg/Kg in the 15-17.5 ft bgs and the 77.5-80 ft bgs samples, respectively. TPH-DRO in the 77.5-80 ft bgs sample exceeded the NMED SSL of 1,000 mg/Kg.

- MW-10: Benzene (0.753 mg/Kg in the 50-52.5 ft bgs sample), toluene (12.1 mg/Kg in the 50-52.5 ft bgs sample and 0.0806 mg/Kg in the 77.5-80 ft bgs sample), ethylbenzene (4.53 mg/Kg in the 50-52.5 ft bgs sample), total xylenes (30.9 mg/Kg in the 50-52.5 ft bgs sample and 0.140 mg/Kg in the 77.5-80 ft bgs sample), and naphthalene (2.29 mg/Kg in the 50-52.5 ft bgs sample and 9.80 mg/Kg in the 77.5-80 ft bgs sample). Benzene, toluene, ethylbenzene, total xylenes, and naphthalene exceeded their respective SSLs in the 50-52.5 ft bgs sample; all detected COCs were below their respective SSLs in the77.5-80 ft bgs sample.

  TPH-GRO was detected at concentrations of 793 and 5.18 mg/Kg in the 50-52.5 ft bgs and the 77.5-80 ft bgs samples, respectively. TPH-DRO was detected at concentrations of 126 and 14.1 mg/Kg in the 50-52.5 ft bgs and the 77.5-80 ft bgs samples, respectively, and were below the applicable SSL for TPH-DRO.

- MW-11: Benzene (4.43 mg/Kg in the 62.5-65 ft bgs sample and 0.213 mg/Kg in the 77.5-80 ft bgs sample), toluene (41.2 mg/Kg in the 62.5-65 ft bgs sample and 0.127 mg/Kg in the 77.5-80 ft bgs sample), ethylbenzene (19.1 mg/Kg in the 62.5-65 ft bgs sample), total xylenes (103 mg/Kg in the 62.5-65 ft bgs sample and 0.428 mg/Kg in the 77.5-80 ft bgs sample), EDC (0.911 mg/Kg in the 62.5-65 ft bgs sample and 0.306mg/Kg in the 77.5-80 ft bgs sample), EDB (0.987 mg/Kg in the 62.5-65 ft bgs sample) and naphthalene (13.2 mg/Kg in the 62.5-65 ft bgs sample). Benzene, toluene, ethylbenzene, total xylenes, EDC, EDB and naphthalene exceeded their respective SSLs in the 62.5-65 ft bgs sample; benzene, total xylenes and EDC also exceeded their respective SSLs in the77.5-80 ft bgs sample.

  TPH-GRO was detected at concentrations of 3290 and 33.5 mg/Kg in the 62.5-65 ft bgs and the 77.5-80 ft bgs samples, respectively. TPH-DRO was detected at concentrations of 768 and 39.7 mg/Kg in the 62.5-65 ft bgs and the 77.5-80 ft bgs samples, respectively, and were below the applicable SSL for TPH-DRO.

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT (Continued)

- No COCs were detected at concentrations above the laboratory reporting limits in any of the analyzed samples from boreholes MW-12, MW-13 and MW-14 (Table 1).

Laboratory analytical results for the soil samples, including laboratory reporting limits, are summarized in Table 1, and shown on Figure 3. The full laboratory analytical report and chain-of-custody documentation are provided in Appendix 5.

Investigation Derived Waste

Management of investigation derived waste (IDW) was handled in accordance with the Guidelines. Soil cuttings, well development water, and decontamination rinse water generated during drilling were containerized in NMDOT-approved 55-gallon steel drums, and stored on-site for pick-up and disposal at a licensed facility by Enviroworks, Inc of Edgewood, New Mexico.

Survey

After completion of the field activities, all site wells were surveyed in accordance with Section 2 of the Guidelines by Surveying Control, Inc., a New Mexico registered professional land surveyor. The survey report is provided in Appendix 6.

D. Vapor Survey

On March 17, 2015, an indoor air survey was conducted in structures overlying the known or suspected extent of the groundwater contaminant plume. Indoor air screening was conducted in the offices of Manny's Auto Sales, located on the former Shamrock 63 site, and the Best Western hotel, located on the parcel adjacent to the west. A PID was used to identify the presence of vapor-phase hydrocarbons in indoor air within the structures. At each screening location the maximum observed instantaneous PID reading was recorded in units of ppmv.

At the Manny's Auto Sales location, indoor air screening was conducted in all public spaces, as well as the staff break room, restrooms, maintenance closet and the at-grade crawlspace under the building. At the Best Western hotel, indoor air was screened in all ground-floor public spaces, as well as four unoccupied ground-floor rooms and a maintenance storage room. The Best Western hotel is a slab-on-grade structure with no accessible crawlspaces under the building. Sub-grade access was provided by water shut-off boxes located near the front entrance and at the southeast corner of the building. No additional accessible sub-grade access points were identified on the site, or the immediately adjacent parcels.

The results of the vapor survey are summarized in Table 2. For screening purposes, the indoor air PID readings are compared to the Occupational Safety & Health Administration (OSHA) Permissible Exposure Limit (PEL) for benzene. PELs are occupational exposure standards based on an eight-hour daily exposure period. The PID instrument does not specify the hydrocarbons present. Comparison to the benzene PEL presumes that the entire detected hydrocarbon volume consists of benzene; this is considered a conservative assumption because benzene has the most

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT (Continued)

stringent PEL of the COCs likely to be encountered at the site. The OSHA PEL for benzene is 1.0 ppmv. Of the screened locations, the maximum observed PID reading slightly exceeded the PEL for benzene at a single location, in the Best Western hotel breakfast room (1.1 ppmv, Table 2).

E. Monitoring Activities

Groundwater Monitoring

On March 16, 2015, depth to water was measured in monitor wells MW-1 through MW-14 with an electronic interface probe. Monitor wells MW-6, MW-9 and MW-10 were found to contain NAPL with thicknesses of 1.04, 0.95 and 5.31 feet respectively. Water level data were used to prepare the potentiometric surface elevation map presented in Figure 4. Table 3 summarizes historical fluid level measurements and potentiometric surface elevations.

Groundwater samples were collected after purging from monitor MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-11, MW-12, MW-13, and MW-14 on March 17, 2014. Monitor wells MW-6, MW-9 and MW-10 were not sampled because they contained NAPL. DBS&A followed standard operating procedures and NMED PSTB Guidelines for Corrective Action during collection of all groundwater samples. The sampling protocol is outlined in Appendix 7. Field notes recorded during sampling activities are included in Appendix 3.

Samples were analyzed for the constituents detailed in the scope of work. All laboratory analyses were performed by TestAmerica, Inc (TestAmerica) in Nashville, Tennessee. The laboratory report and chain-of-custody documentation are provided in Appendix 5.

Historical analytical organic chemistry data are summarized in Table 4. No samples were collected for inorganic analysis in accordance with the approved work plan. Figure 5 shows the distribution of dissolved-phase hydrocarbon concentrations in groundwater for the March 2015 monitoring event.

NAPL Recovery

NAPL was recovered by hand-bailing from monitor well MW-6 on March 8 and March 17, 2015. With the exception of the two recovery events conducted during this monitoring period, NAPL has been recovered on an approximately monthly basis from well MW-6 since November 2014 under WPID #17296. The NAPL recovery activities conducted on March 17, 2015 constituted the last of the six recovery events authorized under that work plan. NAPL was recovered from newly installed wells MW-9 and MW-10 on April 10, 2015.

During NAPL recovery conducted on March 17 and April 10, 2015, approximately 1.66, 0.92 and 4.62 gallons of NAPL were removed from wells MW-6, MW-9 and MW-10, respectively. A total of 16.23 gallons of NAPL have been recovered at the site since NAPL recovery activities began in November 2014. Table 5 presents a summary of NAPL recovery from wells at the site.

II. ACTIVITIES PERFORMED DURING THIS MONITORING EVENT (Continued)

F. System Performance and Effectiveness

No remediation system is installed at this site.

G. Containment of Release

Monitor well MW-6 has contained a measureable NAPL thickness since initial monitoring in May 2014 (Table 5) at thicknesses up to 1.52 feet; NAPL thickness during the current monitoring event was 1.04 foot. NAPL was observed in newly installed wells MW-9 and MW-10, at thicknesses of 0.44 foot and 5.47 feet, respectively. To date, measureable NAPL thicknesses have not been detected in any of the other site monitor wells, although a NAPL sheen was noted in purge water generated from wells MW-5 and MW-7 during the current monitoring event. For this reason, these wells are not considered to provide delineation of the NAPL plume. The extent of NAPL in groundwater is delineated to the east by wells MW-1 and MW-2 and to the south by well MW-11, but remains undefined upgradient to the north of wells MW-6, MW-9 and MW-10, and to the west and southwest of well MW-10.

One or more COCs were detected at concentrations exceeding the applicable standards in groundwater samples collected from wells MW-1, MW-2, MW-3, MW-5, MW-7, MW-8, MW-11, and MW-14. The extent of the dissolved-phase contaminant plume is partially delineated by downgradient wells MW-13, MW-4 and MW-12 (Figure 5). COC concentrations have decreased in downgradient well MW-8 since initial monitoring in May 2014, and only the PAH concentration remains slightly above the applicable standard. The direction of groundwater flow in the immediate vicinity of well MW-14 appears to be easterly (Figure 4), and the contaminant plume is not delineated downgradient of that well. The extent of dissolved-phase contamination also remains unbounded upgradient of the site under the Cerrillos Road corridor, and off-site to the west and southwest, cross-gradient from wells MW-10 and MW-11. Figure 6 presents an isoconcentration map showing the distribution of benzene in groundwater during the current monitoring event.

III. SUMMARY AND CONCLUSIONS

A. Trends or Changes in Site Conditions

Groundwater levels increased an average of 0.06 foot in the eight existing site monitor wells since the last monitoring event in September 2014. Increases ranged from 0.02 foot in well MW-7 to 0.20 foot in well MW-8; the groundwater elevation decreased slightly in well MW-5 (0.03 foot). A graph showing changes in groundwater elevations in site monitor wells over time is provided in Appendix 8. The direction of groundwater flow varies beneath the site, but overall is generally to the southeast at an average gradient of approximately 0.007 ft/ft (Figure 4), similar to the previous monitoring event.

NAPL thickness in monitor well MW-6 decreased from 1.40 foot to 1.04 foot since the last groundwater monitoring event in September 2014. Measurable NAPL has been present in this well since the well was installed in May 2014, at thicknesses up to 1.52 feet (Table 5). NAPL has been recovered from this well on an approximate monthly basis since November 2014.

Table 4 summarizes historical analytical organic chemistry data from this and previous groundwater monitoring events. Graphs showing changes in selected contaminant concentrations over time are included in Appendix 8. The following trends or changes regarding specific wells were noted in comparison to the previous monitoring event in September 2014:

- MW-1: Total BTEX increased slightly from 5,225.4 to 5,498.9 micrograms per liter (µg/L). Benzene and toluene increased from 2,960 to 3,210 µg/L and from 333 to 380 µg/L, respectively, while ethylbenzene showed a decrease from 82.4 to 58.9 µg/L. Total xylenes remained unchanged at 1,850 µg/L. Also showing decreases were MTBE (from 2,110 to 1,810 µg/L) and EDC (from 161 µg/L to below the laboratory reporting limit). EDB increased from 26.3 to 36.5 µg/L. PAHs increased from 248.9 to 322.1 µg/L. Benzene, total xylenes, MTBE, EDB, and PAHs continue to exceed their respective standards. Concentrations of COCs detected in groundwater samples from this well have fluctuated through time, but have generally decreased from the highest concentrations detected in samples from 2008 and 2009.

- MW-2: The total BTEX concentration decreased from 1,450.86 to 1,264.70 µg/L, due to decreases in benzene from 1,260 to 1,140 µg/L, toluene from 40.9 to 30.7 µg/L, ethylbenzne from 5.96 to 2.1 µg/L, and total xylenes from 144 to 91.9 µg/L. MTBE increased from 355 to 477 µg/L, while PAHs decreased from 151.3 to 33.22 µg/L. EDB was detected at a concentration of 0.133 µg/L, below previous laboratory reporting limits and slightly above the NMWQC standard. EDC remained below the laboratory reporting limits. Benzene, MTBE and PAHs continue to exceed their respective standards. Concentrations of COCs in the well continue to fluctuate, as they have since the well was first sampled in May 2008.

- MW-3: Total BTEX decreased slightly from 78.08 to 69.93 µg/L due to a decrease in benzene from 71 to 62.1µg/L, while total xylenes increased slightly from 7.08 to 7.83 µg/L

III. SUMMARY AND CONCLUSIONS (Continued)

MTBE increased from 308 to 413 µg/L. EDC decreased from 20.4 µg/L to below the laboratory reporting limit. Toluene, ethylbenzene, and EDB remained below laboratory reporting limits while PAHs (1.26 µg/L) increased to slightly above the laboratory reporting limit. Benzene and MTBE continue to exceed their respective standards. Concentrations of benzene detected in groundwater samples from this well have generally decreased since the highest concentrations detected in 2008 and 2009, while the concentrations of MTBE have shown a consistent increasing trend.

- MW-4: All COCs remained below laboratory reporting limits, with the exception of EDC and PAHs, which showed a very slight increase but remained near the laboratory reporting limits.

- MW-5: Total BTEX increased slightly from 14,231 to 14,565 µg/L due to increases in the concentrations of benzene from 2,830 to 3,200 µg/L and toluene from 4,620 to 4,890 µg/L), while concentrations of ethylbenzene (771 to 745 µg/L), and total xylenes (6,010 to 5,730 µg/L) decreased slightly. Also showing decreases were MTBE (from 2.24 µg/L to less than the laboratory reporting limit of 1.0 µg/L), EDC (from 1,350 µg/L to less than the laboratory reporting limit of 50 µg/L), and PAHs (from 1,155 to 913 µg/L). EDB increased from 345 to 711 µg/L. Benzene, toluene, total xylenes, EDB, and PAHs continue to exceed their respective standards. Concentrations of COCs in groundwater samples have fluctuated within a generally consistent range since the well was first sampled in December 2011.

- MW-6: This well has not been sampled since it was installed in May 2014 due to the presence of NAPL. The NAPL thickness decreased from 1.40 to 1.04 foot since the last monitoring event. NAPL has been recovered on a monthly basis from this well since November 2014. A summary of NAPL recovered from the well is provided in Table 5. To date, approximately 10.69 gallons of NAPL have been recovered from this well.

- MW-7: Total BTEX decreased from 10,829 to 10,300 µg/L due to decreases in the concentrations of benzene (from 2,770 to 2,580 µg/L), toluene (from 3,000 to 2,790 µg/L), and total xylenes (from 4,470 to 4,270 µg/L), while ethylbenzene increased from 589 to 660 µg/L. MTBE and EDB increased, from 54 to 66.9 µg/L and from 151 to 256 µg/L, respectively. EDC decreased significantly, from 612 µg/L to below the laboratory reporting limit of 50 µg/L. PAHs increased significantly, from 371 to 1,364 µg/L. Concentrations of benzene, toluene, total xylenes, EDB, and PAHs remained above the applicable standards.

- MW-8: Total BTEX decreased from 61.35 to 5.06 µg/L due to decreases in the concentrations of benzene (from 54.1 to 5.06 µg/L), toluene (from 1.31 µg/L to below the laboratory reporting limit), and total xylenes (5.94 µg/L to below the laboratory reporting limit). EDC decreased to below the laboratory detection limit. MTBE showed a minor decrease, from 11.1 to 7.38 µg/L. PAHs increased from below the laboratory reporting limit

III. SUMMARY AND CONCLUSIONS (Continued)

to 31 µg/L. Ethylbenzene, EDB, and EDC remained below the laboratory reporting limits. During the current monitoring period, benzene has decreased to below the applicable NMWQCC standard, while PAHs have increased to just above the applicable standard.

The following groundwater quality conditions were noted at new well installations sampled during the current monitoring event:

- MW-9: As indicated above, this newly installed monitor well contained 0.44 foot of NAPL at the time of initial groundwater monitoring.

- MW-10: As indicated above, this newly installed monitor well contained 5.47 feet of NAPL at the time of initial groundwater monitoring.

- MW-11: Concentrations of benzene (2,740 µg/L), toluene (1,170 µg/L), total xylenes (1,760 µg/L), EDB (304 µg/L), and PAHs (505 µg/L) exceeded their respective groundwater quality standards during this initial sampling event. Ethylbenzene was detected at a concentration of 126 µg/L, below the applicable standard. MTBE and EDC were below the laboratory reporting limits.

- MW-12: PAHs (15.7 µg/L) and EDB (0.0287 µg/L) were detected at concentrations below the applicable NMWQCC standards. All other COCs were below the laboratory reporting limits.

- MW-13: Benzene (5.71 µg/L), MTBE (5.24 µg/L) and PAHs (2.61 µg/L) were detected at concentrations below the applicable standards. All other COCs were below the laboratory reporting limits.

- MW-14: Concentrations of benzene (469 µg/L), EDB (20.0 µg/L), and PAHs (42.4 µg/L) exceeded their respective groundwater quality standards during this initial sampling event. Toluene (26.5 µg/L), ethylbenzene (4.81 µg/L), total xylenes (201 µg/L) and MTBE (24.3 µg/L) were detected at concentrations below the applicable standards. EDC was below the laboratory reporting limit.

B. Assessment of Remediation System

No remediation system is in place at this monitoring-only site.

C. Conclusions and Recommendations

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

- NAPL accumulations are present at the water table in the vicinity of the former pump islands, located to the west of the site on a parcel now occupied by the Best Western

III. SUMMARY AND CONCLUSIONS (Continued)

hotel. This is also the area of the most significant soil contamination in the vadose zone noted during well installation. The extent of NAPL is not delineated to the north under Cerrillos Road, or west and southwest of newly installed monitor well MW-10.

- The highest concentrations of dissolved-phase COCs in groundwater are centered on-site near the former UST nest, and in the vicinity of the NAPL plume. The dissolved-phase plume is largely delineated in the downgradient direction by the existing monitoring well network, but remains unbounded upgradient to the north, and cross-gradient to the northeast, southwest, and west.

- Although some clear trends are evident, particularly decreasing COC concentrations in downgradient wells MW-4 and MW-8, overall concentrations of COCs remain largely within historical ranges. Wells MW-6 through MW-14 do not yet have enough data to establish seasonal fluctuations or long-term trends.

- Installation of new wells MW-9 through MW-14 has provided additional delineation of the downgradient extent of the dissolved-phase contaminant plume at wells MW-12 and MW-13. The new wells also revealed that the NAPL and dissolved-phase plumes extend for an indeterminate and potentially significant distance off-site to the west and southwest of wells MW-10 and MW-11, and northeast of new well MW-14.

- The maximum observed total hydrocarbon concentration in indoor air at the site slightly exceeded the OSHA PEL for benzene at only one location, within the breakfast room of the Best Western hotel. Food preparation and service areas typically produce small quantities of hydrocarbon vapors. To DBS&A's knowledge, no complaints of hydrocarbon odors have been reported during construction or operation of the hotel. Because of these considerations, the small magnitude of the exceedance, the conservative nature of the screening comparisons, and the large number of potential VOC sources present within the structure, DBS&A does not believe the screening data constitute an indication of a vapor intrusion concern.

DBS&A recommends that NAPL recovery and groundwater monitoring continue at the site, as per the current work plan, due to the presence of NAPL in monitor wells MW-6, MW-9 and MW-10, and dissolved-phase contaminant concentrations above the respective NMWQCC and NMEIB standards in monitor wells MW-1, MW-2, MW-3, MW-5, MW-7, MW-8, MW-11and MW-14.

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

- Monitoring results indicate that the dissolved-phase contaminant plume is not delineated to the east of well MW-14. The groundwater flow direction in this part of the site appears to be generally easterly, and DBS&A recommends that at least one additional well be installed east of MW-14 to delineate the downgradient extent of the dissolved-phase plume in this area.

III. SUMMARY AND CONCLUSIONS (Continued)

- Monitoring results indicate the NAPL and dissolved-phase plumes are not delineated to the west and southwest of wells MW-10 and MW-11. DBS&A recommends up to three new wells be installed on the west side of the Best Western property, or on adjacent parcels, in order to delineate the extent of the contaminant plumes in this area.

REFERENCES

Basin Engineering, Inc. 2014. *Well Installation and Semi-Annual Ground Water Monitoring Report, Shamrock 63, 3624 Cerrillos Road, Santa Fe New Mexico*. Submitted to the New Mexico Environment Department Petroleum Storage Tank Bureau. June 17, 2014.

Daniel B. Stephens and Associates, Inc. (DBS&A). 2014a*. Second Semiannual Groundwater Monitoring Report, Shamrock #63, 3624 Cerrillos Road, Santa Fe New Mexico*. Submitted to the New Mexico Environment Department Petroleum Storage Tank Bureau. October 20, 2014, 2014.

_____. 2014b*. Work Plan for Vapor Survey, Monitor Well Installation, and NAPL Recovery and Groundwater Monitoring, Shamrock #63, 3624 Cerrillos Road, Santa Fe New Mexico*. Submitted to the New Mexico Environment Department Petroleum Storage Tank Bureau. December 16, 2014.

New Mexico Environment Department (NMED). 2014. Letter from Dana Behar to Jim Polk regarding Phase 1 fixed-price work plan approval for Shamrock No. 63, 3624 Cerrillos Road, Santa Fe, New Mexico. December 22, 2014.

Figures

Site Name: Shamrock 63
PSTB Facility #: 29206
Date: May 21, 2015

LIST OF FIGURES

Figure		Included	N/A
1	Area Map	X	
2	Site Map	X	
3	Summary of Soil Analytical Results	X	
4	Potentiometric Surface Elevations March 16, 2015	X	
5	Distribution of Dissolved-Phase Contaminants March 17, 2015	X	
6	Benzene Isoconcentration Map	X	

Image source: ESRI ArcGIS Online and data partners, including imagery from agencies supplied via the Content Sharing Program.

N

0 250 500
Feet

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Area Map

Daniel B. Stephens & Associates, Inc.
5/13/2015
JN BE14.0012

Figure 1

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N

0 25 50

Feet

Source: Adapted from ESRI ArcGIS Online and data partners imagery

Explanation

- Newly installed monitor well
- Monitor well
- Property line
- Sanitary sewer
- Buried electric/telecom

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO

Site Map

Daniel B. Stephens & Associates, Inc.
5/13/2015
JN BE14.0012

Figure 2

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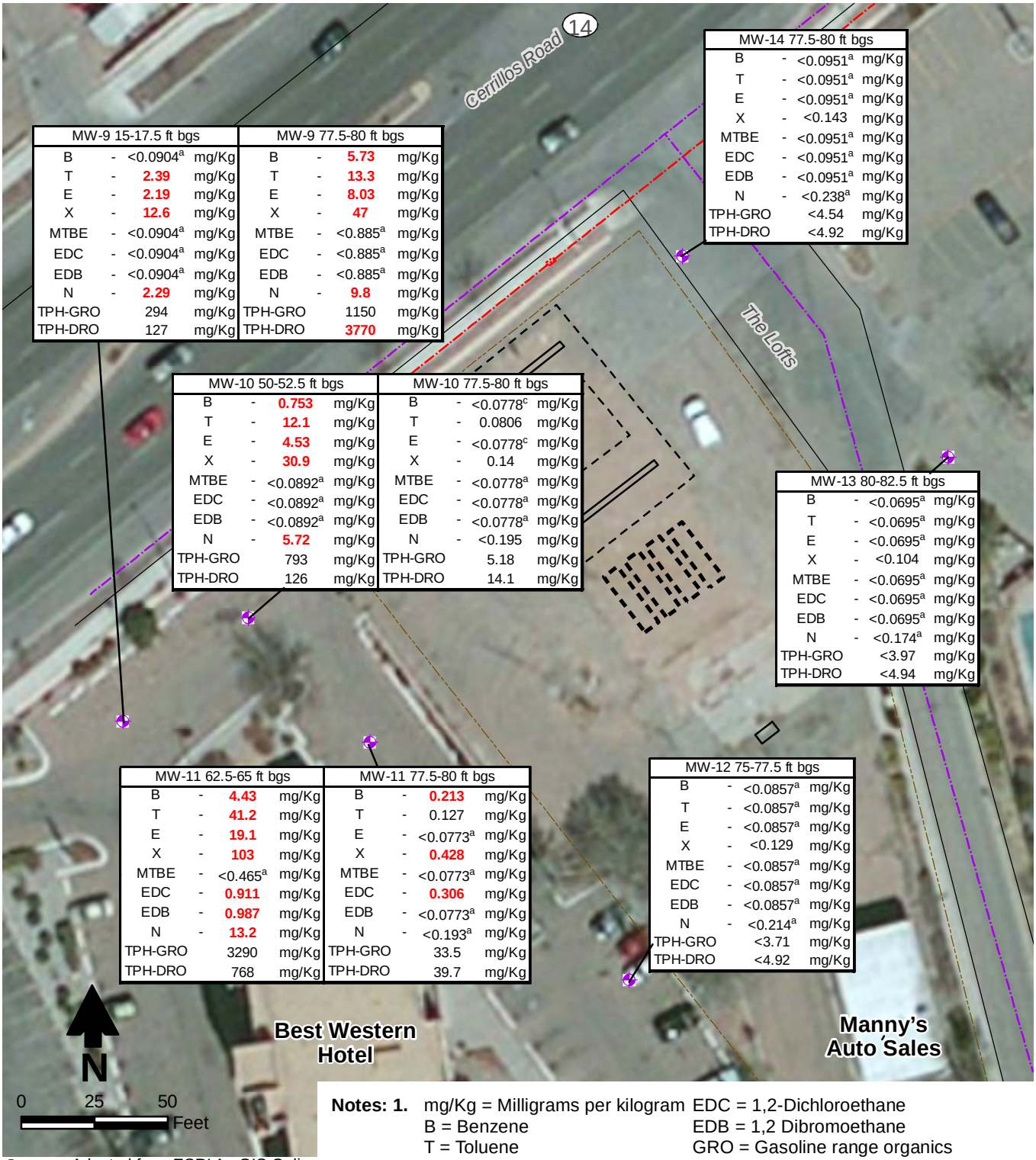

MW-9 15-17.5 ft bgs			
B	-	<0.0904[a]	mg/Kg
T	-	**2.39**	mg/Kg
E	-	**2.19**	mg/Kg
X	-	**12.6**	mg/Kg
MTBE	-	<0.0904[a]	mg/Kg
EDC	-	<0.0904[a]	mg/Kg
EDB	-	<0.0904[a]	mg/Kg
N	-	**2.29**	mg/Kg
TPH-GRO		294	mg/Kg
TPH-DRO		127	mg/Kg

MW-9 77.5-80 ft bgs			
B	-	**5.73**	mg/Kg
T	-	**13.3**	mg/Kg
E	-	**8.03**	mg/Kg
X	-	**47**	mg/Kg
MTBE	-	<0.885[a]	mg/Kg
EDC	-	<0.885[a]	mg/Kg
EDB	-	<0.885[a]	mg/Kg
N	-	**9.8**	mg/Kg
TPH-GRO		1150	mg/Kg
TPH-DRO		**3770**	mg/Kg

MW-14 77.5-80 ft bgs			
B	-	<0.0951[a]	mg/Kg
T	-	<0.0951[a]	mg/Kg
E	-	<0.0951[a]	mg/Kg
X	-	<0.143	mg/Kg
MTBE	-	<0.0951[a]	mg/Kg
EDC	-	<0.0951[a]	mg/Kg
EDB	-	<0.0951[a]	mg/Kg
N	-	<0.238[a]	mg/Kg
TPH-GRO		<4.54	mg/Kg
TPH-DRO		<4.92	mg/Kg

MW-10 50-52.5 ft bgs			
B	-	**0.753**	mg/Kg
T	-	**12.1**	mg/Kg
E	-	**4.53**	mg/Kg
X	-	**30.9**	mg/Kg
MTBE	-	<0.0892[a]	mg/Kg
EDC	-	<0.0892[a]	mg/Kg
EDB	-	<0.0892[a]	mg/Kg
N	-	**5.72**	mg/Kg
TPH-GRO		793	mg/Kg
TPH-DRO		126	mg/Kg

MW-10 77.5-80 ft bgs			
B	-	<0.0778[c]	mg/Kg
T	-	0.0806	mg/Kg
E	-	<0.0778[c]	mg/Kg
X	-	0.14	mg/Kg
MTBE	-	<0.0778[a]	mg/Kg
EDC	-	<0.0778[a]	mg/Kg
EDB	-	<0.0778[a]	mg/Kg
N	-	<0.195	mg/Kg
TPH-GRO		5.18	mg/Kg
TPH-DRO		14.1	mg/Kg

MW-13 80-82.5 ft bgs			
B	-	<0.0695[a]	mg/Kg
T	-	<0.0695[a]	mg/Kg
E	-	<0.0695[a]	mg/Kg
X	-	<0.104	mg/Kg
MTBE	-	<0.0695[a]	mg/Kg
EDC	-	<0.0695[a]	mg/Kg
EDB	-	<0.0695[a]	mg/Kg
N	-	<0.174[a]	mg/Kg
TPH-GRO		<3.97	mg/Kg
TPH-DRO		<4.94	mg/Kg

MW-11 62.5-65 ft bgs			
B	-	**4.43**	mg/Kg
T	-	**41.2**	mg/Kg
E	-	**19.1**	mg/Kg
X	-	**103**	mg/Kg
MTBE	-	<0.465[a]	mg/Kg
EDC	-	**0.911**	mg/Kg
EDB	-	**0.987**	mg/Kg
N	-	**13.2**	mg/Kg
TPH-GRO		3290	mg/Kg
TPH-DRO		768	mg/Kg

MW-11 77.5-80 ft bgs			
B	-	**0.213**	mg/Kg
T	-	0.127	mg/Kg
E	-	<0.0773[a]	mg/Kg
X	-	**0.428**	mg/Kg
MTBE	-	<0.0773[a]	mg/Kg
EDC	-	**0.306**	mg/Kg
EDB	-	<0.0773[a]	mg/Kg
N	-	<0.193[a]	mg/Kg
TPH-GRO		33.5	mg/Kg
TPH-DRO		39.7	mg/Kg

MW-12 75-77.5 ft bgs			
B	-	<0.0857[a]	mg/Kg
T	-	<0.0857[a]	mg/Kg
E	-	<0.0857[a]	mg/Kg
X	-	<0.129	mg/Kg
MTBE	-	<0.0857[a]	mg/Kg
EDC	-	<0.0857[a]	mg/Kg
EDB	-	<0.0857[a]	mg/Kg
N	-	<0.214[a]	mg/Kg
TPH-GRO		<3.71	mg/Kg
TPH-DRO		<4.92	mg/Kg

Source: Adapted from ESRI ArcGIS Online and data partners imagery

Notes: 1. mg/Kg = Milligrams per kilogram
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl tert-butyl ether
EDC = 1,2-Dichloroethane
EDB = 1,2 Dibromoethane
GRO = Gasoline range organics
DRO = Diesel range organics
N = Naphthalene

2. **Bold** indicates concentrations that exceed applicable standards.

[a] Laboratory reporting limit is equal to or greater than NMED soil screening level.

Explanation

- Monitor well
- Property line
- Sanitary sewer
- Buried electric/telecom

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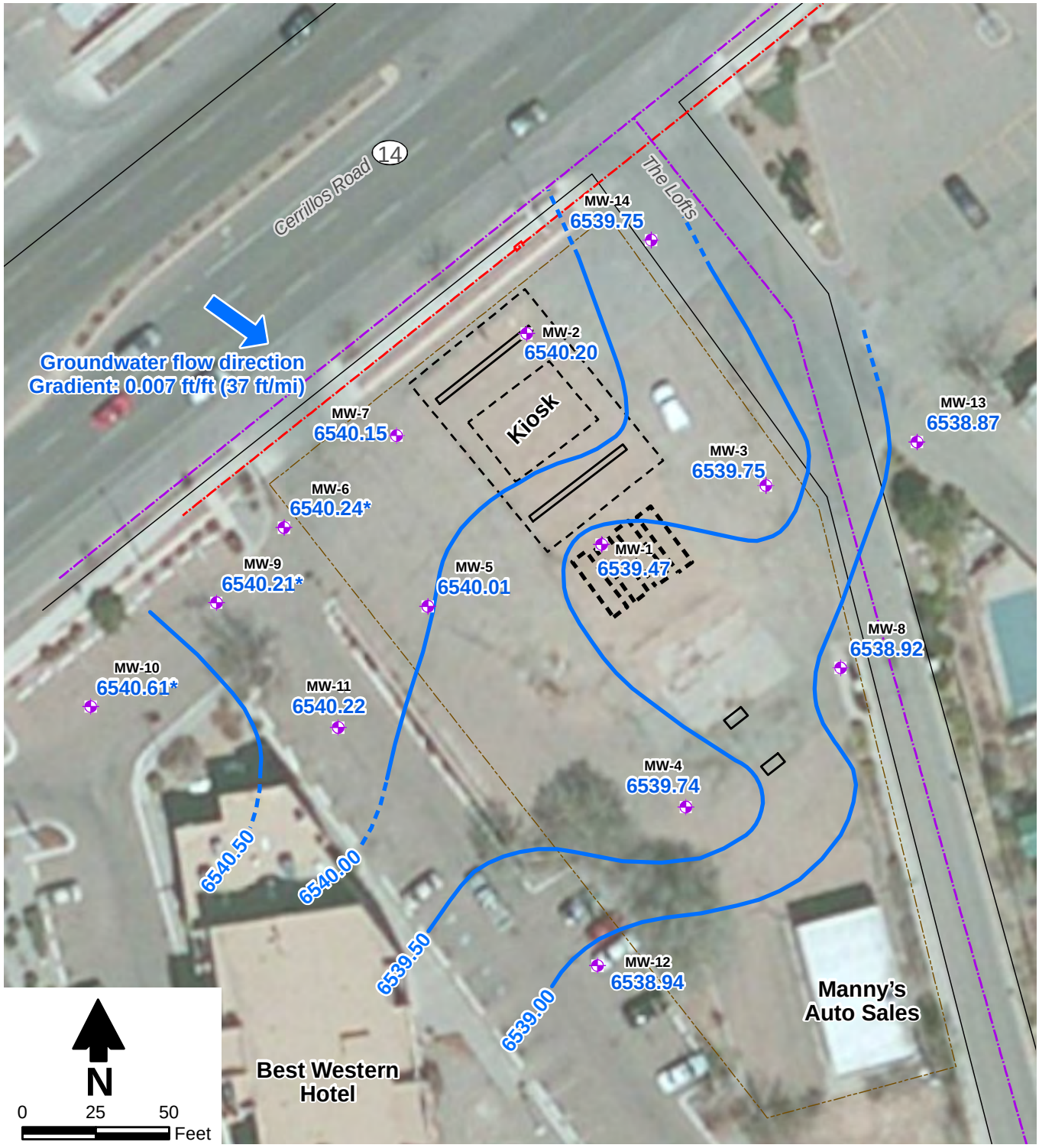
5/14/2015
JN BE14.0012

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO

Summary of Soil Analytical Results

Figure 3



Source: Adapted from ESRI ArcGIS Online and data partners imagery, 3/25/2011

Explanation

- Monitor well
- Potentiometric surface elevation contour (ft msl) (dashed where inferred)
- Property line
- Sanitary sewer
- Buried electric/telecom

MW-7 Monitor well designation

6540.01 Potentiometric surface elevation (ft msl)

6540.61* Potentiometric surface elevation corrected for NAPL thickness (Table 2)

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO

Potentiometric Surface Elevations
March 16, 2015

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5/13/2015
JN BE14.0012

Figure 4

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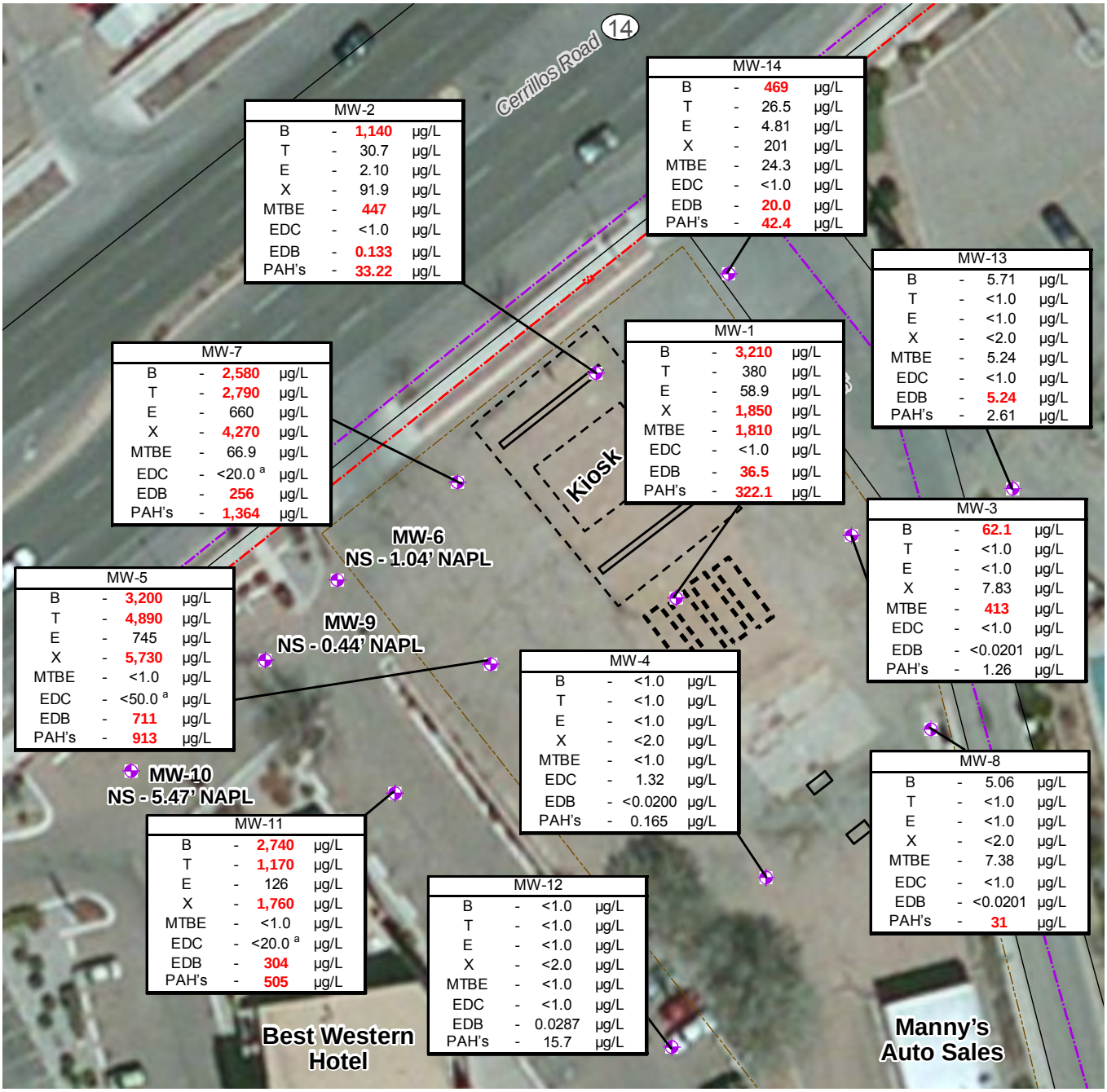

Source: Adapted from ESRI ArcGIS Online and data partners imagery

N

0 25 50 Feet

Explanation

- Monitor well
- Property line
- Sanitary sewer
- Buried electric/telecom

Notes: 1. µg/L = Micrograms per liter
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
MTBE = Methyl tert-butyl ether
EDC = 1,2-Dichloroethane
EDB = 1,2 Dibromoethane
PAH's = Polycyclic aromatic hydrocarbons
NAPL = Non-aqueous phase liquid
NS = Not sampled

2. **Bold** indicates concentrations that exceed applicable standards.
3. <1.0 Concentration less than laboratory method detection limit.
4. [a] Laboratory reporting limits equal to or greater than applicable standard.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO

Distribution of Dissolved-Phase Contaminants
March 17, 2015

Daniel B. Stephens & Associates, Inc.
5/13/2015 JN BE14.0012

Figure 5

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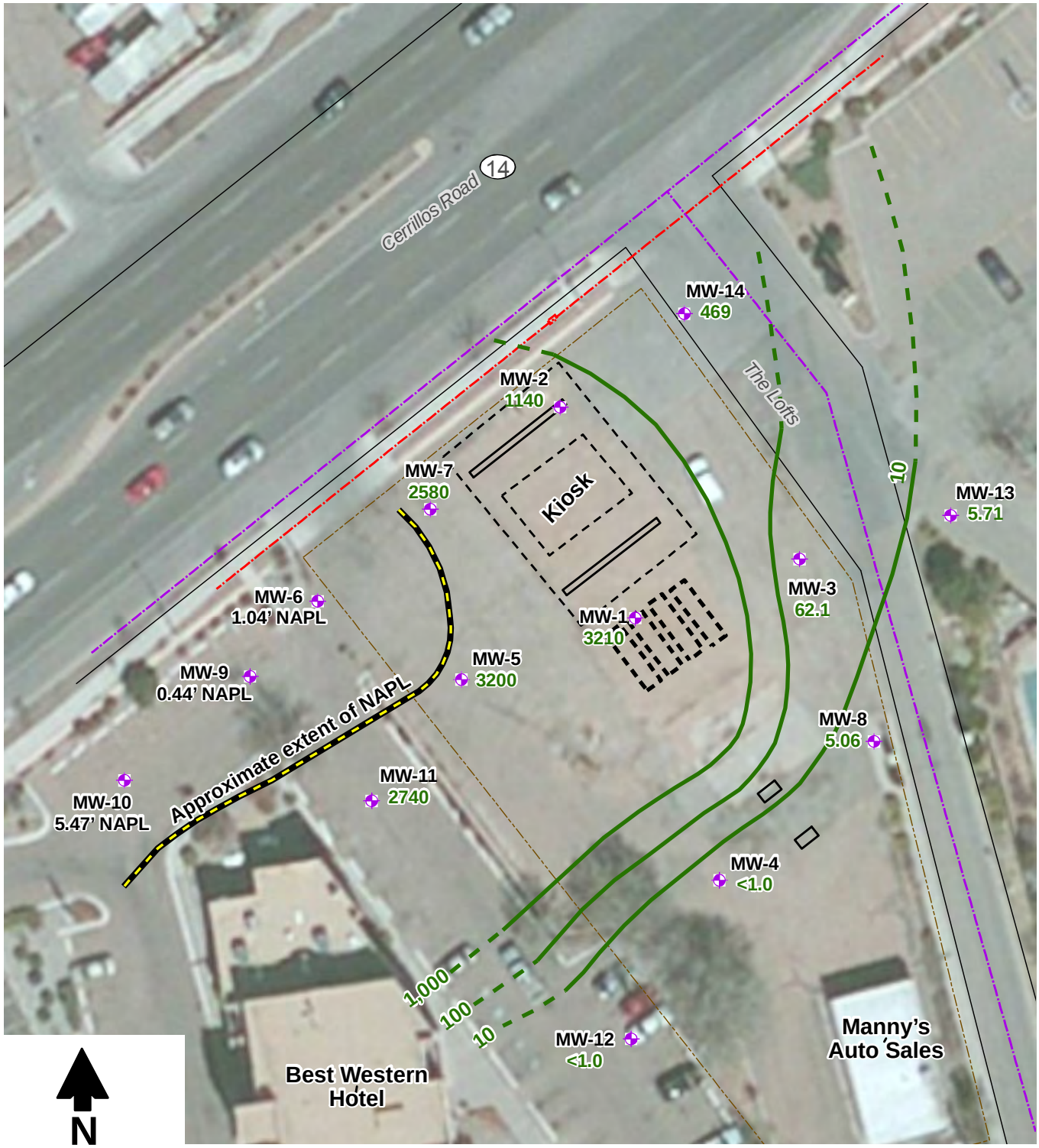

Source: Adapted from ESRI ArcGIS Online and data partners imagery, 3/25/2011

Explanation

- Monitor well
- **MW-1** Monitor well designation
- **3210** Benzene concentration (µg/L)
- Benzene concentration contour (µg/L) (dashed where inferred)

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO

Benzene Isoconcentration Map
March 17, 2015

Daniel B. Stephens & Associates, Inc.
5/13/2015
JN BE14.0012

Figure 6

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Tables

Site Name: Shamrock 63
PSTB Facility #: 29206
Date: May 21, 2015

LIST OF TABLES

Table 1. Summary of Soil Analytical Organic Chemistry Data
Shamrock 63, Santa Fe, New Mexico

Location ID	Date Sampled	Sample Depth (ft bgs)	Concentration (mg/Kg)[a]									
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	Naphthalene	TPH-GRO[b]	TPH-DRO[b]
NMED SSLS (NMED, 2012)[c]			*0.00173*	*1.27*	*0.013*	*0.156*	*0.00241*	*0.000356*	*1.5E-05*	*0.00357*	*None*	*1,000*
MW-9	03/03/15	15-17.5	<0.0904[d]	**2.39**	**2.19**	**12.6**	<0.0904[d]	<0.0904[d]	<0.0904[d]	**2.29**	294	127
	03/04/15	77.5-80	**5.73**	**13.3**	**8.03**	**47.0**	<0.885[d]	<0.885[d]	<0.885[c]	**9.80**	1150	**3770**
MW-10	03/02/15	50-52.5	**0.753**	**12.1**	**4.53**	**30.9**	<0.0892[d]	<0.0892[d]	<0.0892[d]	**5.72**	793	126
	03/03/15	77.5-80	<0.0778[d]	0.0806	<0.0778[d]	0.140	<0.0778[d]	<0.0778[d]	<0.0778[d]	<0.195[d]	5.18	14.1
MW-11	03/05/15	62.5-65	**4.43**	**41.2**	**19.1**	**103**	<0.465[d]	**0.911**	**0.987**	**13.2**	3290	768
	03/05/15	77.5-80	**0.213**	0.127	<0.0773[d]	**0.428**	<0.0773[d]	**0.306**	<0.0773[d]	<0.193[d]	33.5	39.7
MW-12	03/06/15	75-77.5	<0.0857[d]	<0.0857	<0.0857[d]	<0.129	<0.0857[d]	<0.0857[d]	<0.0857[d]	<0.214[d]	<3.71	<4.92
MW-13	03/08/15	80-82.5	<0.0695[d]	<0.0695	<0.0695[d]	<0.104	<0.0695[d]	<0.0695[d]	<0.0695[d]	<0.174[d]	<3.97	<4.94
MW-14	03/07/15	77.5-80	<0.0951[d]	<0.0951	<0.0951[d]	<0.143	<0.0951[d]	<0.0951[d]	<0.0951[d]	<0.238[d]	<4.54	<4.92

Bold indicates value that exceeds the NMED 2012 Tier 1 Soil Screening Level (SSL).

[a] Samples analyzed in accordance with EPA Method 8260B, unless otherwise noted.

[b] TPH-GRO and TPH-DRO analyzed in accoradnce with EPA Method 8015B

[c] NMED 2012 Tier 1 Soil Screening Level protective of groundwater assuming no transport zone in the unsaturated zone (DAF_{unsat} = 1).

[d] Laboratory reporting limit is equal to or greater than the NMED Screening Level

TPH-GRO = Total Petroleum Hydrocarbons, Gasoline Range Organics

TPH-DRO = Total Petroleum Hydrocarbons, Diesel Range Organics

mg/Kg = Milligrams per kilogram

MTBE = Methyl tertiary-butyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

Table 2. Summary of Indoor Air Screening Results
Shamrock # 63, Santa Fe, New Mexico
Page 1 of 1

Location	PID Reading (ppmv)
Manny's Auto Sales	
Crawlspace under structure	0.0
Maintenance closet	0.3
Break room	0.3
Restroom	0.3
Lobby	0.3
Main office space	0.4
Best Western Hotel	
Maintenance room	0.6
Lobby	0.2
Breakfast room	1.1
West main hallway	0.3
East main hallway	0.3
Guest room # 102	0.0
Guest room # 109	0.1
Guest room # 111	0.1
Guest room # 126	0.1
Water shut-off box, front of building	0.0
Water shut-off box, southeast of building	0.0

Notes:

1. PPMV = parts per million by volume
2. All measurements collected on 3/17/2015
3. Field Screening conducted using a photo-ionization detector (PID)
4. Maximum instantaneous concentration recoded at each location
5. The Occupational Health and Safety Administration (OSHA) Permissible Exposure Limit (PEL) for an 8-hour time-weighted average is 1.0 ppmv

Table 3. Summary of Historical Fluid Levels and Field Parameters Data
Shamrock #63, Santa Fe, New Mexico

Well ID	TOC Elevation (ft msl)	Date Measured	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Groundwater Elevation (ft msl) [a]	pH	Specific Conductance (mS/cm)	Total Disolved Solids (mg/L)	Dissolved Oxygen (mg/L)	Temperature (°F)
MW-1	6619.21	11/16/07	79.76	---	6539.45	7.47	1.402	911	1.43	60.8
		01/02/08	80.02	---	6539.19	7.88	1.776	1,154	1.28	57.2
		05/16/08	80.08	---	6539.13	7.16	1.993	1,296	1.74	60.4
		08/07/08	79.77	---	6539.44	7.08	1.840	1,196	0.81	65.4
		10/22/08	79.67	---	6539.54	7.17	1.883	1,224	1.27	59.3
	6620.47	01/13/09	79.41	---	6541.06	7.16	1.961	1,275	1.91	58.9
		12/22/10	78.17	---	6542.30	7.81	1.567	1,018	2.28	59.9
		06/28/11	78.71	---	6541.76	7.85	3.463	2,251	0.92	62.2
		12/15/11	79.19	---	6541.28	7.25	1.451	943	1.17	56.0
		05/23/12	79.13	---	6541.34	7.15	1.229	144	1.03	63.9
		04/24/13	80.39	---	6540.08	7.18	1.550	1,245	0.60	60.3
	6620.48	05/27/14	81.01	---	6539.47	6.87	0.773	NM	2.52	62.5
		09/03/14	81.10	---	6539.38	7.59	1.448	NM	1.20	61.5
		03/16/15	81.01	---	6539.47	6.76	1.373	NM	0.85	59.5
MW-2	6621.53	05/16/08	80.89	---	6540.64	7.50	0.838	545	1.17	59.4
		08/07/08	80.62	---	6540.91	7.15	0.735	476	0.77	66.2
		10/22/08	80.53	---	6541.00	7.20	0.670	436	1.38	60.8
	6622.11	01/13/09	80.31	---	6541.80	7.38	0.643	417	2.09	53.7
		12/22/10	79.13	---	6542.98	7.92	0.781	507	2.21	59.4
		06/28/11	79.63	---	6542.48	7.94	1.814	1,179	0.89	62.3
		12/15/11	80.10	---	6542.01	7.26	0.741	482	1.25	55.6
		05/23/12	80.09	---	6542.02	7.33	1.772	1,119	0.96	64.3

Table 3. Summary of Historical Fluid Levels and Field Parameters Data
Shamrock #63, Santa Fe, New Mexico

Well ID	TOC Elevation (ft msl)	Date Measured	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Groundwater Elevation (ft msl) [a]	pH	Specific Conductance (mS/cm)	Total Disolved Solids (mg/L)	Dissolved Oxygen (mg/L)	Temperature (°F)
MW-2 (cont.)	6622.11	04/24/13	81.20	---	6540.91	7.16	0.734	575	0.91	61.1
		05/27/14	81.83	---	6540.28	7.10	0.776	NM	2.99	62.1
		09/03/14	81.97	---	6540.14	7.61	0.790	NM	1.53	60.8
		03/16/15	81.91	---	6540.20	6.88	0.653	NM	0.73	60.4
MW-3	6620.37	05/16/08	80.24	---	6540.13	7.84	0.741	483	1.62	58.5
		08/07/08	79.94	---	6540.43	7.56	0.439	286	0.60	64.8
		10/22/08	79.83	---	6540.54	7.46	0.590	384	1.11	61.3
	6620.94	01/13/09	79.60	---	6541.34	7.55	0.501	328	1.78	58.7
		12/22/10	78.36	---	6542.58	8.02	0.745	485	2.40	58.5
		06/28/11	78.88	---	6542.06	7.81	1.720	1,118	0.71	61.9
		12/15/11	79.35	---	6541.59	7.36	0.714	465	0.75	56.0
		05/23/12	79.34	---	6541.60	7.19	1.611	1,047	0.70	64.9
		04/24/13	80.57	---	6540.37	7.17	0.758	424	0.92	63.1
		05/27/14	81.15	---	6539.79	6.87	0.773	NM	2.73	63.3
		09/03/14	81.27	---	6539.67	7.49	0.891	NM	2.25	60.9
		03/16/15	81.19	---	6539.75	6.76	0.738	NM	0.66	60.5
MW-4	6618.94	05/16/08	78.80	---	6540.14	8.37	1.456	945	1.60	58.1
		08/07/08	78.51	---	6540.43	7.36	1.534	997	1.23	64.3
		10/22/08	78.34	---	6540.60	7.25	1.583	1,029	1.65	61.8
	6619.53	01/13/09	78.16	---	6541.37	7.26	1.520	988	1.90	58.3
		12/22/10	76.92	---	6542.61	7.96	1.541	1,002	1.91	58.9
		06/28/11	77.43	---	6542.10	7.68	3.415	2,220	1.34	62.5

Table 3. Summary of Historical Fluid Levels and Field Parameters Data
Shamrock #63, Santa Fe, New Mexico

Well ID	TOC Elevation (ft msl)	Date Measured	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Groundwater Elevation (ft msl) [a]	pH	Specific Conductance (mS/cm)	Total Disolved Solids (mg/L)	Dissolved Oxygen (mg/L)	Temperature (°F)
MW-4 (cont.)	6619.53	12/15/11	77.97	---	6541.56	7.57	1.485	965	1.22	55.9
		05/23/12	78.06	---	6541.47	7.14	3.011	1,958	1.39	63.6
		04/24/13	79.19	---	6540.34	7.27	1.318	1,010	1.36	61.3
		05/27/14	79.73	---	6539.80	6.66	1.133	NM	2.37	61.5
		09/03/14	79.83	---	6539.70	7.03	1.218	NM	2.23	62.3
		03/16/15	79.79	---	6539.74	7.06	1.098	NM	1.46	60.5
MW-5	6620.95	12/15/11	79.15	---	6541.80	7.58	0.560	364	1.00	57.8
		05/23/12	79.12	---	6541.83	7.42	1.018	662	0.31	64.0
		04/24/13	80.21	---	6540.74	7.35	0.437	522	2.01	62.4
	6620.97	05/27/14	80.90	---	6540.07	6.95	0.715	NM	1.56	61.8
		09/03/14	80.93	---	6540.04	7.28	0.813	NM	0.97	63.1
		03/16/15	80.96	---	6540.01	6.91	0.705	NM	0.76	60.1
MW-6	6621.73	05/27/14	82.09	81.26	6540.35	NM	NM	NM	NM	NM
		09/03/14	82.70	81.30	6540.22	NM	NM	NM	NM	NM
		03/16/15	82.37	81.33	6540.24	NM	NM	NM	NM	NM
MW-7	6622.46	05/27/14	82.23	---	6540.23	7.30	0.510	NM	2.61	61.9
		09/03/14	82.36	---	6540.10	7.82	0.464	NM	1.27	62.8
		03/16/15	82.31	---	6540.15	6.96	0.446	NM	0.91	60.1
MW-8	6619.98	05/27/14	81.25	---	6538.73	6.45	0.984	NM	1.75	61.7
		09/03/14	81.26	---	6538.72	6.55	0.905	NM	2.06	62.4
		03/16/15	81.06	---	6538.92	6.90	0.910	NM	1.35	60.3
MW-9	6619.49	03/16/15	79.65	79.21	6540.21	NM	NM	NM	NM	NM

Table 3. Summary of Historical Fluid Levels and Field Parameters Data
Shamrock #63, Santa Fe, New Mexico

Well ID	TOC Elevation (ft msl)	Date Measured	Depth to Water (ft bgs)	Depth to NAPL (ft bgs)	Groundwater Elevation (ft msl) [a]	pH	Specific Conductance (mS/cm)	Total Disolved Solids (mg/L)	Dissolved Oxygen (mg/L)	Temperature (°F)
MW-10	6618.39	03/16/15	82.43	76.96	6540.61	NM	NM	NM	NM	NM
MW-11	6617.89	03/16/15	77.67	---	6540.22	6.90	1.634	NM	0.99	60.4
MW-12	6615.09	03/16/15	76.15	---	6538.94	7.42	0.946	NM	2.70	59.1
MW-13	6619.75	03/16/15	80.88	---	6538.87	6.72	2.169	NM	1.21	59.6
MW-14	6623.61	03/16/15	83.86	---	6539.75	6.98	0.749	NM	1.74	60.4

Note: Data prior to September 2014 reported by Basin Engineering, Inc. (Basin, 2014)

[a] Groundwater elevation (GWE) corrected for NAPL thickness using the following equation: GWE = TOC Elevation - (DTW - [NAPL thickness x 0.85]).

NAPL = Non-aqueous phase liquid
ft msl = Feet above mean sea level
ft bgs = feet below ground surface
mS/cm = millisiemens per centimeter
mg/L = milligrams per liter
°F = degrees farenheit
NM = not measured

Table 4. Summary of Groundwater Analytical Organic Chemistry Data
Shamrock #63, Santa Fe, New Mexico

Well Name	Date Sampled	Concentration (µg/L)[a]								
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	EDB	EDC	PAHs
NMWQCC Standard [b]		*10*	*750*	*750*	*620*	*none*	*100* [c]	*0.1*	*10*	*30*
MW-1	11/16/07	**1,700**	260	85	**1,000**	3,045	**1,100**	<10 [d]	**41**	**131**
	01/02/08	**6,500**	640	150	**2,800**	10,090	**4,200**	**23**	**110**	**222**
	05/16/08	**6,000**	660	200	**3,200**	10,060	**4,400**	**28**	**160**	**285**
	08/07/08	**5,500**	**830**	180	**3,600**	10,110	**3,600**	**48**	**210**	**280**
	10/22/08	**7,200**	**820**	230	**3,700**	11,950	**4,700**	**29**	**150**	**410**
	01/13/09	**6,700**	**890**	220	**3,400**	11,210	**5,400**	**22**	**120**	**360**
	12/22/10	**4,790**	380	232	**3,600**	9,002	**2,880**	**13.9**	<1.0	**362.8**
	06/28/11	**4,790**	330	177	**3,340**	8,637	**2,610**	**12.2**	<1.0	**353**
	12/15/11	**3,900**	262	147	**2,400**	6,709	**2,360**	<0.02[e]	<1.0	**257.5**
	05/23/12	**4,450**	417	143	**2,790**	7,800	**2,620**	**12.9**	<1.0	**226.5**
	04/24/13	**5,000**	439	122	**2,900**	8,461	**2,730**	**27.5**[e]	**146**	**165**
	05/27/14	**3,540**	276	74.1	**1,740**	5,630.1	**2,340**	**25**	**166**	**299**
	09/03/14	**2,960**	333	82.4	**1,850**	5,225.4	**2,110**	**26.3**	**161**	**248.9**
	03/17/15	**3,210**	380	58.9	**1,850**	5,498.9	**1,810**	**36.5**[e]	<1.0	**322.1**
MW-2	05/16/08	**1,300**	430	180	**1,200**	3,110	**100**	<10 [d]	**20**	**32**
	08/07/08	**2,000**	180	140	**1,100**	3,420	**130**	<5.0 [d]	**22**	16.7
	10/22/08	**1,700**	140	140	**940**	2,920	**130**	<5.0 [d]	**21**	20.0
	01/13/09	**1,700**	130	91	**810**	2,731	**160**	<5.0 [d]	**22**	10
	12/22/10	**1,720**	74.3	5.99	240	2,040.29	**426**	<1.0 [d]	<1.0	**94.5**
	06/28/11	**1,920**	84.1	4.68	280	2,288.78	**426**	<1.0 [d]	<1.0	**68.1**
	12/15/11	**1,340**	53.1	4.04	167	1,564.14	**427**	<0.02[e]	<1.0	**37.4**
	05/23/12	**1,730**	57.6	5.00	194	1,986.60	**514**	<1.0 [d]	<1.0	19.3

Table 4. Summary of Groundwater Analytical Organic Chemistry Data
Shamrock #63, Santa Fe, New Mexico

Well Name	Date Sampled	Concentration (µg/L)[a]								
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	EDB	EDC	PAHs
NMWQCC Standard [b]		*10*	*750*	*750*	*620*	*none*	*100* [c]	*0.1*	*10*	*30*
MW-2 (cont.)	04/24/13	**1,300**	47.6	2.48	182	1,532.08	**188**	**0.248**[e]	**17.9**	15.4
	05/27/14	**1,510**	30.3	1.86	104	1,646.16	**392**	<1.0 [d]	**20.7**	<25.0
	09/03/14	**1,260**	40.9	5.96	144	1,450.86	**355**	<1.0 [d]	<1.0	**151.3**
	03/17/15	**1,140**	30.7	2.10	91.9	1,264.70	**447**	**0.133**[e]	<1.0	**33.22**
MW-3	05/16/08	**320**	7.4	ND	23	350.4	4.7	<1.0 [d]	ND	6.6
	08/07/08	**340**	12	ND	24	376	8.5	<1.0 [d]	1.0	ND
	10/22/08	**300**	14	ND	28	342	12	<1.0 [d]	1.1	ND
	01/13/09	**290**	8.1	ND	23	321.1	18	<1.0 [d]	1.2	ND
	12/22/10	**56.1**	2.12	<1.0	9.35	67.57	60.5	<1.0 [d]	<1.0	<25.0
	06/28/11	**33.5**	1.04	<1.0	5.71	40.25	64.2	<1.0 [d]	<1.0	<25.0
	12/15/11	**49.9**	1.31	<1.0	6.45	57.66	60.4	<0.02[e]	<1.0	<25.0
	05/23/12	**54.6**	1.13	<1.0	7.25	62.98	64.1	<1.0 [d]	<1.0	<25.0
	04/24/13	**112.0**	2.3	<1.0	13.3	127.60	88.5	<0.0199[e]	2.45	<25.0
	05/27/14	**67.1**	1.02	<1.0	7.31	75.43	**117**	<1.0 [d]	4.76	<25.0
	09/03/14	**71**	<1.0	<1.0	7.08	78.08	**308**	<1.0 [d]	**20.4**	<15.0
	03/17/15	**62.1**	<1.0	<1.0	7.83	69.93	**413**	<0.0201[e]	<1.0	1.26
MW-4	05/16/08	**360**	1.2	ND	28	389.2	5.7	<1.0 [d]	**11**	**39.4**
	08/07/08	**350**	1.9	ND	42	393.9	6.2	<1.0 [d]	**17**	9.4
	10/22/08	**330**	2.7	ND	52	384.7	6.5	<1.0 [d]	**19**	9.9
	01/13/09	**310**	1.3	ND	37	348.3	7.5	<1.0 [d]	**20**	ND
	12/22/10	**10.2**	<1.0	<1.0	<3.0	10.2	5.31	<1.0 [d]	**13.2**	<25
	06/28/11	1.12	<1.0	<1.0	<3.0	1.12	3.90	<1.0 [d]	7.15	<25

Table 4. Summary of Groundwater Analytical Organic Chemistry Data
Shamrock #63, Santa Fe, New Mexico

Well Name	Date Sampled	Concentration (µg/L)[a]								
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	EDB	EDC	PAHs
NMWQCC Standard [b]		*10*	*750*	*750*	*620*	*none*	*100* [c]	*0.1*	*10*	*30*
MW-4 (cont.)	12/15/11	<1.0	<1.0	<1.0	<3.0	<6.0	18.60	<0.02[e]	6.62	<25
	05/23/12	<1.0	<1.0	<1.0	<3.0	<6.0	1.81	<1.0 [d]	3.27	<25
	04/24/13	<1.0	<1.0	<1.0	<3.0	<6.0	1.31	<0.0199[e]	3.09	<25
	05/27/14	<1.0	<1.0	<1.0	<3.0	<6.0	<1.0	<1.0 [d]	<1.0	<25
	09/03/14	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0	<1.0 [d]	1.12	<15
	03/17/15	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0	<0.0200[e]	1.32	0.165
MW-5	12/15/11	**678**	**2,520**	**1,560**	**10,700**	15,458	<1.0	<0.02[e]	<1.0	**7,170**
	05/23/12	**2,920**	**4,090**	**934**	**4,940**	12,884	<10	**198**	<10[d]	**1,376**
	04/24/13	**4,630**	**5,690**	**1,140**	**7,060**	18,520	<10	**561[e]**	**1,250**	**1,446**
	05/27/14	**4,570**	**6,590**	**1,740**	**7,910**	20,810	3.17	**489**	**1,480**	**2,860**
	09/03/14	**2,830**	**4,620**	**771**	**6,010**	14,231	2.24	**345**	**1,350**	**1,155**
	03/17/15	**3,200**	**4,890**	745	**5,730**	14,565	<1.0	**711[e]**	<50.0[d]	**913**
MW-6	05/27/14	Not Sampled, 0.83' NAPL present								
	09/03/14	Not Sampled, 1.40' NAPL present								
	03/16/15	Not Sampled, 1.04' NAPL present								
MW-7	05/27/14	**2,980**	**3,350**	740	**5,030**	12,100	47.6	**130**	**610**	**1,743**
	09/03/14	**2,770**	**3,000**	589	**4,470**	10,829	54	**151**	**612**	**371**
	03/17/15	**2,580**	**2,790**	660	**4,270**	10,300	66.9	**256**[e]	<20.0[d]	**1,364**
MW-8	05/27/14	**66**	1.62	<1.0	10	77.62	10.1	<1.0 [d]	5.45	<25
	09/03/14	**54.1**	1.31	<1.0	5.94	61.35	11.1	<1.0 [d]	<1.0	<15
	03/17/15	5.06	<1.0	<1.0	<2.0	5.06	7.38	<0.0201[e]	<1.0	**31**
MW-9	03/16/15	Not Sampled, 0.44' NAPL present								

Table 4. Summary of Groundwater Analytical Organic Chemistry Data
Shamrock #63, Santa Fe, New Mexico

Well Name	Date Sampled	Concentration (µg/L)[a]								
		Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total BTEX	MTBE	EDB	EDC	PAHs
NMWQCC Standard [b]		*10*	*750*	*750*	*620*	*none*	*100* [c]	*0.1*	*10*	*30*
MW-10	03/16/15	Not Sampled, 5.47' NAPL present								
MW-11	03/17/15	**2,740**	**1,170**	126	**1,760**	5,796	<1.0	**304**[e]	<20.0[d]	**505**
MW-12	03/17/15	<1.0	<1.0	<1.0	<2.0	<5.0	<1.0	0.0287[e]	<1.0	15.7
MW-13	03/17/15	5.71	<1.0	<1.0	<2.0	5.71	5.24	<0.0205[e]	<1.0	2.61
MW-14	03/17/15	**469**	26.5	4.81	201	701.31	24.3	**20.0**[e]	<1.0	**42.4**

Bold indicates values that exceed applicable standards.

Data prior to September 2014 reported by Basin Engineering, Inc. (Basin, 2014).

[a] Samples analyzed in accordance with EPA Method 8260B, unless otherwise noted.

[b] New Mexico Water Quality Control Commission standard, unless otherwise noted.

[c] MTBE standard is set by the New Mexico Environmental Improvement Board.

[d] Laboratory reporting limit is equal to or greater than the NMWQCC standard.

[e] Analyzed in accordance with EPA Method 504.1 for EDB

µg/L = Micrograms per liter

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

MTBE = Methyl tertiary-butyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

PAHs = Polycyclic aromatic hydrocarbons

NAPL= Non-aqueous phase liquid

Table 5. Summary of NAPL Recovery from Site Wells
Shamrock # 63, Santa Fe, New Mexico
Page 1 of 1

Date	Initial Depth to Water [a] (ft btoc)	Initial Depth to NAPL (ft btoc)	Initial NAPL Thickness (feet)	Corrected Depth to Water [b] (ft btoc)	Total Volume of Fluids Removed (gallons)	Volume of NAPL Removed (gallons)	Cumulative Volume of NAPL Removed (gallons)	Final Thickness of NAPL (feet)
MW-6								
05/27/14	82.09	81.26	0.83	81.38	3.5	0.5	0.5	<0.01
09/03/14	82.70	81.30	1.40	81.51	6.0	0.85	1.35	<0.01
11/17/14	82.80	81.28	1.52	81.51	2.98	1.42	2.77	0.20
12/12/14	82.55	81.24	1.31	81.44	3.22	1.41	4.18	0.18
01/19/15	82.45	81.20	1.25	81.39	3.1	1.47	5.65	0.19
02/16/15	82.42	81.21	1.21	81.39	3.22	1.68	7.33	0.21
03/08/15	82.36	81.25	1.11	81.42	3.12	1.70	9.03	0.10
03/17/15	82.37	81.33	1.04	81.53	3.38	1.66	10.69	0.28
MW-9								
04/10/15	80.19	79.20	0.99	79.34	2.35	0.92	0.92	0.05
MW-10								
4/10/15	77.04	82.35	5.31	79.43	6.01	4.62	4.62	0.35

[a] Depth to water (DTW) before correction for NAPL thickness.
[b] DTW corrected for NAPL thickness using the following equation: DTW = DTW - (NAPL thickness x 0.85).
NAPL = nonaqueous-phase liquid
ft btoc = feet below top of casing

Appendices

Site Name: Shamrock 63
PSTB Facility #: 29206
Date: May 21, 2015

LIST OF APPENDICES

Appendix		Included	N/A
1	OSE Well Permits	X	
2	Photographic Documentation	X	
3	Field Notes	X	
4	Geologic Logs	X	
5	Laboratory Reports	X	
6	Survey Report	X	
7	Sampling Protocol	X	
8	Graphs	X	

Appendix 1

OSE Well Permits

Tom Blaine, P.E.
State Engineer

Santa Fe Office
PO BOX 25102
SANTA FE, NM 87504 5102

STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER

Trn Nbr: 562356
File Nbr: RG 93132

Feb. 05, 2015

JOHN E. CASEY
DANIEL B. STEPHENS & ASSOCIATES, INC
6020 ACADEMY NE, SUITE 100
ALBUQUERQUE, NM 87109

Greetings:

Enclosed is your copy of the above numbered permit that has been approved subject to the conditions set forth on the approval page. In accordance with the conditions of approval, the well can only be tested for 10 cumulative days, and the well is to be plugged on or before 02/05/2016, unless a permit to use the water is acquired from this office.

A Well Record & Log (OSE Form wr-20) shall be filed in this office within twenty (20) days after completion of drilling, but no later than 02/05/2016.

Appropriate forms can be downloaded from the OSE website www.ose.state.nm.us or will be mailed upon request.

Sincerely,

Ken Churan
(505) 827-6120

Enclosure

explore

File No. RG-93132

NEW MEXICO OFFICE OF THE STATE ENGINEER

APPLICATION FOR PERMIT TO DRILL A WELL WITH NO CONSUMPTIVE USE OF WATER

(check applicable box):

6-38695

For fees, see State Engineer website: http://www.ose.state.nm.us/

Purpose:	☐ Pollution Control And / Or Recovery	☐ Geo-Thermal
☐ Exploratory	☐ Construction Site De-Watering	☐ Other (Describe):
☒ Monitoring	☐ Mineral De-Watering	

A separate permit will be required to apply water to beneficial use.

☒ Temporary Request - Requested Start Date: **2/9/15** Requested End Date: **Unknown**

Plugging Plan of Operations Submitted? ☐ Yes ☒ No

1 APPLICANT(S)

Name: **Polk Oil Company**	Name:
Contact or Agent: check here if Agent ☐ **Jim Polk**	Contact or Agent: check here if Agent ☒ **John Casey, Daniel B. Stephens & Associates, Inc.**
Mailing Address: **1221 N. Paseo de Onate**	Mailing Address: **6020 Academy NE, Suite 100**
City: **Espanola**	City: **Albuquerque**
State: **NM** Zip Code: **87532**	State: **NM** Zip Code: **87109**
Phone: **505-753-2365** ☐ Home ☐ Cell Phone (Work):	Phone: ☐ Home ☐ Cell Phone (Work): **970-259-2078**
E-mail (optional). **polkoilco@polkoilcom.com**	E-mail (optional): **jcasey@dbstephens.com**

2015 JAN 16 AM 11:16

OFFICE OF STATE ENGINEER
SANTA FE, NEW MEXICO

FOR OSE INTERNAL USE — Application for Permit, Form wr-07, Rev 4/12/12

File Number: RG-93132	Trn Number: 562356
Trans Description (optional):	
Sub-Basin: SF	
PCW/LOG Due Date: 2/5/16	

2. WELL(S) Describe the well(s) applicable to this application.

Location Required: Coordinate location must be reported in NM State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude (Lat/Long - WGS84).
District II (Roswell) and District VII (Cimarron) customers, provide a PLSS location in addition to above.

☑ NM State Plane (NAD83) (Feet)
☐ NM West Zone
☐ NM East Zone
☑ NM Central Zone

☐ UTM (NAD83) (Meters)
☐ Zone 12N
☐ Zone 13N

☒ Lat/Long (WGS84) (to the nearest 1/10th of second)

Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (*Quarters or Halves , Section, Township, Range)* OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
MW-9 (POD 5)	1712478.91	1690232.03	See attached table (NMSP (83) & (LAT. LONG)
MW-10 (POD 6)	1712437.04	1690196.66	
MW-11 (POD 7)	1712519.17	1690201.13	
MW-12 (POD 8)	1712607.03	1690115.80	
MW-13 (POD 9)	1712717.24	1690278.13	
MW-14 (POD 10)	1712624.83	1690347.15	

NOTE: If more well locations need to be described, complete form WR-08 (Attachment 1 – POD Descriptions)
Additional well descriptions are attached: ☒ Yes ☐ No **If yes, how many** 1

Other description relating well to common landmarks, streets, or other: **3570, 3650, and 3624 Cerrillos Road, Santa Fe, NM**

Well is on land owned by: **Manuel Miramontez, Kelly Santa Fe Ventures Limited Partnershipp, and The Lofts**

Well Information: NOTE: If more than one (1) well needs to be described, provide attachment. Attached? ☐ Yes ☒ No
If yes, how many_____

Approximate depth of well (feet): **90.00**	Outside diameter of well casing (inches): **2.00**
Driller Name: **National Exploration**	Driller License Number: **WD-1210**

3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Daniel B. Stephens & Associates is contracted by New Mexico Environment Department Petroleum Storage Tank Bureau (NMED PSTB) to install monitor wells to assess the vertical extent of contamination within the vadose zone within contaminated site perimeters.

The duration of the monitoring is indeterminate. Well will be P&A'd once site is determined by NMED PSTB that no further action is required.

Additional PODs under RG-93132.

FOR OSE INTERNAL USE — Application for Permit, Form wr-07

File Number: RG-93132	Trn Number: 562356

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate boxes, to indicate the information has been included and/or attached to this application:

Exploratory:	**Pollution Control and/or Recovery:**	**Construction De-Watering:**	**Mine De-Watering:**
☐ Include a description of any proposed pump test, if applicable.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for the pollution control or recovery operation. ☐ The estimated maximum period of time for completion of the operation. ☐ The annual diversion amount. ☐ The annual consumptive use amount. ☐ The maximum amount of water to be diverted and injected for the duration of the operation. ☐ The method and place of discharge.	☐ Include a description of the proposed dewatering operation, ☐ The estimated duration of the operation, ☐ The maximum amount of water to be diverted, ☐ A description of the need for the dewatering operation, and, ☐ A description of how the diverted water will be disposed of.	☐ Include a plan for pollution control/recovery, that includes the following: ☐ A description of the need for mine dewatering. ☐ The estimated maximum period of time for completion of the operation. ☐ The source(s) of the water to be diverted. ☐ The geohydrologic characteristics of the aquifer(s). ☐ The maximum amount of water to be diverted per annum. ☐ The maximum amount of water to be diverted for the duration of the operation. ☐ The quality of the water ☐ The method of measurement of water diverted. ☐ The recharge of water to the aquifer. ☐ Description of the estimated area of hydrologic effect of the project. ☐ The method and place of discharge. ☐ An estimation of the effects on surface water rights and underground water rights from the mine dewatering project. ☐ A description of the methods employed to estimate effects on surface water rights and underground water rights. ☐ Information on existing wells, rivers, springs, and wetlands within the area of hydrologic effect.
Monitoring: ☒ Include the reason for the monitoring well, and, ☒ The duration of the planned monitoring.	☐ The method of measurement of water produced and discharged. ☐ The source of water to be injected. ☐ The method of measurement of water injected. ☐ The characteristics of the aquifer. ☐ The method of determining the resulting annual consumptive use of water and depletion from any related stream system. ☐ Proof of any permit required from the New Mexico Environment Department. ☐ An access agreement if the applicant is not the owner of the land on which the pollution plume control or recovery well is to be located.	**Geo-Thermal:** ☐ Include a description of the geothermal heat exchange project, ☐ The amount of water to be diverted and re-injected for the project, ☐ The time frame for constructing the geothermal heat exchange project, and, ☐ The duration of the project. ☐ Preliminary surveys, design data, and additional information shall be included to provide all essential facts relating to the request.	

ACKNOWLEDGEMENT

I, We (name of applicant(s)), **Michael McVey on behalf of Polk Oil Company**
Print Name(s)

affirm that the foregoing statements are true to the best of (my, our) knowledge and belief.

John E Casey
Applicant Signature

Applicant Signature

ACTION OF THE STATE ENGINEER

This application is.

☑ approved ☐ partially approved ☐ denied

provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval.

Witness my hand and seal this 5 day of FEBRUARY 20 15, for the State Engineer,

TOM BLAINE, P.E., State Engineer

By: Ken Curran
Signature

KEN CURRAN
Print

Title: WATER RESOURCE SPECIALIST
Print

FOR OSE INTERNAL USE

Application for Permit, Form wr-07

File Number: RG-93132	Trn Number: 562356

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL

4 No water shall be appropriated and beneficially used under this permit

B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated

C1 A complete and properly executed Well Record on the form provided by the State Engineer shall be filed not later than twenty (20) days after completion of the well
Test data shall be filed not later than twenty (20) days after completion of the test(s)

G If artesian water is encountered, all rules and regulations pertaining to the drilling and casing of artesian wells shall be complied with.

LOG The Point of Diversion RG 93132 POD10 must be completed and the Well Log filed on or before 02/05/2016

LOG The Point of Diversion RG 93132 POD5 must be completed and the Well Log filed on or before 02/05/2016

LOG The Point of Diversion RG 93132 POD6 must be completed and the Well Log filed on or before 02/05/2016

LOG The Point of Diversion RG 93132 POD7 must be completed and the Well Log filed on or before 02/05/2016

LOG The Point of Diversion RG 93132 POD8 must be completed and the Well Log filed on or before 02/05/2016

NEW MEXICO STATE ENGINEER OFFICE
PERMIT TO EXPLORE

SPECIFIC CONDITIONS OF APPROVAL (Continued)

LOG The Point of Diversion RG 93132 POD9 must be completed and the Well Log filed on or before 02/05/2016

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:	Date Rcvd Corrected:
Formal Application Rcvd: 01/16/2015	Pub of Notice Ordered:
Date Returned Correction:	Affidavit of Pub Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously

Witness my hand and seal this 05 day of Feb A.D., 2015

Tom Blaine, P.E. , State Engineer

By: _____
Ken Churan

Trn Desc: RG 93132 File Number: RG 93132
Trn Number: 562356

NMSP (83)

Well Locations - Shamrock #63

	Well	X_Coord	Y_Coord	Latitude	Longitude	Lat_DMS	Long_DMS	TRS
POD 5	MW-9	1712478.914	1690232.028	35.645262	-106.007449	35° 38' 42.945"	-106° 0' 26.817"	S05; T16N.R09E
POD 6	MW-10	1712437.035	1690196.655	35.645165	-106.007590	35° 38' 42.596"	-106° 0' 27.326"	S05; T16N.R09E
POD 7	MW-11	1712519.165	1690201.127	35.645177	-106.007314	35° 38' 42.638"	-106° 0' 26.330"	S05; T16N.R09E
POD 8	MW-12	1712607.028	1690115.697	35.644942	-106.007019	35° 38' 41.791"	-106° 0' 25.268"	S05; T16N.R09E
POD 9	MW-13	1712717.242	1690278.126	35.645387	-106.006647	35° 38' 43.395"	-106° 0' 23.928"	S05; T16N.R09E
POD 10	MW-14	1712624.826	1690347.149	35.645578	-106.006957	35° 38' 44.080"	-106° 0' 25.046"	S05; T16N.R09E

0 30 60 Feet

N

Source: Adapted from ESRI ArcGIS Online and data partners imagery

Explanation

- Existing monitor well
- Proposed monitor well
- Property line

SHAMROCK #63, 3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO

Proposed Monitor Well Locations

Daniel B. Stephens & Associates, Inc.
12/15/2014 JN BE14.0012

Figure 2

S:\Projects\BE14.0012_Shamrock_63\GIS\MXDs\Site_maps\Proposed wells_map.mxd

NEW MEXICO
ENVIRONMENT DEPARTMENT

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

2905 Rodeo Park Drive East
Building 1
Santa Fe, New Mexico 87505
Telephone (505) 476-4397 Fax (505) 476-4374
www nmenv.state.nm.us

RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

December 22, 2014

Mr Jim Polk
Polk Oil Company
1221 N Paseo de Oñate
Española, New Mexico 87532

Re Approval of Phase 1 Fixed-Price Workplan for Shamrock No. 63, 3624 Cerrillos Road, Santa Fe, New Mexico

Facility #. 29206 Release ID # 4509 WPID #· 17381

Dear Mr Polk·

The New Mexico Environment Department (Department) approves the fixed-price workplan dated December 16, 2014, which was submitted on your behalf by Daniel B Stephens & Associates, Inc. (DBS&A) This workplan is for continued Phase 1 Secondary Investigation activities consisting of advancing six soil borings, completing the borings as monitoring wells, sampling and lab analysis, a second monitoring event and reporting at the Shamrock No 63 site. Work shall be performed in accordance with the workplan and current Contractor Fee Schedule.

The total budget approved for this workplan shall not exceed , including New Mexico Gross Receipts Tax. Please refer to the following table for a breakdown of the expected deliverables and dates of completion. The dates listed in the table are the current deadlines in the applicable portion of the corrective action timeline for the subject site These deliverables document completion of individual performance criteria

Deliverable Name	$ Approved	Estimated Date of Deliverable	Deliverable ID
Secondary Investigation & Report		02/27/2015	17381-1
Groundwater Monitoring & Report		05/29/2015	17381 2

Deliverable Name	$ Approved	Estimated Date of Deliverable	Deliverable ID
*Contingency Set-Aside		05/29/2015	17381-3

**NOTE: DBS&A shall notify the Department in writing or by electronic mail and receive Department approval prior to expenditure of any contingency set-aside funds. The approved budgets for these deliverables are not-to-exceed amounts for the period covered by the subject workplan.*

Please be reminded that Section 74-6B-7.F (NMSA 1978) of the Ground Water Protection Act does not allow the Department to authorize payments in excess of the funds available. This means that approval of the workplan does not guarantee reimbursement from the Corrective Action Fund (Fund) Furthermore, the Department must receive all claims for reimbursement within 90 days of the date of notice of deliverable approval.

To facilitate reimbursement, if a deliverable represents a reduced scope of work that requires a reduction in the amount to be claimed, the notification of the modified costs must be submitted to the Department with the deliverable.

The Department has reviewed the current statement of qualifications of DBS&A's authorized representative, and the individual with direct, responsible supervisory control of this workplan. In accordance with 20.5.16.9 NMAC, the Department has determined that DBS&A is currently a qualified firm to perform the scope of work as described in the approved workplan.

Substantial compliance is required for reimbursement and will be determined on a site-by-site basis prior to disbursement from the Fund. In accordance with 20.5.17.11 NMAC, the owner or operator shall request a compliance determination before submitting the initial request for payment of the costs of corrective action, other than the costs of an MSA. Please submit a request for compliance determination, if you have not already done so, to the Petroleum Storage Tank Bureau, 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico 87505 It is in your best interest to submit your request as soon as possible to ensure that any work that you undertake is reimbursable.

You may begin work immediately Approval of this workplan is contingent upon all work being performed on this site in accordance with all local, state and federal regulations, including 29 CFR 1910 governing occupation health and safety The Department expects DBS&A to complete the work as outlined within the approved budget. All change orders must be approved in writing prior to the work being performed.

If you have any questions, please contact the project manager, Susan von Gonten at (505) 476-4389. Thank you for your continued voluntary cooperation.

Sincerely,

Dana Bahar
Bureau Chief
Petroleum Storage Tank Bureau

DB:SvG:tp

cc: Michael McVey, Senior Hydrologist, DBS&A, Albuquerque Office
Lorena Goerger, Manager, Remedial Action Program
Jim Gibb, Geoscientist Supervisor Remedial Action Program
Susan von Gonten, Project Manager, Remedial Action Program
Jennifer Foote, Inspector, Prevention and Inspection Program
Robert Italiano, Manager, NMED District II (via email)

cc w/encl: PSTB Master File Santa Fe

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-9 Pod 5	RG-93132
WELL OWNER NAME(S)	PHONE (OPTIONAL)
New Mexico Environment Department	
WELL OWNER MAILING ADDRESS	CITY / STATE / ZIP
2905 Rodeo Park Dr E Bldg 1	Santa Fe / NM / 87505

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	35	38	43	N
LONGITUDE	-106	0	-26	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1210	Bryan Nydoski	National EWP

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03-03-15	03-04-15	92'	92'	81

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ● SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 81

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY: Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	72	8	PVC sch 40	thread	2		—
72	92	8	PVC sch 40	thread	2		0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	65	8	Bentonite grout		
65	70	8	Bentonite Chips		
70	92	8	Sand #10/20		
			concrete well Pad – Flush		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5		Sand w/gravel	○ Y ○ N	
5	10		Sand w/gravel	○ Y ○ N	
10	15		Sand w/gravel	○ Y ○ N	
15	20		Sand w/gravel	○ Y ○ N	
20	25		Sand w/gravel	○ Y ○ N	
25	30		Sand w/gravel	○ Y ○ N	
30	35		Sand w/gravel	○ Y ○ N	
35	40		Sand w/gravel	○ Y ○ N	
40	45		Sand w/gravel	○ Y ○ N	
45	50		Sand w/gravel	○ Y ○ N	
50	55		Sand w/gravel	○ Y ○ N	
55	60		Sand w/gravel	○ Y ○ N	
60	65		Sand w/gravel	○ Y ○ N	
65	70		Sand w/gravel	○ Y ○ N	
70	75		Sand	○ Y ○ N	
75	80		Sand w/clay	○ Y ○ N	
80	85		Sand	○ Y ○ N	
85	90		Sand	○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ⊗ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Miguel Alvarado

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Miguel Alvarado — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

03.10.15 — DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

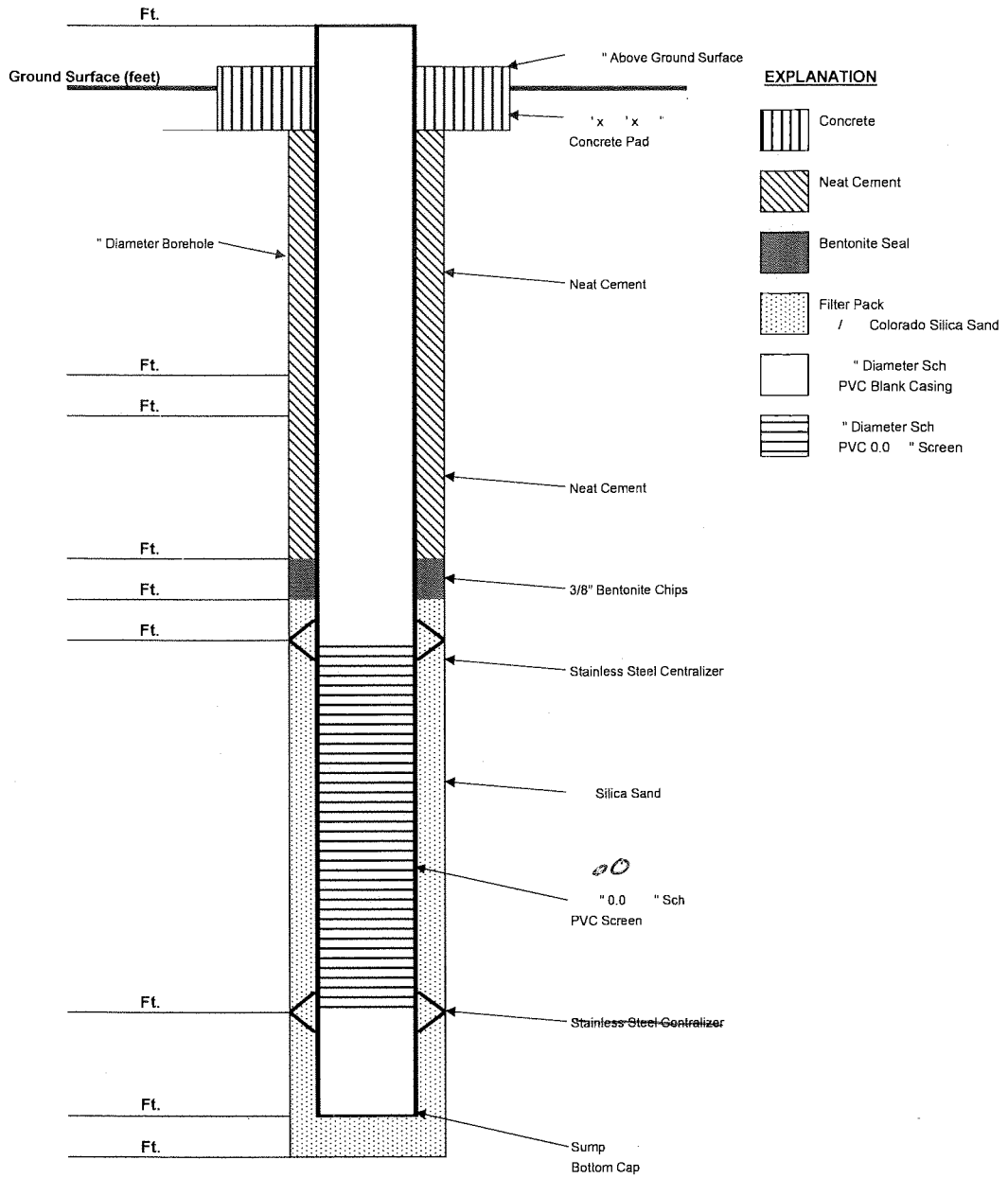
FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

Drilling Began 03-03-15
Drilling Finished 03-04-15

Driller _____

WELL CONSTRUCTION DIAGRAM

WELL # MW-9



Reported By: _____ Date: _____

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-10 Pod 6	RG-93132
WELL OWNER NAME(S)	PHONE (OPTIONAL)
New Mexico Environment Department	
WELL OWNER MAILING ADDRESS	CITY / STATE / ZIP
2905 Rodeo Park Dr. E, Bldg 1	Santa Fe / NM / 87505

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	35	38	43	N
LONGITUDE	-106	0	-27	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1210	Bryan Nydoske	National EWP

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03.02.15	03.03.15	92'	92	81

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ☒ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 81

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY: Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	72	8	PVC sch 40	thread	2		—
72	92	8	PVC sch 40	thrad	2		0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	65	8	bentonite grout		Pump
65	70	8	bentenite chips		Pour
70	92	8	Sand #10/20		Pour
			Concrete pad flush		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5		Sand with gravel	○ Y ○ N	
5	10		Sand with gravel	○ Y ○ N	
10	15		Sand with gravel	○ Y ○ N	
15	20		Sand with gravel	○ Y ○ N	
20	25		Sand with gravel	○ Y ○ N	
25	30		Sand with gravel	○ Y ○ N	
30	35		Sand with gravel	○ Y ○ N	
35	40		Sand with gravel	○ Y ○ N	
40	45		Sand with gravel	○ Y ○ N	
45	50		Sand with gravel	○ Y ○ N	
55	60		Sand with gravel	○ Y ○ N	
60	65		Sand with gravel	○ Y ○ N	
65	70		Sand with gravel	○ Y ○ N	
70	75		Sand	○ Y ○ N	
75	80		Sand with clay	○ Y ○ N	
80	85		Sand	○ Y ○ N	
85	90		Sand	○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ◉ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Miguel Alvarado

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

[signature] Miguel Alvarado — 03 . 10 . 15

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE

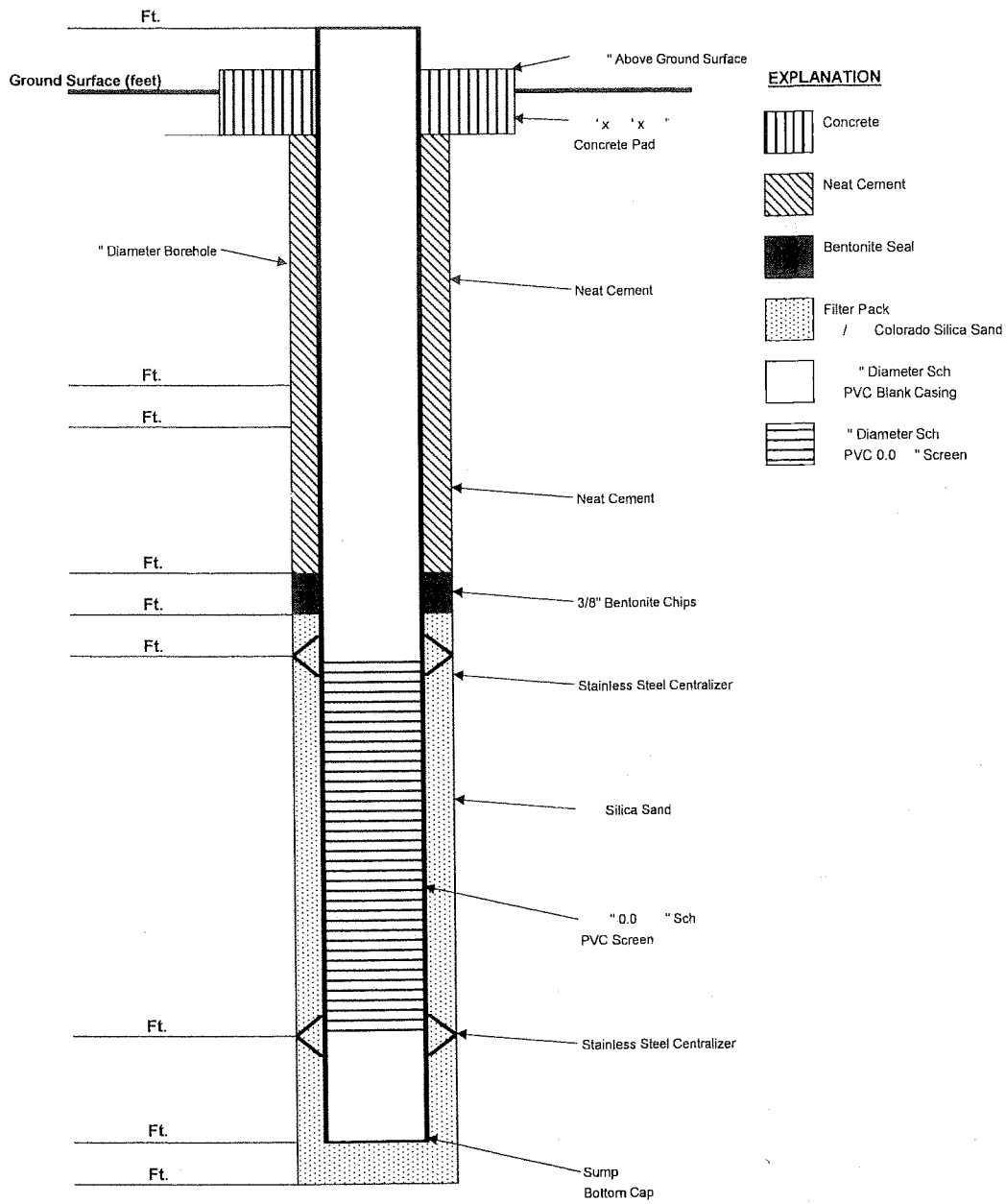
WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

Drilling Began 03.02.15
Drilling Finished 03.03.15
Driller Miguel

WELL CONSTRUCTION DIAGRAM

WELL # MW-10



Reported By: _____ Date: _____

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-11 Pod 7	RG-93132
WELL OWNER NAME(S)	PHONE (OPTIONAL)
New Mexico Environment Department	
WELL OWNER MAILING ADDRESS	CITY / STATE / ZIP
2905 Rodeo Park Dr E Bldg 1	Santa Fe NM 87505

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	35	38	43	N
LONGITUDE	-106	8	-26	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1210	Bryan Nydosick	National EWP

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03.04.15	03.05.15	92	92	81

STATIC WATER LEVEL IN COMPLETED WELL (FT): 81

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ✓ SHALLOW (UNCONFINED)

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY: Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	72	8	PVC sch 40	tread	2		—
72	92	8	PVC sch 40	tread	2		0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	65	8	Bentonite Grout		Pump
65	70	8	Bentonite chips		Pour
70	92	8	Sand #10/20		Pour
			Concret Well pad - flush		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5		Sand w/gravel	○ Y ○ N	
5	10		Sand w/gravel	○ Y ○ N	
10	15		Sand w/gravel	○ Y ○ N	
15	20		Sand w/gravel	○ Y ○ N	
20	25		Sand w/gravel	○ Y ○ N	
25	30		Sand w/gravel	○ Y ○ N	
30	35		Sand w/gravel	○ Y ○ N	
35	40		Sand w/gravel	○ Y ○ N	
40	45		Sand w/gravel	○ Y ○ N	
45	50		Sand w/gravel	○ Y ○ N	
50	55		Sand w/gravel	○ Y ○ N	
55	60		Sand w/gravel	○ Y ○ N	
60	65		Sand w/gravel	○ Y ○ N	
65	70		Sand w/gravel	○ Y ○ N	
70	75		Sand	○ Y ○ N	
75	80		Sand w/clay	○ Y ○ N	
80	85		Sand	○ Y ○ N	
85	90		Sand	○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ☒ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Miguel Alvarado

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Miguel Alvarado — 03 . 10 . 15

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

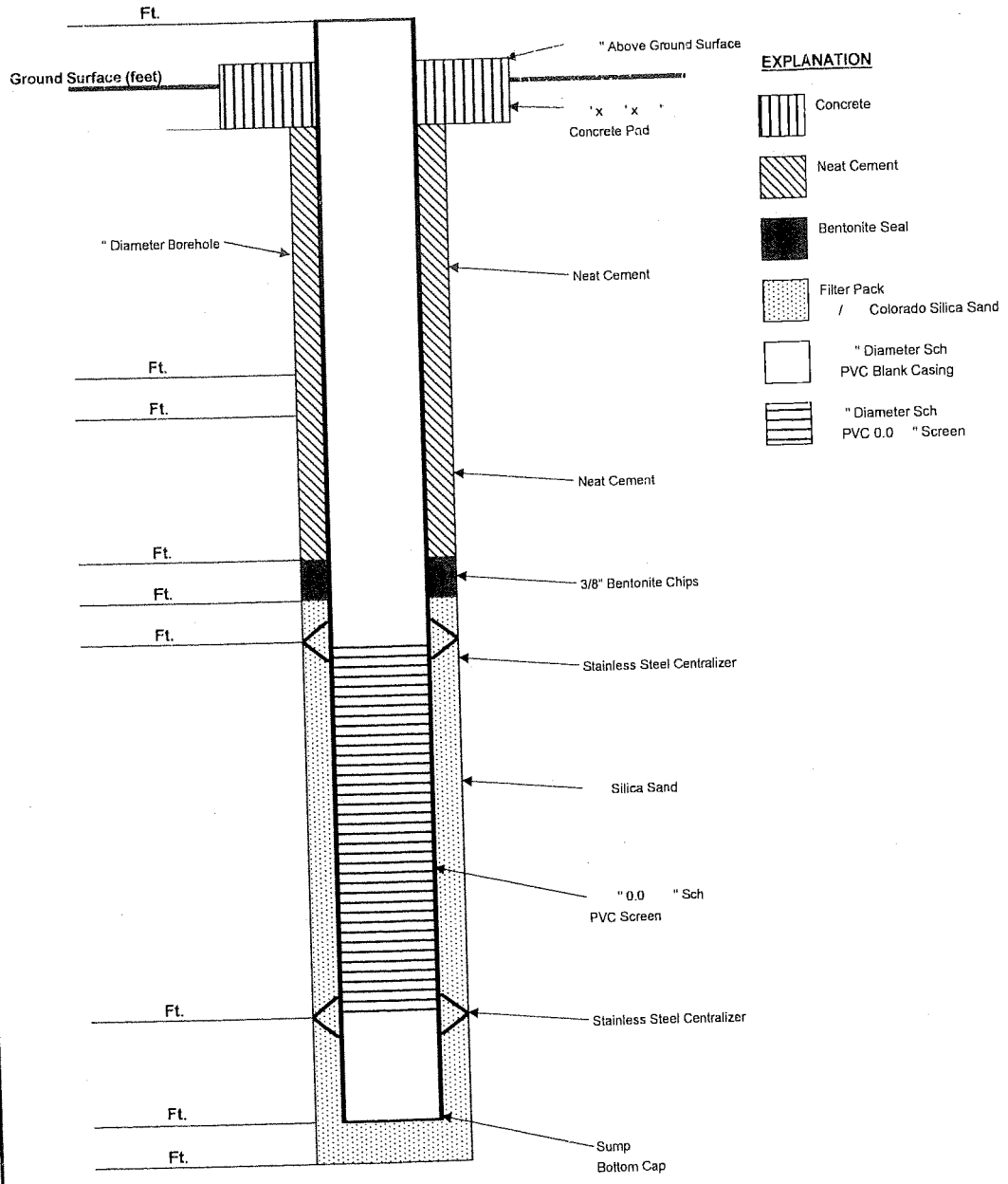
FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

Drilling Began 03.04.15
Drilling Finished 03.05.15

Driller _____

WELL CONSTRUCTION DIAGRAM

WELL # MW-11



Reported By: _____

Date: _____

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-12 Pod 8	BG-93132
WELL OWNER NAME(S)	PHONE (OPTIONAL)
New Mexico Environment Department	
WELL OWNER MAILING ADDRESS	CITY / STATE / ZIP
2905 Rodeo Park Dr E Bldg 1	Santa Fe NM 87505

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	35	38	42	N
LONGITUDE	-106	0	-25	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1210	Bryan Nydoske	National EWP

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03.05.15	03.06.15	90	90	80

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ✕ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 80

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY: Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	70	8	PVC sch 40	tread	2		—
70	90	8	PVC sch 40	tread	2		0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	63	8	Bentonite grout		Pump
63	68	8	Bentonite Chips		Pour
68	90	8	Sand # 10/20		Pour
			Concrete Well pad flush		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5		Sand w/gravel	○ Y ○ N	
5	10		Sand w/gravel	○ Y ○ N	
10	15		Sand w/gravel	○ Y ○ N	
15	20		Sand w/gravel	○ Y ○ N	
20	25		Sand w/gravel	○ Y ○ N	
25	30		Sand w/gravel	○ Y ○ N	
30	35		Sand w/gravel	○ Y ○ N	
35	40		Sand w/gravel	○ Y ○ N	
40	45		Sand w/gravel	○ Y ○ N	
45	50		Sand w/gravel	○ Y ○ N	
50	55		Sand w/gravel	○ Y ○ N	
55	60		Sand w/gravel	○ Y ○ N	
60	65		Sand w/gravel	○ Y ○ N	
65	70		Sand w/gravel	○ Y ○ N	
70	75		Sand w/gravel	○ Y ○ N	
75	80		Sand	○ Y ○ N	
80	85		Sand w/clay	○ Y ○ N	
85	90		Sand	○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ☒ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Miguel Alvarado

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Miguel Alvarado — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

03.10.15 — DATE

FOR OSE INTERNAL USE

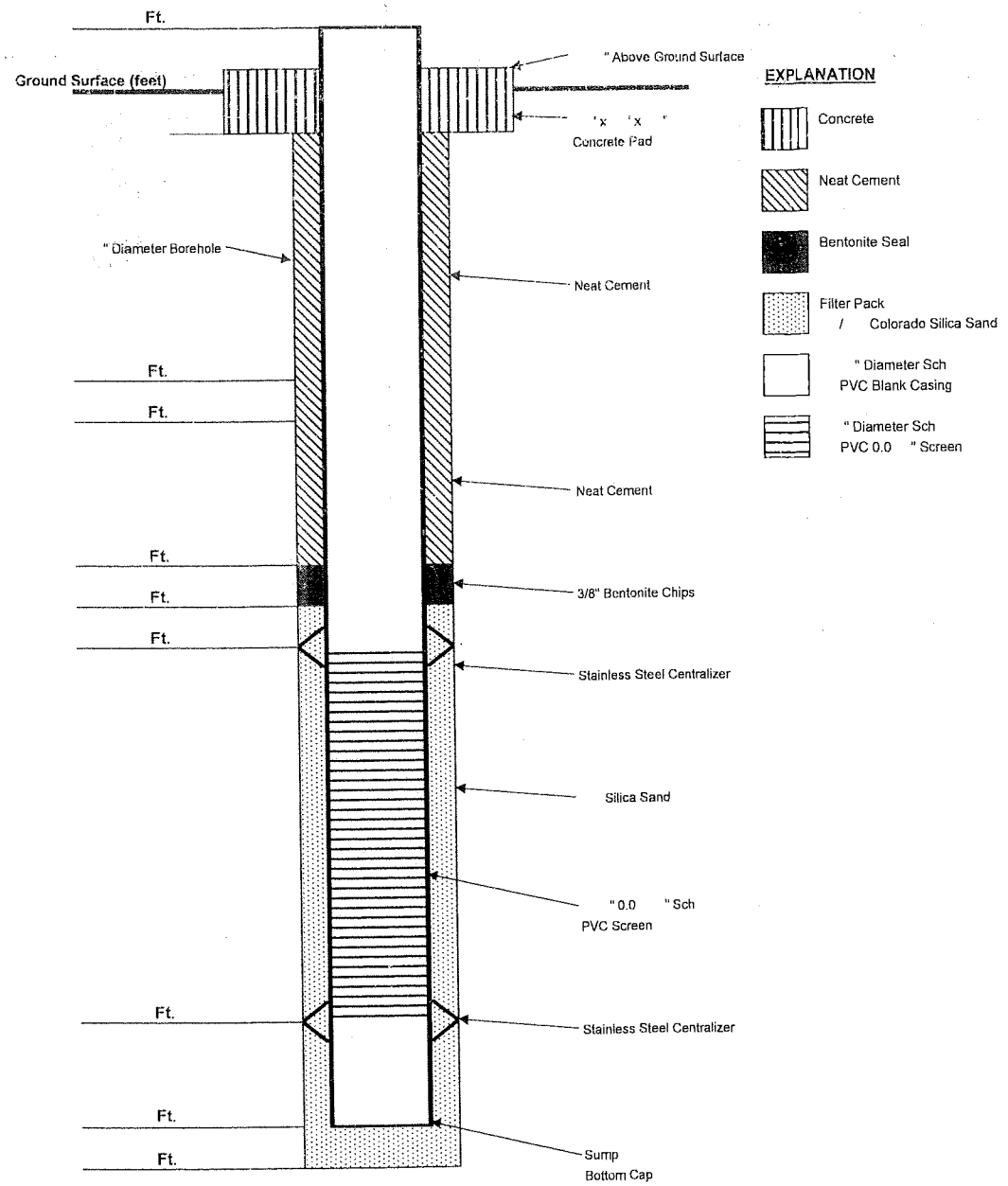
WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		

Drilling Began 03.05.15
Drilling Finished 03.06.15
Driller Miguel

WELL CONSTRUCTION DIAGRAM

WELL # MW-12



Reported By: _____ Date: _____

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	MW-13 Pod 9
OSE FILE NUMBER(S)	RG-93132
WELL OWNER NAME(S)	New Mexico Environment Department
PHONE (OPTIONAL)	
WELL OWNER MAILING ADDRESS	2905 Rodeo Park Dr E Bldg 1
CITY / STATE / ZIP	Santa Fe / NM / 87505

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	35	38	44	N
LONGITUDE	-106	0	-24	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1210	Bryan Nydaske	National EWP

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03.08.15	03.08.15	92	92	81

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ✓ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 81

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY: Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	72	8	PVC sch 40	tread	2		—
72	92	8	PVC Sch 40	tread	2		0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	65	8	Bentonite grout		Pump
65	70	8	Bentonite Chips		Pour
70	92	8	Sand # 10/20		Pour
			Concrete well pad flush		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5		Sand w/ gravel	○ Y ○ N	
5	10		Sand w/ gravel	○ Y ○ N	
10	15		Sand w/ gravel	○ Y ○ N	
15	20		Sand w/ gravel	○ Y ○ N	
20	25		Sand w/ gravel	○ Y ○ N	
25	30		Sand w/ gravel	○ Y ○ N	
30	35		Sand w/ gravel	○ Y ○ N	
35	40		Sand w/ gravel	○ Y ○ N	
40	45		Sand w/ gravel	○ Y ○ N	
45	50		Sand w/ gravel	○ Y ○ N	
50	55		Sand w/ gravel	○ Y ○ N	
55	60		Sand w/ gravel	○ Y ○ N	
60	65		Sand w/ gravel	○ Y ○ N	
65	70		Sand w/ gravel	○ Y ○ N	
70	75		Sand	○ Y ○ N	
75	80		Sand w/ clay	○ Y ○ N	
80	85		Sand	○ Y ○ N	
85	90		Sand	○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ○ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST: TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:

Miguel Alvarado

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

[signature] Miguel Alvarado — 03.10.15

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — DATE

FOR OSE INTERNAL USE

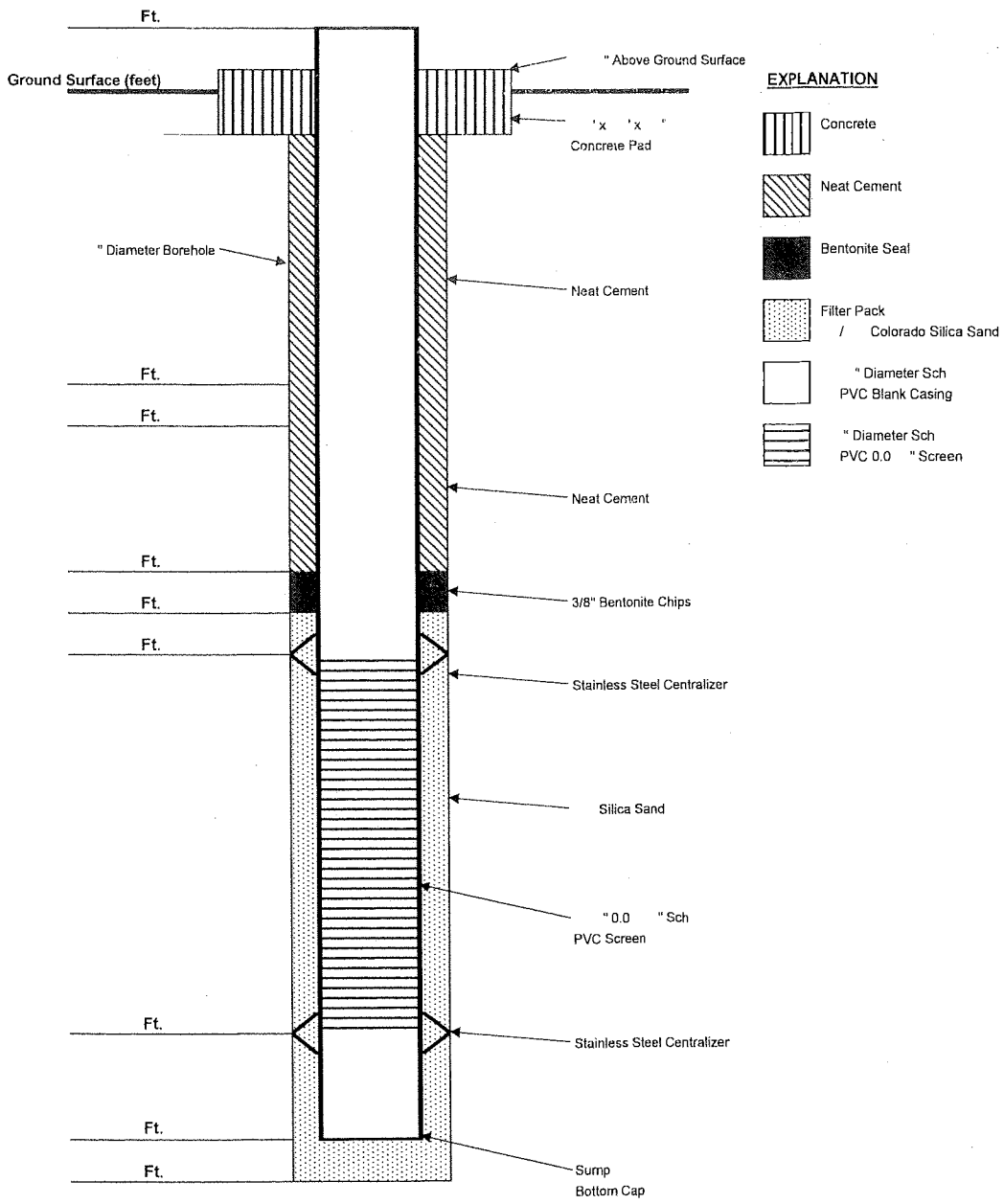
WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		

Drilling Began 03.08.15
Drilling Finished 03.08.15
Driller Miguel

WELL CONSTRUCTION DIAGRAM

WELL # MW-13



Reported By: _____ Date: _____

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
MW-14 Pod 10	RG-93132
WELL OWNER NAME(S): New Mexico Environment Department	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 2905 Rodeo Park Dr E Bldg 1	CITY: Santa Fe STATE: NM ZIP: 87505

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	35	38	44	N
LONGITUDE	-106	0	-25	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1210	Bryan Nydeskey	National EWP

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
03.07.15	03.07.15	92	92	81

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ✓ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): 81

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY:

DRILLING METHOD: ○ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY: Auger

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	72	8	PVC sch 40	thread	2		—
72	92	8	PVC sch 40	thread	2		0.020

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	65	8	Bentonite Grout		Pump
65	70	8	Bentonite Chips		Pour
70	92	8	Sand # 10/20		Pour
			Concrete Well pad flush		

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	5		Sand W/gravel	○ Y ○ N	
5	10		Sand W/gravel	○ Y ○ N	
10	15		Sand W/gravel	○ Y ○ N	
15	20		Sand W/gravel	○ Y ○ N	
20	25		Sand W/gravel	○ Y ○ N	
25	30		Sand W/gravel	○ Y ○ N	
30	35		Sand W/gravel	○ Y ○ N	
35	40		Sand W/gravel	○ Y ○ N	
40	45		Sand W/gravel	○ Y ○ N	
45	50		Sand W/gravel	○ Y ○ N	
50	55		Sand W/gravel	○ Y ○ N	
55	60		Sand W/gravel	○ Y ○ N	
60	65		Sand W/gravel	○ Y ○ N	
65	70		Sand W/gravel	○ Y ○ N	
70	75		Sand	○ Y ○ N	
75	80		Sand w/clay	○ Y ○ N	
80	85		Sand	○ Y ○ N	
85	90		Sand	○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ☒ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm):

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Miguel Maraca

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER / PRINT SIGNEE NAME — Miguel

03.10.15
DATE

FOR OSE INTERNAL USE

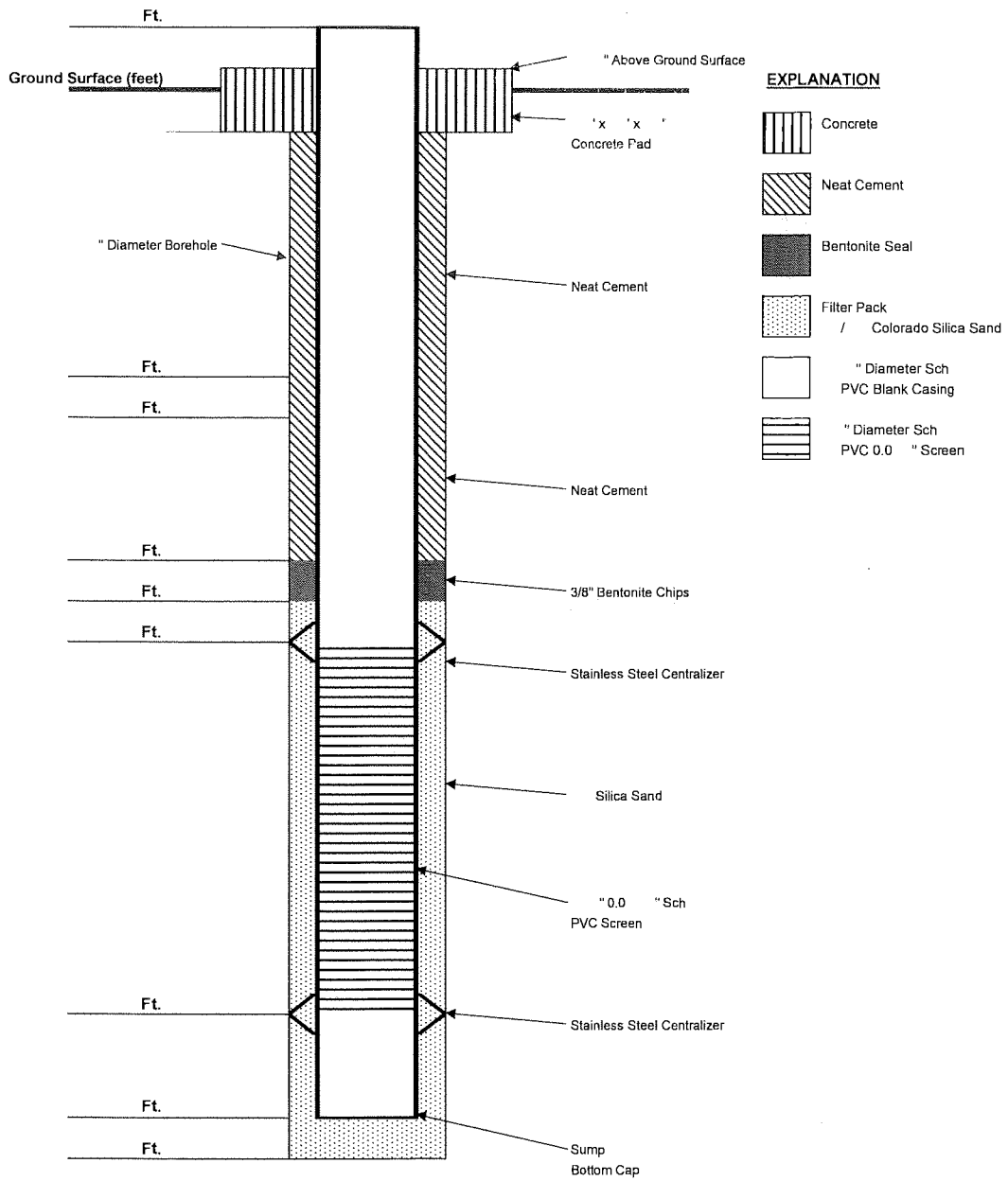
WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		

Drilling Began 03.07.15
Drilling Finished 03.07.15
Driller Miguel

WELL CONSTRUCTION DIAGRAM

WELL # MW-14



Reported By: _____ Date: _____

Appendix 2

Photographic Documentation

1. MW-10 location prior to drilling.

2. Removal of surface asphalt at MW-10.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

3. Drilling monitor well MW-10.

4. Installation of well casing at MW-10.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

5. Installation of filter pack at MW-10.

6. Decontamination of auger flights.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

7. Surface completion of MW-10.

8. MW-9 location prior to drilling.

9. Hand auger clearance at MW-9.

10. Drilling monitor well MW-9 and decontamination of split spoon sampler.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

11. Grout mixing at MW-9.

12. Surface completion of MW-9.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

13. MW-11 location prior to drilling.

14. Drilling monitor well MW-11.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

15. Installation of well casing at MW-11.

16. Installation of filter pack at MW-11.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

17. Surface completion of MW-11.

18. MW-12 location prior to drilling.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

19. Drilling monitor well MW-12.

20. Surface completion of MW-12.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

21. CME-85 rig and exclusion zone at MW-14.

22. Soil sampling at MW-14.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

23. Installation of grout at MW-14.

24. Installation of flush-mount, traffic-grade vault at MW-14.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

25. Surface completion of MW-14.

26. Removal of surface asphalt at MW-13.

27. Installation of filter pack at MW-13.

28. Surface completion of MW-13.

SHAMROCK #63
3624 CERRILLOS ROAD
SANTA FE, NEW MEXICO
Photographs

29. 53 soil and water drums, labelled and stored onsite.

Appendix 3
Field Notes

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1822

Well #: MW-1

Well Diameter: 2" (inches) Height of Water Column: 10.80 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 1.73 (gal)

Depth to Water: 81.01 (feet btoc) Purge Volume: 5.18 (gal)

Total Depth of Well: 91.81 (feet) Purge Method: Disposable Poly Bailer

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	6.76	15.26	1373	~~-39~~ -42.3	0.85	—
1	6.85	15.64	1360	-44.5	0.67	—
2	6.87	15.72	1345	-45.7	0.58	—
3	6.88	15.52	1337	-35.9	0.62	—

Sample Description:

Physical Observations: Turbid, Pale Brown, Strong HC Odor

Analytical Method(s): 8260B + 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1655

Well #: MW-2

Well Diameter: 2" (inches) Height of Water Column: 6.90 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 1.10 (gal)

Depth to Water: 81.91 (feet btoc) Purge Volume: 3.31 (gal)

Total Depth of Well: 88.81 (feet) Purge Method: Disposable Poly Bailer

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	6.88	15.80	653	-38.1	0.73	—
1	6.98	15.74	712	-38.6	0.68	—
2	6.99	15.62	716	-37.2	0.86	—
3	7.00	15.64	723	-37.7	0.78	—

Sample Description: _____

Physical Observations: Turbid, Grayish Brown, Slight Odor

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1425

Well #: MW-3

Well Diameter: 2" (inches) Height of Water Column: 7.62 (feet)

Depth to NAPL: ~~81.19~~ – (feet btoc) Casing Volume: 1.22 (gal)

Depth to Water: 81.19 (feet btoc) Purge Volume: 3.66 (gal)

Total Depth of Well: 88.81 (feet) Purge Method: Disposable Poly Bailer

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	6.76	15.81	738	-41.6	0.66	—
1	6.85	15.64	814	-37.4	0.78	—
2	6.89	15.41	873	-35.7	1.19	—
3	6.93	15.54	887	-35.4	0.80	—

Sample Description: _____

Physical Observations: V. Turbid, Grayish Brown, HC Odor

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1536

Well #: MW-4

Well Diameter: 2" (inches) Height of Water Column: 7.17 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 1.15 (gal)

Depth to Water: 79.79 (feet btoc) Purge Volume: 3.44 (gal)

Total Depth of Well: 86.96 (feet) Purge Method: Disposable Poly Bailer

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	7.06	15.85	1098	-34.3	1.46	—
1	7.04	15.74	1109	-34.1	1.10	—
2	7.12	15.60	1133	-77.2	~~2~~ 2.35	—
3		DRY @ ~ 2½ GALLONS				—

Sample Description: _____

Physical Observations: V. Turb ID, Grayish Brown, No Odor

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1900

Well #: MW-5

Well Diameter: 2" (inches) Height of Water Column: 6.54 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 1.05 (gal)

Depth to Water: 80.96 (feet btoc) Purge Volume: 3.14 (gal)

Total Depth of Well: 87.50 (feet) Purge Method: Disposable Poly Bailer

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	6.91	15.62	705	-27.5	0.76	—
1		Sheen Appeared	After	~1.25 Gallons		
2						—
3						—

Sample Description: Sheen Appeared After ~1.25 Gallons

Physical Observations: V. Turbid, Dk Grayish/Brown, Strong Odor, Sheen

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

NAPL RECOVERY DATA SHEET

Project Name: SHAMROCK #63
Project #: BEM.0012.00
Project Manager: JOHN CASEY
Well #: MW-6
Initial Depth to NAPL: 81.33 (feet btoc)
Initial Depth to Water: 82.37 (feet btoc)
Initial NAPL Thickness: 1.04 (feet)

Sampler: J. FISHER
Date: 3/17/15
Time: 21:20
Well Diameter: 2 (inches)
Bailer Diameter: 1 1/2 (inches)
Start Time: 21:20
End Time: 22:20

Note:
Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
1	0.94	1.44	2120
2	0.64	0	
3	0.78	1.03	
4	0.90	0.57	
5	0.75	0.71	
6	0.75	0.62	
7	0.63	0.76	
8	0.56	0.55	
9	0.51	0.64	
10	0.38	0.76	
11	0.56	0.64	
12	0.53	0.68	
13	0.65	0.55	
14	0.47	0.64	
15	0.55	0.21	

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
16	0.50	0.26	
17	0.53	0.26	
18	0.51	0.25	
19	0.47	0.32	
20	0.41	0.36	
21	0.43 ~~0.4~~	0.35	
22	0.43	0.37	
23	0.46	0.35	
24	0.39	0.40	
25	0.36	0.44	
26	0.35	0.32	
27	0.33	0.36	
28	0.30	0.37	
29	0.33	0.35	
30	0.29	0.37	

Totals:

NAPL Thickness: _____ (feet)
Volume of NAPL: _____ (gal)
Final Depth to Water: _____ (feet btoc)

Water Thickness: _____ (feet)
Volume of Water: _____ (gal)
Final Depth to NAPL: _____ (feet btoc)

Daniel B. Stephens & Associates, Inc.

NAPL RECOVERY DATA SHEET

Project Name: SHAMROCK #63
Project #: BG14.0012.00
Project Manager: JOHN CASEY
Well #: MW-6
Initial Depth to NAPL: 81.33 (feet btoc)
Initial Depth to Water: 82.37 (feet btoc)
Initial NAPL Thickness: 1.04 (feet)

Sampler: J. FISHER
Date: 3/17/15
Time: 21:20
Well Diameter: 2 (inches)
Bailer Diameter: 1½ (inches)
Start Time: 21:20
End Time: 22:20

Note:
Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
1	0.31	0.33	
2	0.28	0.36	
3	0.25	0.40	
4	0.27	0.33	
5	0.28	0.31	
6	0.22	0.40	
7	0.24	0.36	
8	0.21	0.38	
9	0.23	0.39	
10	0.20	0.43	
11	0.21	0.45	22:20
12			
13			
14			
15			

Bailer #	NAPL Thickness in Bailer (feet)	Water Thickness in Bailer (feet)	Remarks / Time
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Totals:

NAPL Thickness: 18.59 (feet)
Volume of NAPL: 1.66 (gal)
Final Depth to Water: 81.58 (feet btoc)

Water Thickness: 19.07 (feet)
Volume of Water: 1.72 (gal)
Final Depth to NAPL: 81.30 (feet btoc)

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1730

Well #: MW-7

Well Diameter: 2" (inches) Height of Water Column: 6.96 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 1.11 (gal)

Depth to Water: 82.31 (feet btoc) Purge Volume: 3.34 (gal)

Total Depth of Well: 89.27 (feet) Purge Method: DISPOSABLE POLY BAILER

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	6.96	15.63	446	-35.6	0.91	—
1	SHEEN APPEARED AFTER ~ 1 GALLON					—
2						—
3						—

Sample Description: _____

Physical Observations: SL TURBID/COLORLESS, STRONG ODOR, SHEEN

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63
Project #: BE14.0012.00.00003.0001
Project Manager: John Casey

Sampler: J. Fisher
Sample Date: 3/17/15
Sample Time: 1342

Well #: MW-8
Well Diameter: 2" (inches)
Depth to NAPL: — (feet btoc)
Depth to Water: 81.06 (feet btoc)
Total Depth of Well: 88.78 (feet)

Height of Water Column: 7.72 (feet)
Casing Volume: 1.24 (gal)
Purge Volume: 3.71 (gal)
Purge Method: Disposable Poly Bailer

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	6.90	15.72	910	-38.3	1.35	—
1	6.89	15.70	855	-38.6	1.61	—
2	6.90	15.43	803	-37.7	2.07	—
3	6.88	15.41	802	-36.9	1.59	—

Sample Description:

Physical Observations: Turbid, Pale Brown, No Odor

Analytical Method(s): 8260B + 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 2100

Well #: MW-11

Well Diameter: 2" (inches) Height of Water Column: 16.54 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 2.65 (gal)

Depth to Water: 77.67 (feet btoc) Purge Volume: 7.94 (gal)

Total Depth of Well: 94.21 (feet) Purge Method: Disposable Poly Bailer

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	6.90	15.80	1634	-17.7	0.99	—
1	6.92	15.91	1818	-20.7	1.41	—
2	6.94	15.88	1882	-22.8	1.76	—
3	6.94	15.79	1903	-22.1	1.80	—

Sample Description: _____

Physical Observations: VTURB HC, PALE BROWN, SLHC ODOR

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 2010

Well #: MW-12

Well Diameter: 2" (inches) Height of Water Column: 15.12 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 2.42 (gal)

Depth to Water: 76.15 (feet btoc) Purge Volume: 7.26 (gal)

Total Depth of Well: 91.27 (feet) Purge Method: Disposable Bailer

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	7.42	15.05	946	-23.0	2.76	—
1	7.17	15.18	1064	-19.7	2.42	—
2	7.15	15.24	1076	-18.9	1.51	—
3	7.20	15.41	1067	-18.1	2.56	—

Sample Description: _____

Physical Observations: V. Turbid, Pale Brown, No Odor

Analytical Method(s): 8260B & 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1215

Well #: MW-13

Well Diameter: 2" (inches) Height of Water Column: 12.67 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 2.03 (gal)

Depth to Water: 80.88 (feet btoc) Purge Volume: 6.08 (gal)

Total Depth of Well: 93.55 (feet) Purge Method: Disposable Poly Bailer

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	6.72	15.34	2169	-11.9	1.21	—
1	6.86	15.34	1777	-19.1	2.15	—
2	6.94	15.44	1625	-27.3	2.33	—
3	7.03	15.26	1385	-28.4	2.88	—

Sample Description:

Physical Observations: Turbid, No Odor, Brown

Analytical Method(s): 8260B + 504.1

Daniel B. Stephens & Associates, Inc.

GROUNDWATER MONITORING DATA SHEET

Project Name: Shamrock #63 Sampler: J. Fisher

Project #: BE14.0012.00.00003.0001 Sample Date: 3/17/15

Project Manager: John Casey Sample Time: 1300

Well #: MW-14

Well Diameter: 2" (inches) Height of Water Column: 9.16 (feet)

Depth to NAPL: — (feet btoc) Casing Volume: 1.47 (gal)

Depth to Water: 83.86 (feet btoc) Purge Volume: 4.40 (gal)

Total Depth of Well: 93.02 (feet) Purge Method: Disposable Polybailer

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	6.98	15.78	749	-48.0	1.84	—
1	6.96	15.70	757	-50.2	1.33	—
2	6.99	15.59	750	-43.7	1.53	—
3	6.99	15.70	746	-40.1	1.95	—

Sample Description: _____

Physical Observations: Turbid, HC Odor, Pale Brown

Analytical Method(s): 8260B + 504.1

2/16/15 J. Fisher

ONSITE

GAUGE WELLS.

Well ID	DTP (ft btoc)	DTW (ft btoc)	
MW-4	-	79.69	
MW-8	-	80.96	
MW-3	-	81.13	
MW-1	-	~~80.87~~ 80.91	STR HC ODOR
MW-5	-	~~82.24~~ 80.87,	STR HC ODOR
MW-2	-	81.81	
MW-7	-	82.24	STR HC ODOR
MW-6	81.21	82.42	

1420 SET UP FOR NAPL RECOVERY on MW-6.

1525 NAPL RECOVERY COMPLETE.

1540 OFFSITE.

[signature] 2/16/15

3/2/15 PNB

0940 PNB onsite

Purpose: Install 6 monitor wells

Weather: partly cloudy, 36°F

0945 4 drilling locations on the Best Western property located

1015 Jason and National crew onsite

Begin staging trucks and drums

1045 Steve w/ Nat gas onsite

1130 Brian offsite

1200 Jason offsite

Begin drilling at MW-10

1400 A large cobble is preventing the core barrel from advancing. Switch to Split spoon to get through cobbles.

1745 Begin clean up; Hotel Management doesn't want drilling to begin until 9am so not to disturb Hotel guests.

1815 PNB offsite

PNB 3/2/15

3/3/15 PMB

0810 PMB onsite

Purpose: well install

Weather: Partly Cloudy, 33°F

0845 Tailgate safety meeting

Set up to continue drilling MW-10

0850 Begin drilling

1145 WL = 81' bgs for MW-10

1230 TD = 92' bgs

1245 begin construction of MW-10

1347 Begin development

~~1556 grout in~~ PMB

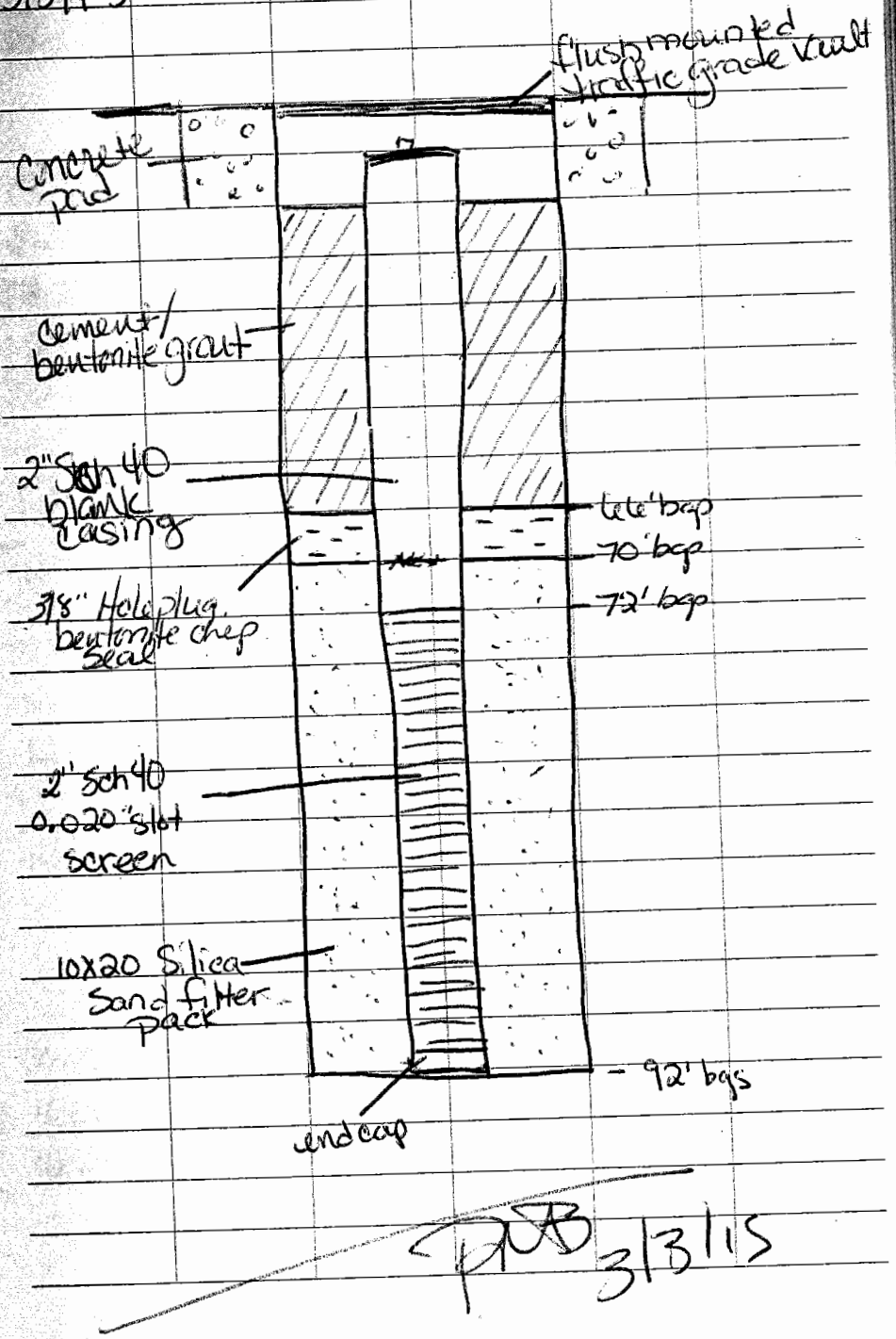
Time	vol	Temp	pH	SpCond	ORP	DH

unable to calibrate, YSI malfunction

total: 20 gal purged

PMB 3/3/15

3/3/15 MW-10 PMB



PMB 3/3/15

3/3/15 PNB

1556 Cerout installed
1415 Begin drilling MW-9
1830 Stop drilling for the day
clean up and secure site
1945 PNB off site

PNB
3/3/15

3/4/15 P.N.B

0805 PNB & Cathcart onsite
Purpose: well Install
Weather: Sunny, 28°F
0815 Tailgate meeting
0830 Resume drilling at MW-9
1200 MW-9 WL = 81.5' bgs
1255 TD MW-9 @ 92' bgs
1300 Begin construction of MW-9
~~PNB~~
1343 Begin development

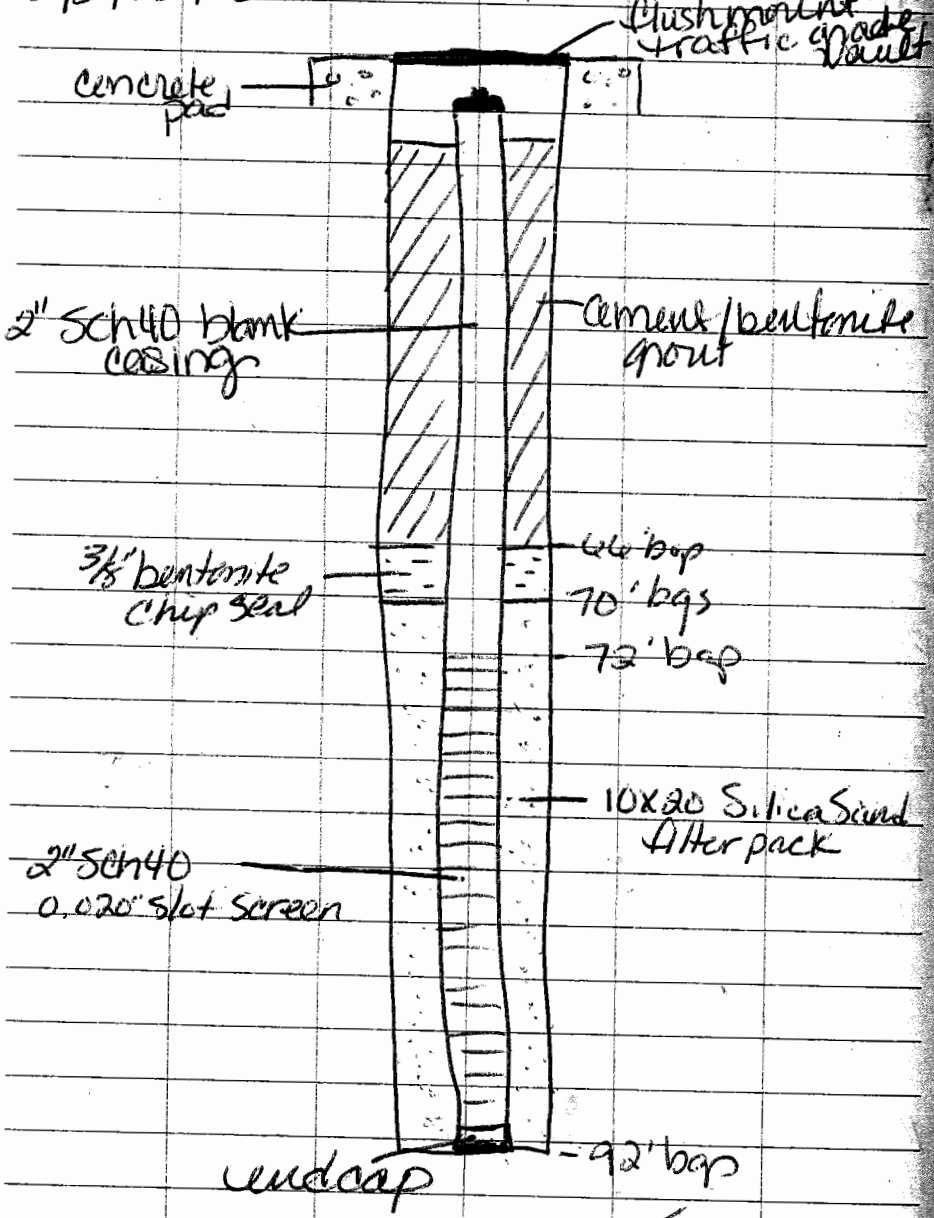
Time	Vol	pH	Temp	Sp. Cond	DO	ORP
1358	initial	7.42	15.05	4.05	1.99	103.2
1401	5.0	7.42	16.17	6.14	4.38	137.0
1404	7.5	7.47	15.63	6.23	3.42	147.5
1407	11	7.49	15.27	6.27	3.48	157.0
1411	16	7.44	15.35	6.70	2.67	166.7
1414	18	7.46	15.61	6.64	3.05	167.5

20 gal total developed
Sheen on water throughout development.
1600 Move to MW-11
1615 Begin drilling MW-11
1645 PNB off site

P.N.B
3/4/15

~~3/3/15 PNB~~ PNB

MW-9



PNB
~~3/3/15~~ PNB
3/4/15

3/5/15 PNB

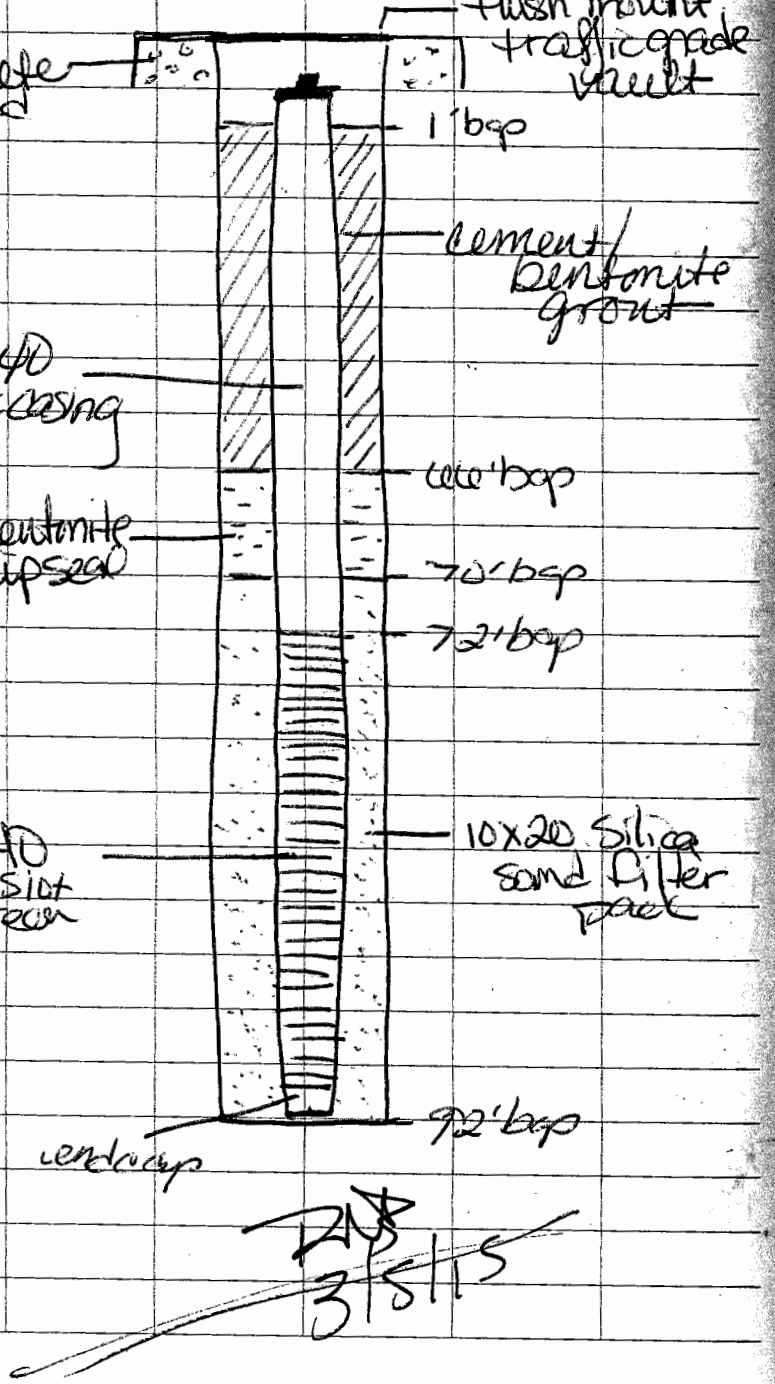
0805 PNB onsite
Purpose: Well Install
Weather: Sunny, 24°F
Tailgate safety meeting
0830 Began drilling @ MW11
1030 National Safety Inspector onsite.
1230 MW-11 WL ≈ 81' bgs
1300 TD @ 92' bgs
Began well construction
1440 Began development

Time	vol	pH	Temp	SpCnd	DO	ORP
1501	initial	7.25	16.73	1307	3.76	-12.2
1504	3.0	7.08	16.83	1412	2.98	-5.5
1507	5.0	7.26	16.91	1574	3.26	-7.8
1510	8.0	7.07	16.54	1615	2.95	-12.2
1513	10.0	7.11	16.28	1696	3.43	-9.0
1516	13.0	7.11	16.75	1790	3.52	-1.6
1520	15.0	7.06	15.91	1824	2.94	14.6
1523	17.0	7.04	16.56	1844	3.25	15.6

total purged 20gal
1630 move to MW-12
1845 PNB offsite

PNB
3/5/15

3/5/15 MW-11 PMB



PMB 3/5/15

3/6/15 PMB

0800 PMB onsite

Purpose: Well Install

Weather: Sunny, 26°F

0830 Begin drilling MW-12

1280 National delivery of drums.

1330 WL ~ 78 to 80 sounded not working in mud.

1430 TD MW-12 @ 90' bgs

1439 Begin construction

1525 Begin development

Time	vol	pH	Temp	SpCond	DO	ORP
1529	initial	7.21	19.82	694	4.84	7.2
1531	3.0	7.33	18.80	709	4.78	1.2
1533	5.0	7.34	18.33	725	4.55	0.9
1536	8.0	7.31	18.06	723	4.03	2.7
1538	10.0	7.29	18.07	732	4.82	3.7
1540	13.0	7.28	17.83	743	4.63	3.7
1542	15.0	7.25	17.56	752	3.91	5.7

Total purged 20 gal

1715 Gauging new wells

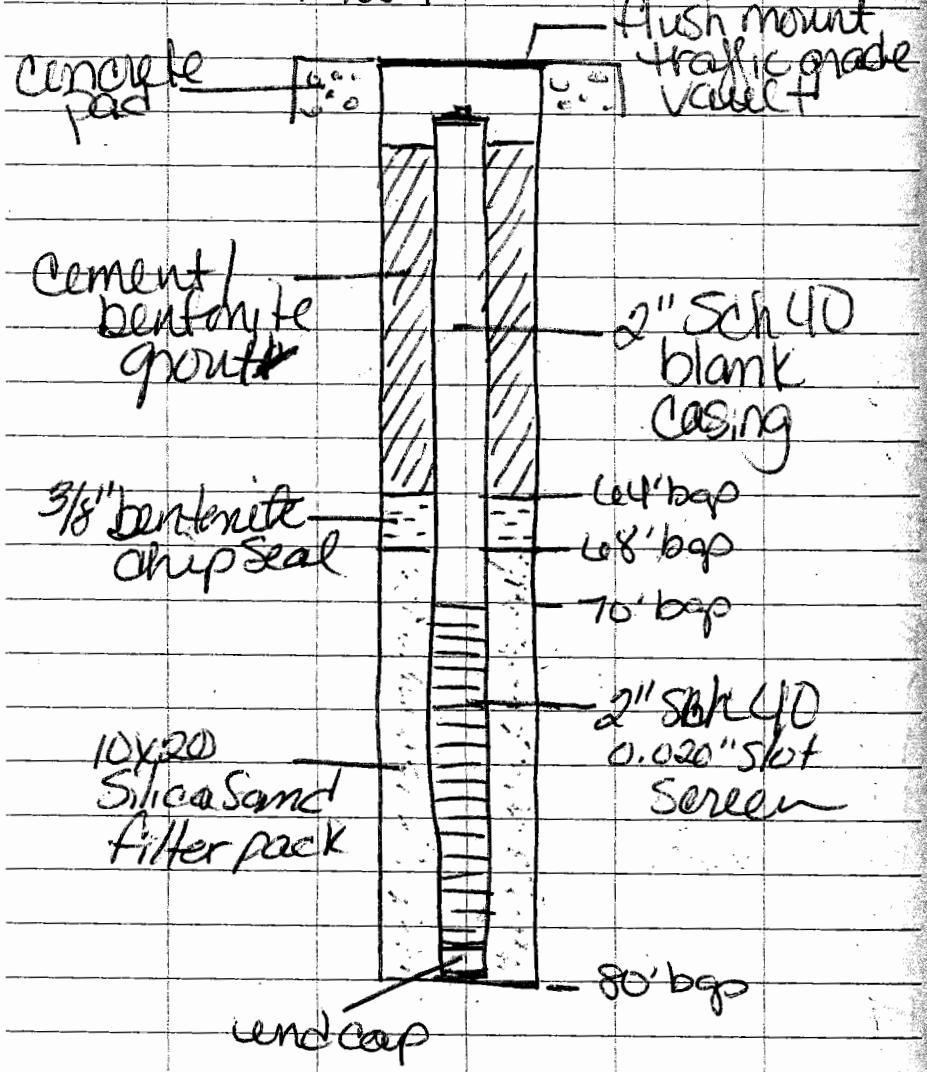
Well ID	DTP	DTW	TD	Comment
MW-10	77.58	80.72	—	
MW-9	79.36	79.65	—	
MW-11	~~71.81~~	77.81		

1830 PMB off site

PMB 3/6/15

3/6/15 PMB

MW-12



PMB 3/6/15

3/7/15 PMB

0650 PMB onsite:
Purpose: Well Install
Weather: Sunny, 25°F
Tailgate meeting
0700 Begin drilling MW-14
1000 Begin gauging wells for NAPL Recovery on 3/8/15

well ID	DTP	DTW	TD	comment
MW-1	—	81.15	—	PMB
MW-2	—	82.02	—	
MW-3	—	81.19	—	
MW-4	—	79.80	—	
MW-5	—	81.07	—	
MW-6	81.25	82.20	—	
MW-7	—	82.48	—	
~~MW-8~~	~~PMB~~		—	
MW-3	—	81.32	—	

1350 TD MW-14 @ 92
Begin Construction
1425 Begin development

PMB 3/7/15

Cont. Development

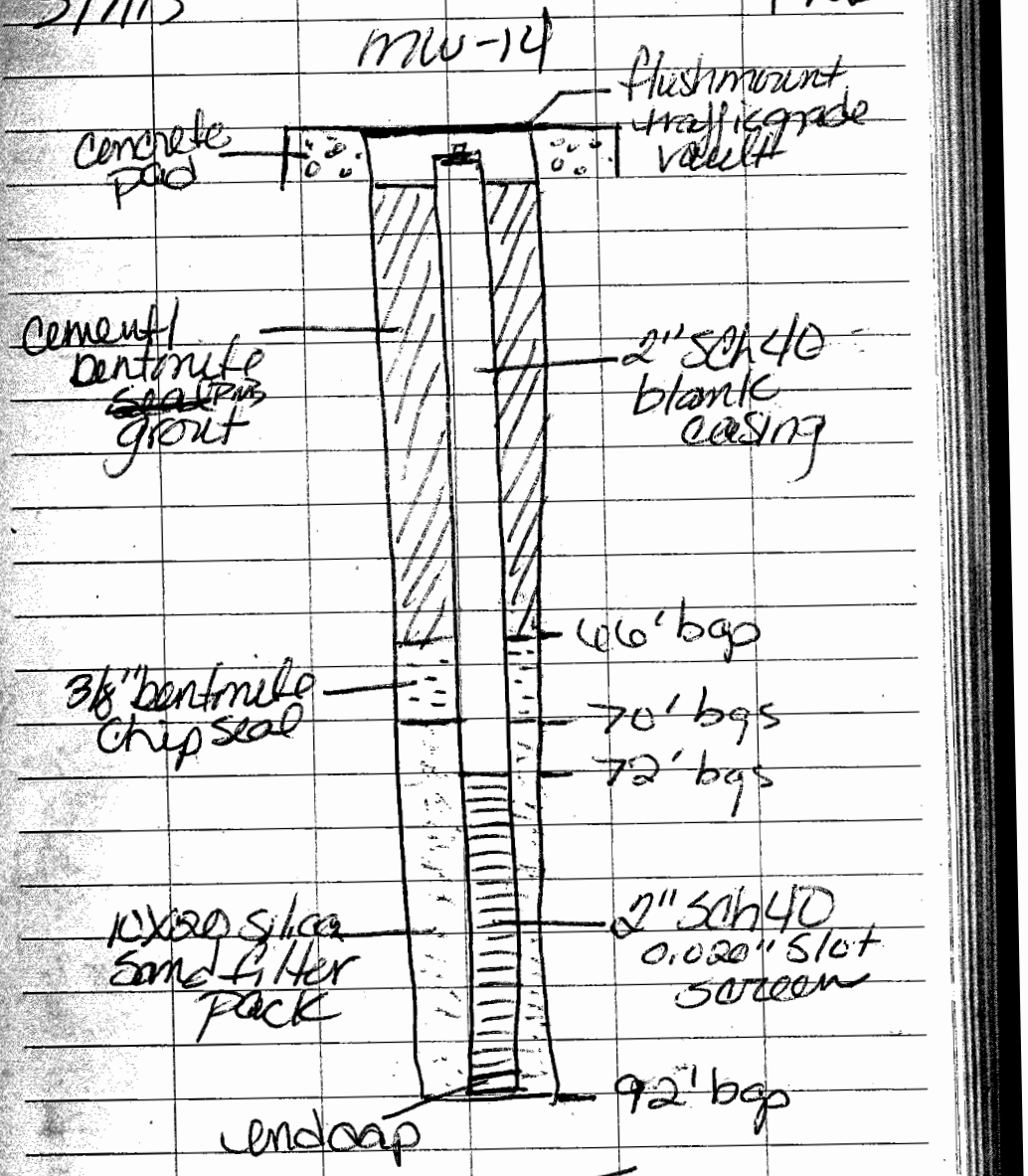
Time	vol	Temp	pH	SpCon	ORP	DO
1441	initial	19.61	7.34	604	10.7	3.59
1447	3.0	17.13	7.38	609	10.3	3.63
1450	4.0	16.41	7.30	612	15.5	3.92
1452	7.0	16.22	6.87	618	24.3	3.41
1454	10.0	16.30	PKB 7.27	617	15.2	4.57
1458	12.0	15.91	6.90	618	18.6	4.20
1501	15.0	15.89	6.88	622	38.6	3.60
1505	18.0	15.64	7.02	627	16.7	3.87

total purged - 20 gal

PKB 3/7/15

3/7/15 PKB

MW-14



PKB

1800 PKB off site

PKB 3/7/15

3/8/15 PNB

0650 PNB onsite
Purpose: Well install & Monthly NAPL Recovery
Weather: Partly cloudy, 33°F
Tailgate safety meeting
0725 Began drilling MW-13
1040 MW-14 DTW = 83.91
MW-12 DTW = 76.21
MW-11 DTW = 77.72
1325 MW-13 TD ~ 81' bgs
1410 Began construction of MW-13
1450 Began development of MW-13

Time	vol	pH	Temp	Cond	ORP	DO
1507	initial	7.06	18.80	794	-196.4	1.90
1509	3.0	7.01	18.39	911	-200.5	2.47
1515	5.0	6.90	18.03	937	-207.7	2.28
1517	5.5	6.94	18.31	954	-208.6	1.87
1521	6.0	6.93	17.96	990	-213.7	2.00
1532	7.0	6.87	18.06	984	-226.9	2.82
1534	8.0	6.98	17.67	1011	-233.0	4.30
1538	9.0	6.89	17.26	1024	-235.9	4.67

154 total gal bailed
1605 Began MW-4 NAPL Recovery
See field sheets

PNB

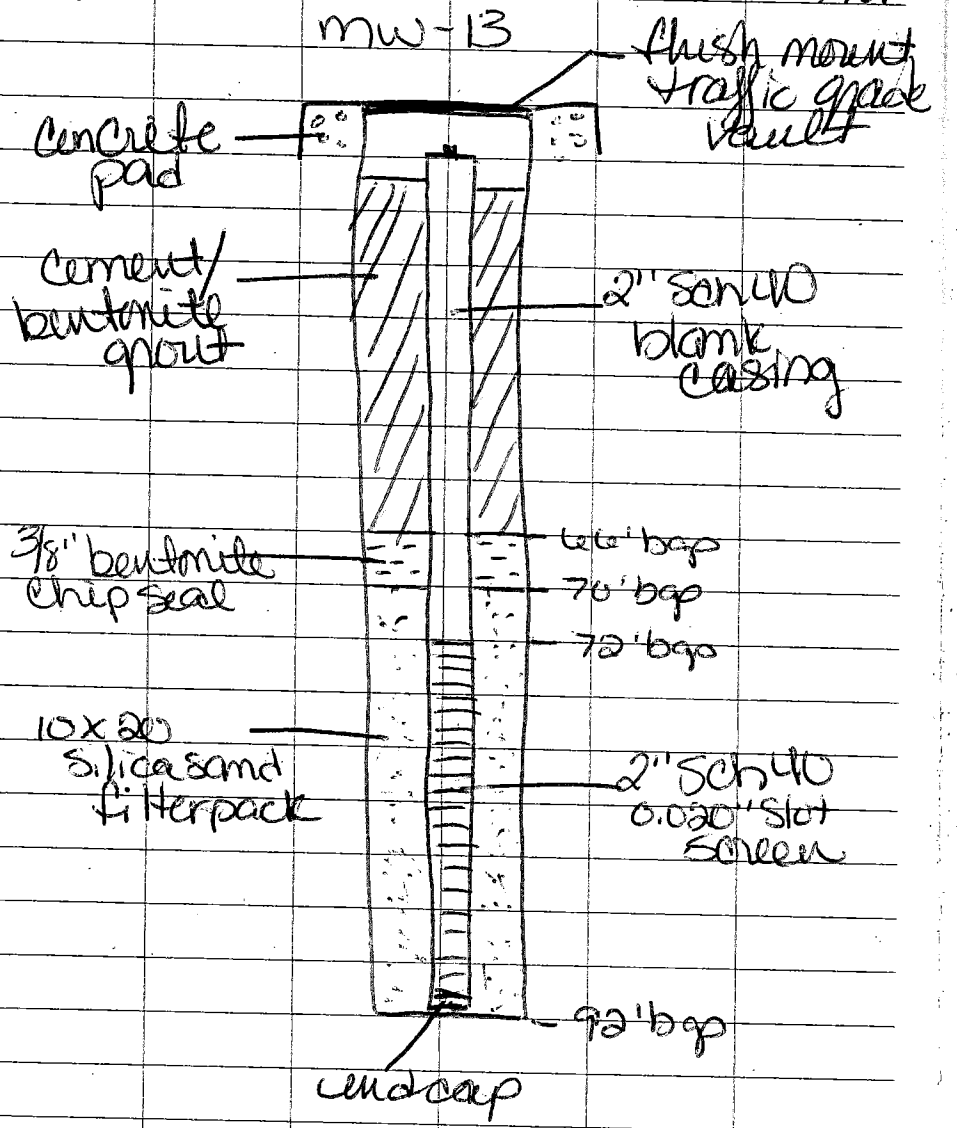
3/8/15 PNB

		DTP	DTW
1950	MW-9	79.22	79.45
	MW-10	77.25	81.41

1930 53 drums stored onsite
47 Soil
6 Water
1945 PNB off site

PNB 3/8/15

3/8/15 PAB



PAB 3/8/15

3/16/15 J. FISHER

1415	ONSITE			
	GAUGE MONITOR WELLS			
	WELL ID	DTP (ft btoc)	DTW (ft btoc)	TD (ft btoc)
	MW-13	—	80.88	93.55
	MW-14	—	83.86	93.02 STR HC ODOR
	MW-8	—	81.06	88.78
	MW-3	—	81.19	88.81
	MW-4	—	79.79	86.96
	MW-2	—	81.91	88.81 STR HC ODOR
	MW-1	—	81.01	91.81
	MW-7	—	82.31	89.27 STR HC ODOR
	MW-5	—	80.96	87.50 HC ODOR
	MW-12	—	76.15	91.27
	MW-11	—	77.67	94.21
	MW-6	81.33	82.37	NR
	MW-9	79.21	79.65	NR
	MW-10	76.96	82.43	NR
1600	CALIBRATE PID. MINI RAE 2000			
	SN: 110-001315			
	ZEROED FRESH AIR READING: 0.0 PPM			
	CAL'D 100 PPM ISOBUTYLENE READING:			
	BATTERIES DID GO BEFORE CAL COMPLETE			
1620	OFFSITE			

3/16/15

3/17/15 J. Fisher

1040 Onsite @ Shamrock #63.
Calibrate YSI 556MPS
SN: 13K100928
DO: P_B = 602.6 mm Hg
Cal'd % Sat'n Reading = 79.3% @ 17.88°C
[DI] = 6.12 mg/L @ 17.95°C
pH: 7.03 / 7.03 @ 18.71°C
10.05 / 10.05 @ 19.44°C
SC: 1413 / 1413 µS/cm @ 18.97°C
ORP: 223 / 223.0 mV @ 19.28°C
1537 Calibrate PID - MiniRae 2000
SN: 110-001315
Zeroed Fresh Air Reading = 0.0 PPM
Cal'd 100 PPM Isobutylene Reading = 100 PPM
1545 Begin Vapor Survey
In Manny's Auto Sales
Office. Smells Like Air Freshner.
Crawl Space Under Building = 0.0 PPM
Maintenance Closet = 0.3 PPM
Breakroom = 0.3 PPM
Bathroom = 0.3 PPM
Lobby = 0.3 PPM
Main Office = 0.4 PPM
1620 Begin Vapor Survey in
Best Western

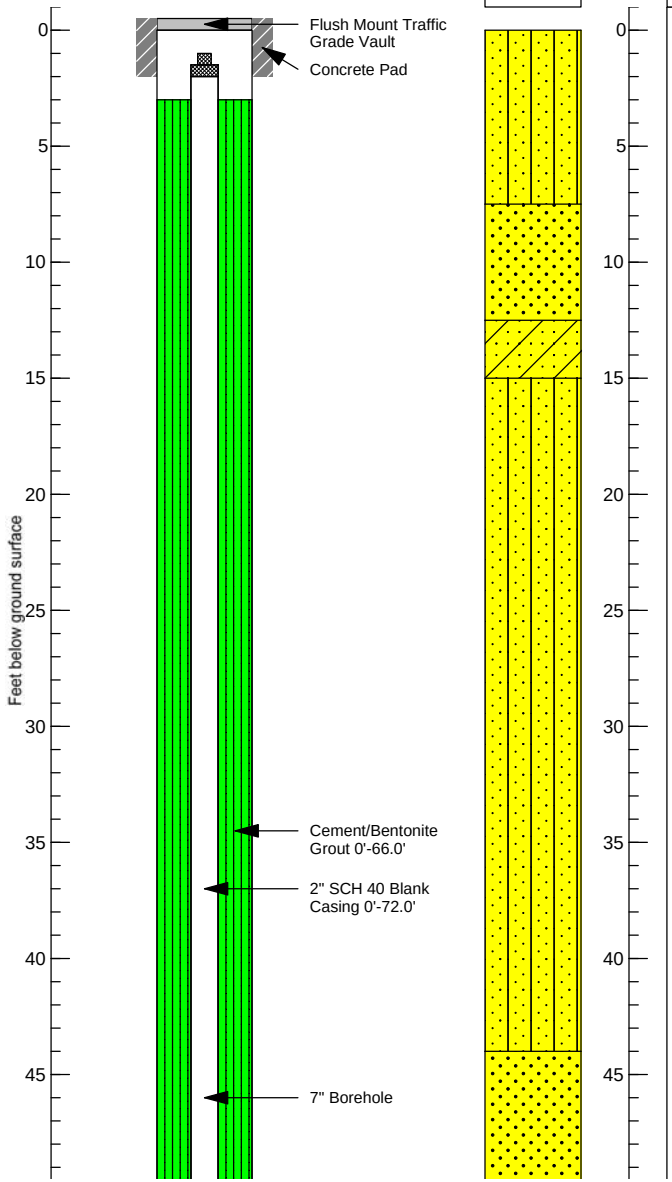
3/17/15 J. Fisher

Maintenance Room = 0.6 PPM
Lobby = 0.0 PPM
Pool Room = 0.2 PPM
Breakfast Room = 1.1 PPM
W. Hallway = 0.3 PPM
E. Hallway = 0.3 PPM
102 = 0.0 PPM
109 = 0.1 PPM
111 = 0.1 PPM
126 = 0.1 PPM
Could Not Open Irrigation
Box At Southern Best Western
N. Entrance.
Water Shut Off In Front = 0.0
Water Shut Off SE = 0.0
1635 Resume GW Monitoring.
2110 GW Monitoring Complete
Prepare to Perform NAPL Rec.
~~GW Monitoring~~ on MW-6.
2235 NAPL Recovery Complete.
Offsite

3/17/15

Appendix 4
Geologic Logs

S:\Projects\BE14.0012_Shamrock_63\VR_Drawings\LogPlot



Grahic Log	PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
	1404	100	0-5	SM	0-5	Clayey sand, grayish brown (10YR 5/2), very fine to fine grained, subangular, wellsorted, damp, soft clay, low plasticity, strong HC odor (cuttings).
	1532	50	5-7.5	SM	5-6	Silty sand with gravel, brown (7.5 YR 5/4), very fine to very coarse grained, poorly sorted, sub rounded to subangular, loose, dry, gravel >3cm. Gravel consists of weathered granite, strong HC odor
	1504	25	7.5-10	SW	7.5-8	Silty sand with gravel as above.
	2758	100	10-12.5	SW	10-12.5	Silty sand with gravel as above.
	2007	100	12.5-15	SC	12.5-15	Silty sand with gravel, pink (7.5YR 7/3), otherwise as above.
	3579	100	15-17.5	SM	15-17.5	Silty sand with gravel as above.
	2949	100	17.5-20	SM	17.5-20	Silty sand with gravel, brown (7.5YR 5/3), otherwise as above.
	1686	100	20-22.5	SM	20-22.5	Silty sand with gravel as above.
	2673	100	22.5-25	SM	22.5-25	Silty sand with gravel as above.
	2876	100	25-27.5	SM	25-27.5	Silty sand with gravel, brown (7.5 YR 5/4), very fine to very coarse grained, poorly sorted, sub rounded to subangular, loose, dry, gravel >3cm. Gravel consists of weathered granite, strong HC odor
	2667	100	27.5-30	SM	27.5-30	Silty sand with gravel as above.
	2912	100	30-32.5	SM	30-32.5	Silty sand with gravel as above.
	3561	100	32.5-35	SM	32.5-35	Silty sand with gravel as above.
	3502	100	35-37.5	SM	35-37.5	Gravelly sand, strong brown (7.5YR 4/6), fine to medium grained, moderately sorted, subrounded to subangular, loose, damp, gravel consists of weathered granite, strong HC odor
	2743	100	37.5-40	SM	37.5-40	Gravelly sand as above.
	3224	50	40-42.5	SM	40-42.5	Gravelly sand as above with minor clay, loose, reddish brown (5YR 5/4).
	1992	75	42.5-45	SM	42.5-45	Sand with gravel, reddish brown (5YR 4/4), very fine to very coarse grained, poorly sorted, subrounded to angular, loose, damp, gravel consists of weathered granite, strong HC odor.
				SW	44-44.5	Gravelly sand, reddish yellow (5YR 6/6), fine to very coarse grained, poory sorted, subangular,loose, weathered
	1793	100	45-47.5	SW	45-47.5	granite, strong HC odor. Gravelly sand as above.
	2132	100	47.5-50	SW	47.5-50	Gravely sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/3/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690230.89 TOC Elevation: 6619.49
Easting: 1712486.99

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-9

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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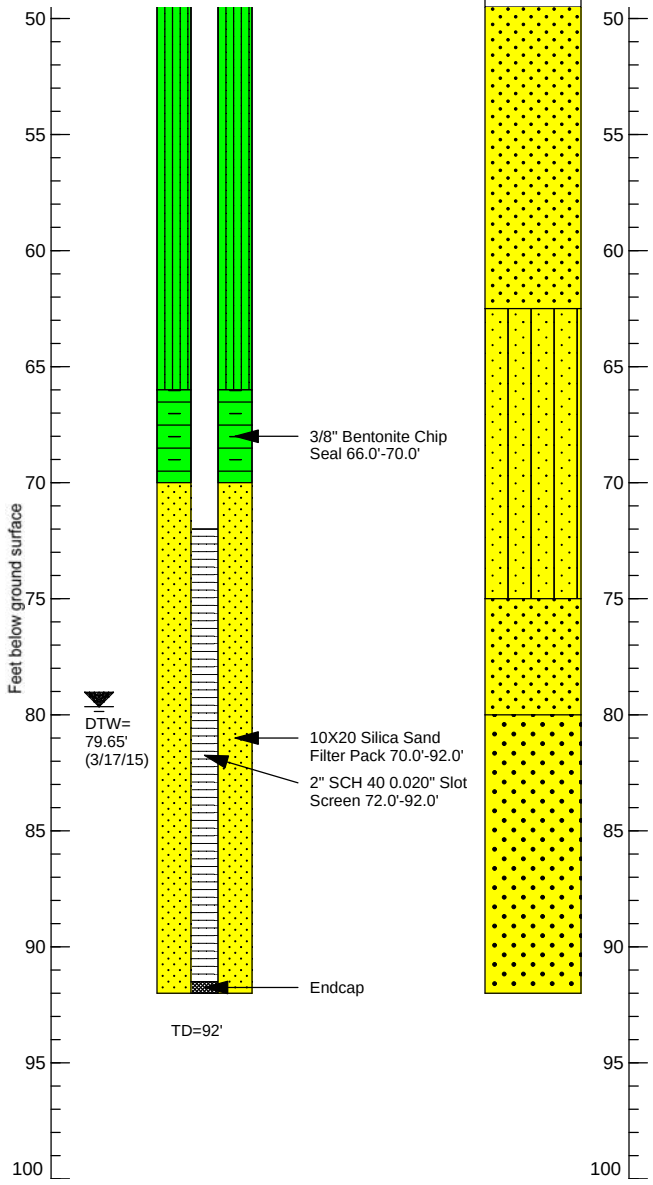

Grahic Log	PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
	2055	100	50-52.5	SW	50-52.5	Gravelly sand, pink (5YR7/4), fine to very coarse grained, poory sorted, subangular,loose, minor clay, stiff, weathered granite, strong HC odor.
	1114	100	52.5-55	SW	52.5-55	Silty sand, strong brown (7.5YR 4/6), very fine to fine grained, well sorted, subangular, loose, damp, slight HC odor, black staining.
	1508	100	55-57.5	SW	55-57.5	Silty sand as above.
	1527	100	57.5-60	SW	57.5-60	Silty sand, very fine to very coarse grained, otherwise as above.
	978.9	100	60-62.5	SW	60-62.5	Silty sand, reddish yellow (5YR 6/6), fine to very coarse grained, poory sorted, subangular,loose, weathered granite, strong HC odor, black staining.
	3361	100	62.5-65	SM	62.5-65	Silty sand as above.
	2509	100	65-67.5	SM	65-67.5	Sand,reddish brown (5YR 4/4), fine to very coarse, poorly sorted, subrounded to angular, loose, damp, HC odor.
	2906	100	67.5-70	SM	67.5-70	Sand as above.
	2477	100	70-72.5	SM	70-72.5	Sand, brown (7.5YR 5/4), medium grained, well sorted, subrounded, loose, saturated, HC odor.
	2815	100	72.5-75	SM	72.5-75	Sand as above.
	3462	100	75-77.5	SW	75-77.5	Sand, medium to coarse grained, otherwise as above.
	1803	100	77.5-80	SW	77.5-80	Sand, medium to very coarse grained, otherwise as above.
		100	80-82.5	SP	80-82.5	Sand as above.
		100	82.5-85	SP	82.5-85	Sand as above.
		100	85-87.5	SP	85-87.5	Sand, medium to coarse grained, otherwise as above.
		100	87.5-90	SP	87.5-90	Sand, medium to very coarse grained, otherwise as above.
		100	90-92	SP	90-92	Sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/3/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690230.89 TOC Elevation: 6619.49
Easting: 1712486.99

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-9

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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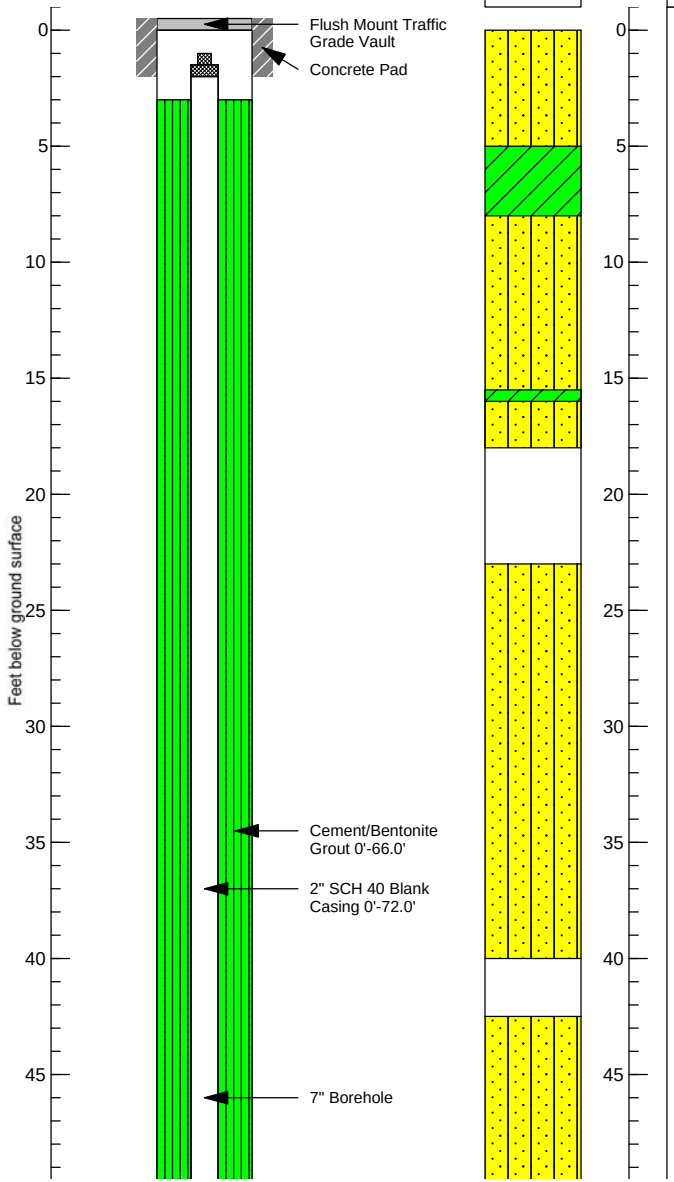

PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
1.8	NA	0-5	SM	0-5	Silty sand with gravel, light reddish brown (5YR 6/4), fine to medium grained, moderately sorted, subrounded, loose, dry (cuttings).
1.4	50	5-8		5-6.5	Sandy clay, brown (7.5YR 5/4), low plasticity, soft, coarse grained sand, subangular, dry.
0.6	50	8-13	SM	8-9	Silty sand with cobbles, brown (7.5 YR 4/4), fine to very coarse grained, angular to subrounded, poorly sorted, loose, cobbles >8cm, dry.
1.2	60	13-18	SM	13-15.5	Silty sand with cobbles as above
			CL	15.5-16	Sandy clay, brown (7.5 YR 4/4), low plasticity, soft, fine to coarse grained sand, subrounded to subangular, poorly sorted, dry, minor black staining.
		18-23	---	16-23	No Recovery
0.0	50	23-25	SM	23-25	Silty sand with gravel, brown (7.5 YR 5/4), very fine to very coarse grained, poorly sorted, sub rounded to subangular, loose, dry, gravel >3cm. Gravel consists of weathered granite.
0.4	50	25-27.5	SM	25-27.5	Silty sand with gravel as above.
18.9	100	27.5-30	SM	27.5-30	Silty sand with gravel as above.
8.4	75	30-32.5	SM	30-32.5	Silty sand with gravel as above.
33.8	100	32.5-35	SM	32.5-35	Silty sand with gravel as above, HC odor at 35'
7.7	100	35-37.5	SM	35-37.5	Silty sand with gravel as above, HC odor, gray staining.
105.3	50	37.5-40	SM	37.5-40	Silty sand with gravel as above.
	0	40-42.5	---	40-42.5	No recovery.
3,167	100	42.5-45	SM	42.5-45	Silty sand with gravel as above, HC odor and staining.
2,478	100	45-47.5	SM	45-47.5	Silty sand with gravel as above, HC odor and staining.
2,321	100	47.5-50	SM	47.5-50	Silty sand with gravel as above, HC odor and staining.

Geologist: P. Barlow
Driller: National
Date completed: 3/2/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon (core barrel to 23')

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690195.50 TOC Elevation: 6618.39
Easting: 1712444.19

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-10

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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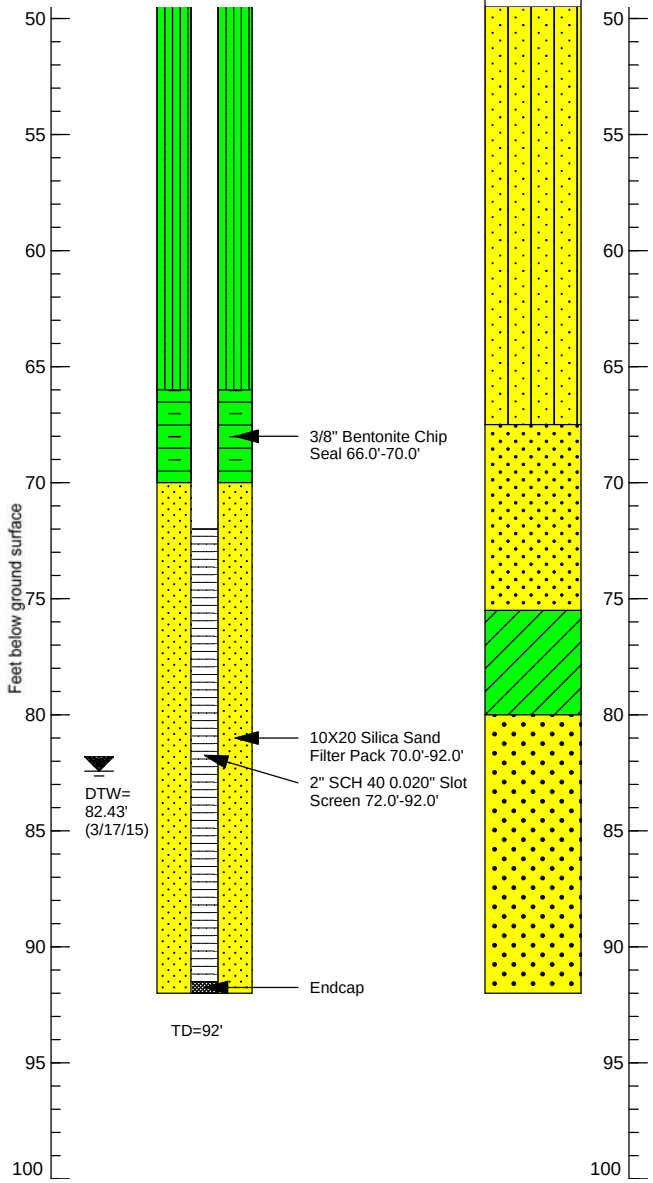

PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
3,617	75	50-52.5	SM	50-52.5	Silty sand with gravel as above, very strong HC odor
1,766	100	52.5-55	SM	52.5-55	Silty sand with gravel as above, very strong HC odor
2251	100	55-57.5	SM	55-57.5	Silty sand, with gravel as above, high amount of weathered granite, very strong HC odor, oily feel, damp.
2205	100	57.5-60	SM	57.5-60	Silty sand, with gravel as above, high amount of weathered granite, very strong HC odor, oily feel, damp.
576.2	100	60-62.5	SM	60-62.5	Silty sand with weathered granite, brown (7.5YR 4/4), very fine to coarse grained, poorly sorted, subrounded to subangular, HC odor, minor staining.
1672	100	62.5-65	SM	62.5-65	Silty sand , brown (7.5YR 4/4), very fine to fine grained, well sorted, subrounded to subangular, HC odor, minor staining.
1525	100	65-67.5	SM	65-67.5	As above
2095	100	67.5-70	SW	67.5-70	Sand, reddish brown (5YR 5/4), fine to very coarse grained, poorly sorted,
2142	100	70-72.5	SW	70-72.5	Sand as above.
2119	100	72.5-75	SW	72.5-75	Sand as above.
2257	100	75-77.5	SW CL	74.5-75 75-77.5 75.5-77.5	Sand, light brown (7.5YR 6/4), fine to very coarse grained, subrounded, poorly sorted, loose, HC odor, damp. Sand as above Clay, reddish brown (5YR 5/4), stiff, wet, low plasticity.
574.1	100	77.5-80	CL	77.5-80	Clay as above.
	100	80-82.5	SP	80-82.5	Sand, reddish brown (5YR 4/4), coarse to very coarse grained, well sorted, subrounded to angular, loose, HC odor, minor black and gray staining, interbedded thin layers of clay.
	100	82.5-85	SP	82.5-85	Sand, reddish brown (5YR 4/4), coarse to very coarse grained, well sorted, subrounded to angular, loose, HC odor, saturated.
	100	85-87.5	SP	85-87.5	Sand as above
	100	87.5-90	SP	87.5-90	Sand as above, odorless
	100	90-92	SP	90-92	Sand as above, odorless

Geologist: P. Barlow
Driller: National
Date completed: 3/2/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon (core barrel to 23')

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690195.50 TOC Elevation: 6618.39
Easting: 1712444.19

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-10

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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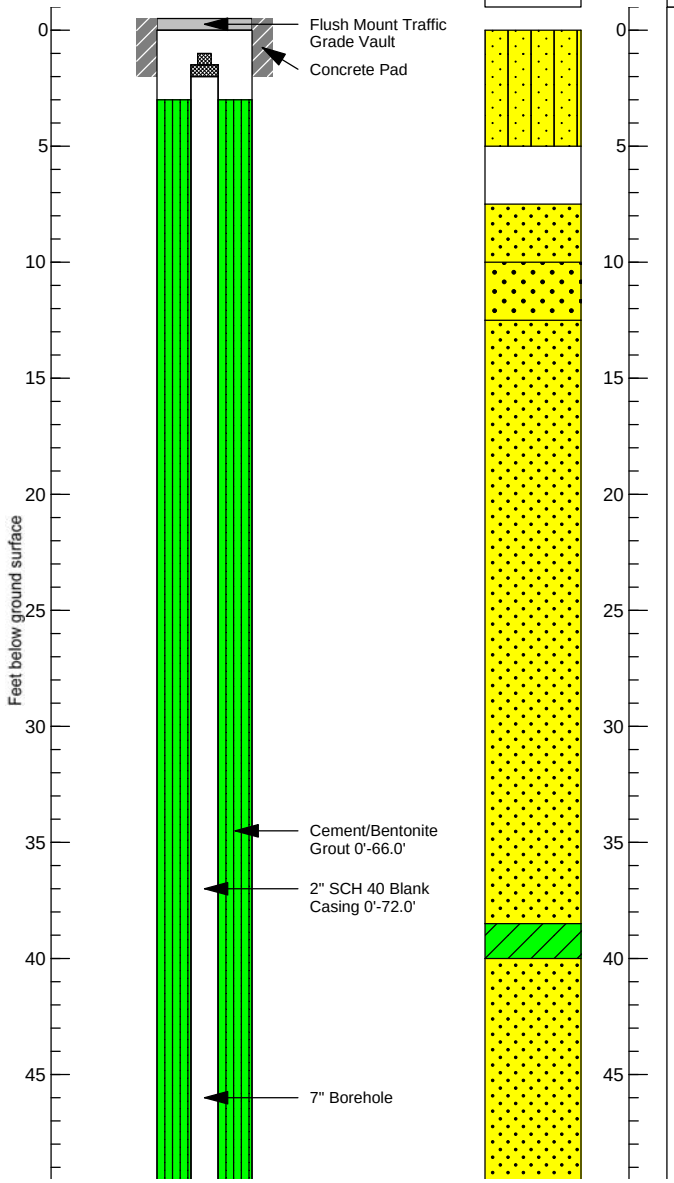

PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
36.1	100	0-5	SM	0-5	Silty sand with gravel and minor clay, brown (7.5YR 5/3), very fine to coarse grained, poorly sorted, subrounded to subangular, loose, clay is stiff, dry, strong HC odor (cuttings).
	0	5-7.5	---	5-7.5	No recovery.
23.2	100	7.5-10	SW	7.5-10	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, granite gravel.
6.8	100	10-12.5	SP	10-12.5	Sand, yellowish red (7.5YR 5/6), fine to medium grained, moderately sorted, subrounded to subangular, loose, dry.
14.4	100	12.5-15	SW	12.5-15	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, granite gravel.
7.5	50	15-17.5	SW	15-17.5	Gravelly sand as above
10.9	100	17.5-20	SW	17.5-20	Gravelly sand as above
7.4	100	20-22.5	SW	20-22.5	Gravelly sand as above
19.8	100	22.5-25	SW	22.5-25	Gravelly sand as above
37.8	25	25-27.5	SW	25-27.5	Gravelly sand as above
15.4	100	27.5-30	SW	27.5-30	Gravelly sand as above
13	100	30-32.5	SW	30-32.5	Gravelly sand as above
9.9	100	32.5-35	SW	32.5-35	Gravelly sand as above
52.5	100	35-37.5	SW	35-37.5	Gravelly sand as above
1,006	100	37.5-38.5	SW	37.5-38.5	Gravelly sand as above
		38.5-40	CL	38.5-40	Clay, brown (7.5YR 4/2), soft, medium plasticity, dry, slight HC odor.
1,280	50	40-42.5	SW	40-42.5	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel. HC odor.
4674	100	42.5-45	SW	42.5-45	Gravelly sand as above
1,493	100	45-47.5	SW	45-47.5	Sand, strong brown (7.5YR 4/6), fine to coarse grained, poorly sorted, subrounded to subangular, loose, damp, HC odor.
4,507	100	47.5-50	SW	47.5-50	Sand, similar to above with gravel and minor clay.

Geologist: P. Barlow
Driller: National
Date completed: 3/4/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690188.49 TOC Elevation: 6617.89
Easting: 1712528.53

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-11

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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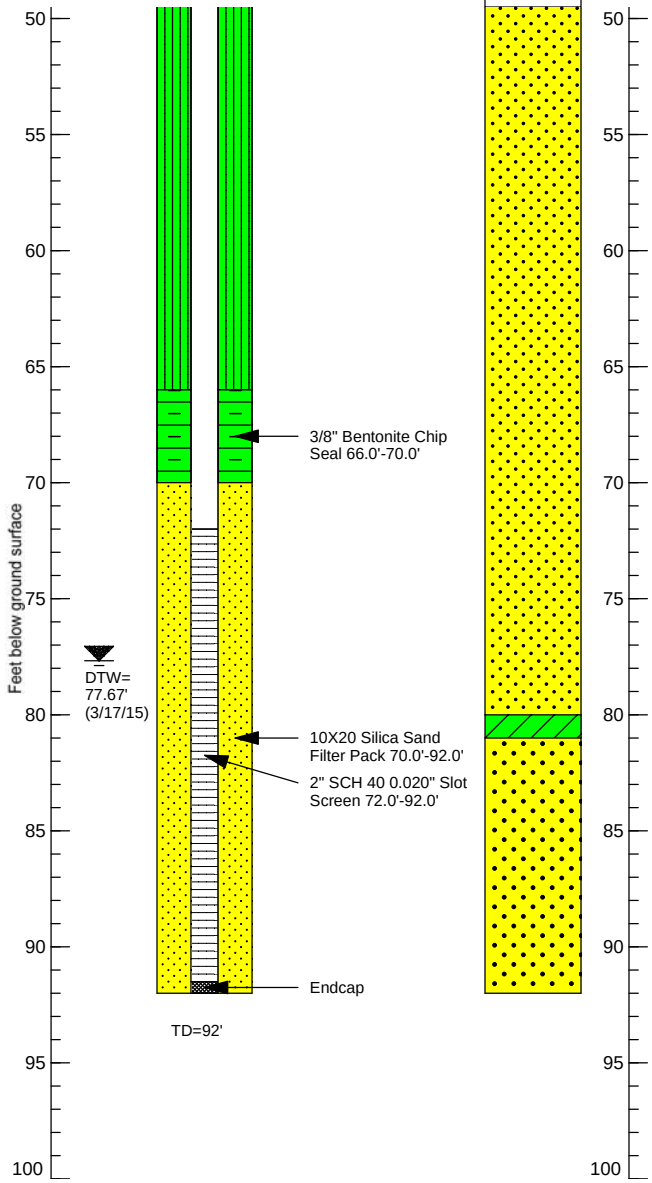


PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
2345	100	50-52.5	SW	50-52.5	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained with minor clay, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel. HC odor.
2055	100	52.5-55	SW	52.5-55	Gravelly sand as above . HC odor.
909	100	55-57.5	SW	55-57.5	Gravelly sand as above . HC odor.
7655	100	57.5-60	SW	57.5-60	Gravelly sand as above . HC odor.
4942	100	60-62.5	SW	60-62.5	Gravelly sand as above . HC odor.
7694	100	62.5-65	SW	62.5-65	Gravelly sand as above . HC odor.
1214	100	65-67.5	SW	65-67.5	Gravelly sand as above . HC odor.
1256	`100	67.5-70	SW	67.5-70	Gravelly sand as above . HC odor.
1241	100	70-72.5	SW	70-72.5	Gravelly sand as above . HC odor.
1378	100	72.5-75	SW	72.5-75	Gravelly sand as above . HC odor.
1268	100	75-77.5	SW	75-77.5	Gravelly sand as above . HC odor.
156.2	100	77.5-80	SW	77.5-80	Sand,reddish brown (5YR 4/4), fine to very coarse, poorly sorted, subrounded to angular, loose, wet
	100	80-81	CL	80-81	Clay, brown (7.5YR 5/4), stiff, low plasticiy, dry.
		81-82.5	SP	81-82.5	Sand, brown (7.5YR 5/4), medium grained, well sorted, subrounded, loose, saturated.
	100	82.5-85	SP	82.5-85	Sand, medium to very coarse grained, otherwise as above.
	100	85-87.5	SP	85-87.5	Sand as above.
	100	87.5-90	SP	87.5-90	Sand as above.
	100	90-92	SP	90-92	Sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/4/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

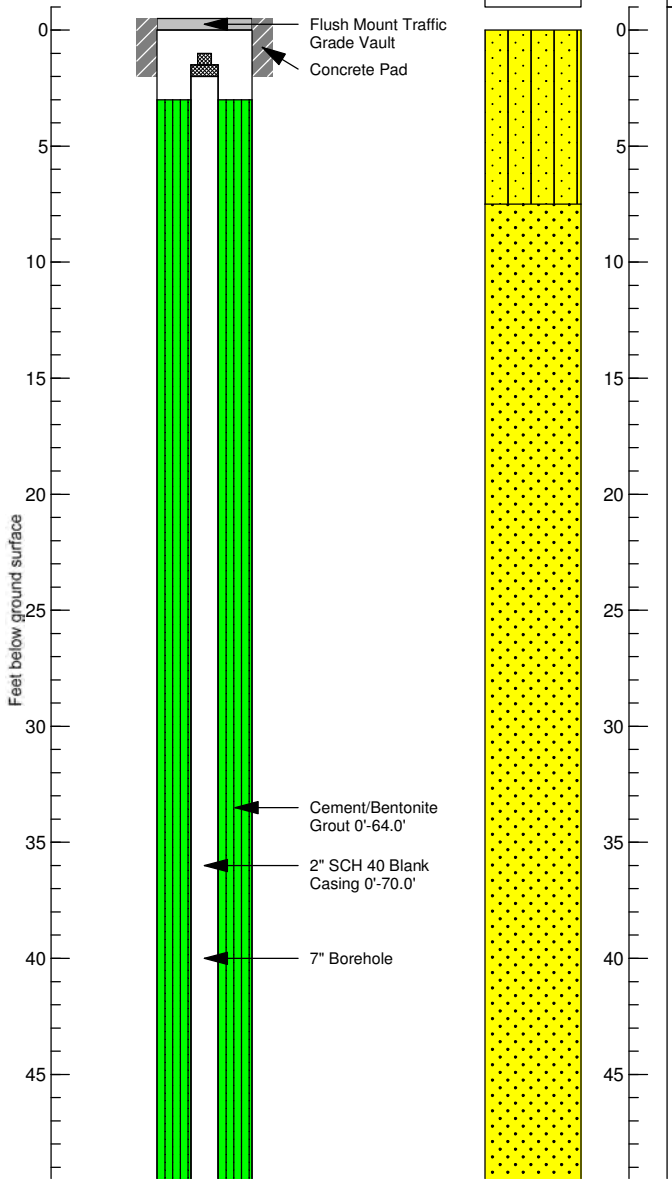
DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690188.49 TOC Elevation: 6617.89
Easting: 1712528.53

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-11

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

S:\Projects\BE14.0012_Shamrock_63\VR_Drawings\LogPlot



PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
6.2	100	0-5	SM	0-5	Silty sand with gravel and minor clay, brown (7.5YR 5/3), very fine to coarse grained, poorly sorted, subrounded to subangular, loose, clay is stiff, dry, strong HC odor (cuttings).
0.0	100	5-7.5	SM	5-7.5	Silty sand as above with granite gravel.
0.0	100	7.5-10	SW	7.5-10	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel.
6.9	100	10-12.5	SW	10-12.5	Sand with gravel, yellowish red (7.5YR 5/6), fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, granite gravel.
5	100	12.5-15	SW	12.5-15	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel.
14.9	100	15-17.5	SW	15-17.5	Gravelly sand as above.
16.7	100	17.5-20	SW	17.5-20	Gravelly sand as above.
8	100	20-22.5	SW	20-22.5	Gravelly sand as above.
0.1	100	22.5-25	SW	22.5-25	Gravelly sand as above.
0.2	100	25-27.5	SW	25-27.5	Gravelly sand as above.
0.1	100	27.5-30	SW	27.5-30	Gravelly sand as above.
0.3	100	30-32.5	SW	30-32.5	Gravelly sand as above.
0.5	100	32.5-35	SW	32.5-35	Gravelly sand as above.
0.8	100	35-37.5	SW	35-37.5	Gravelly sand as above.
1	100	37.5-40	SW	37.5-40	Gravelly sand as above.
0.0	100	40-42.5	SW	40-42.5	Gravelly sand as above.
0.2	100	42.5-45	SW	42.5-45	Gravelly sand as above.
1	100	45-47.5	SW	45-47.5	Gravelly sand as above.
2	100	47.5-50	SW	47.5-50	Gravelly sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/5/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon (core barrel to 23')

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690107.31 TOC Elevation: 6615.09
Easting: 1712616.92

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-12

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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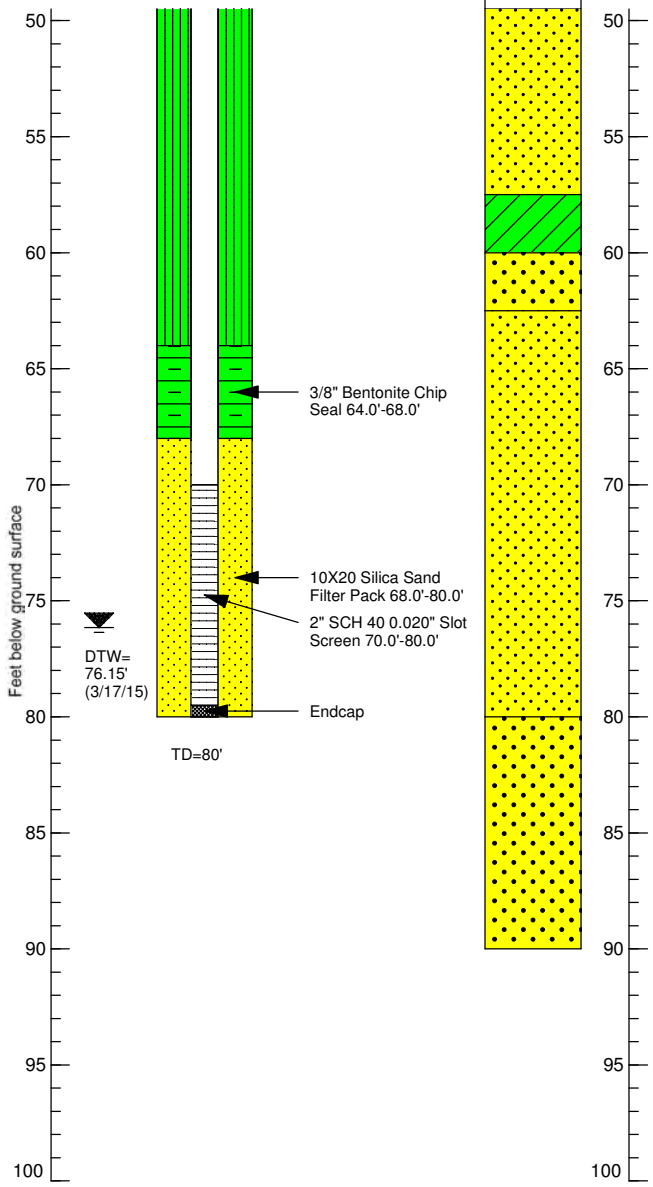

PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
3.4	100	50-52.5	SW	50-52.5	Gravelly sand, similar to above with minor clay.
0.1	100	52.5-55	SW	52.5-55	Gravelly sand, similar to above with minor clay.
0.2	100	55-57.5	SW	55-57.5	Gravelly sand, similar to above with minor clay.
0.9	100	57.5-60	CL	57.5-60	Clay, brown (7.5YR 5/4), stiff, medium plasticiy, damp.
1.1	100	60-62.5	SP	60-62.5	Sand, brown (7.5YR 5/4), fine grained, well sorted, subrounded, damp.
0.7	100	62.5-65	SW	62.5-65	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, minor clay, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel.
0.0	100	65-67.5	SW	65-67.5	Gravelly sand as above.
0.0	75	67.5-70	SW	67.5-70	Gravelly sand as above. Slight HC odor.
0.4	100	70-72.5	SW	70-72.5	Sand, brown (7.5YR 5/4), medium to very coarse grained, moderatley sorted, subrounded, loose, wet.
0.0	100	72.5-75	SW	72.5-75	Sand as above
	100	75-77.5	SW	75-77.5	Sand as above, saturated.
	100	77.5-80	SW	77.5-80	Sand as above
	100	80-82.5	SP	80-82.5	Sand, brown (7.5YR 5/4), fine grained, subrounded, well sorted, loose, saturated.
	100	82.5-85	SP	82.5-85	Sand as above.
	100	85-87.5	SP	85-87.5	Sand as above
	100	87.5-90	SP	87.5-90	Sand as above

Geologist: P. Barlow
Driller: National
Date completed: 3/5/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon (core barrel to 23')

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690107.31 TOC Elevation: 6615.09
Easting: 1712616.92

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-12

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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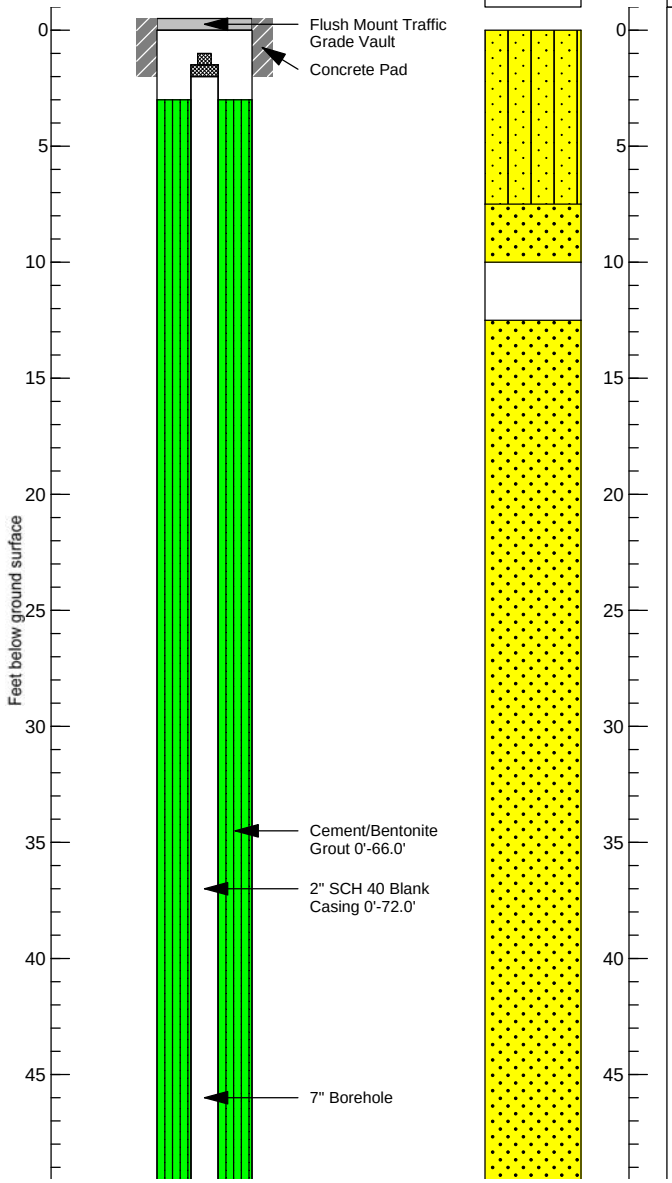

Grahic Log	PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
	0.6	100	0-5	SM	0-5	Silty sand, reddish brown (5YR 5//43), very fine to coarse grained, poorly sorted, subrounded to subangular, loose (cuttings).
	0.4	100	5-7.5	SM	5-7.5	Silty sand as above.
	0.3	100	7.5-10	SW	7.5-10	Gravelly sand,reddish brown (5YR 5/4), very fine to coarse grained, poorly sorted, subrounded to subangular, loose, dry, granite gravel.
		0	10-12.5	---	10-12.5	No recovery.
	0.0	50	12.5-15	SW	12.5-15	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel.
	0.0	100	15-17.5	SW	15-17.5	Gravelly sand as above
	0.0	100	17.5-20	SW	17.5-20	Gravelly sand as above
	0.0	100	20-22.5	SW	20-22.5	Gravelly sand as above
	0.9	25	22.5-25	SW	22.5-25	Gravelly sand as above
	0.3	100	25-27.5	SW	25-27.5	Gravelly sand as above
	1.2	100	27.5-30	SW	27.5-30	Gravelly sand as above
	0.7	100	30-32.5	SW	30-32.5	Gravelly sand as above
	1.1	100	32.5-35	SW	32.5-35	Gravelly sand as above
	0.9	50	35-37.5	SW	35-37.5	Gravelly sand as above
	0.3	100	37.5-40	SW	37.5-40	Gravelly sand as above
	0.4	100	40-42.5	SW	40-42.5	Gravelly sand as above
		25	42.5-45	SW	42.5-45	Gravelly sand as above
	1.2	100	45-47.5	SW	45-47.5	Gravelly sand as above
	0.8	100	47.5-50	SW	47.5-50	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained with minor clay, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel.

Geologist: P. Barlow
Driller: National
Date completed: 3/8/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690285.77 TOC Elevation: 6619.75
Easting: 1712725.96

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-13

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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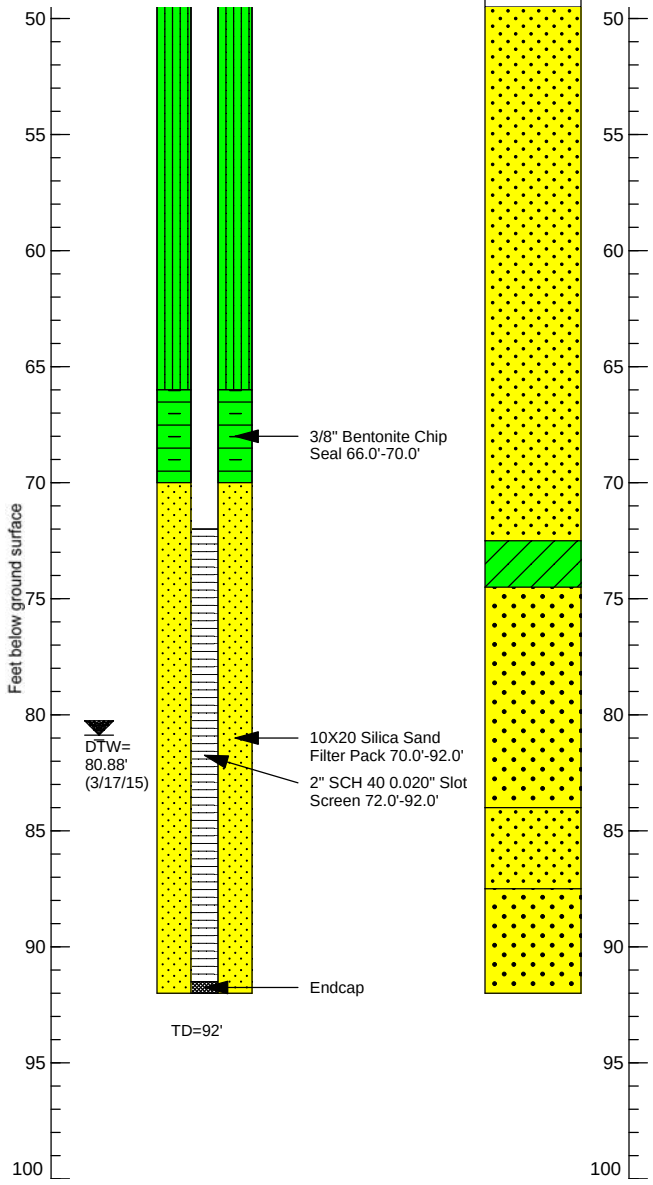

Grahic Log	PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
	0.3	100	50-52.5	SW	50-52.5	Gravelly sand with minor clay as above
	0.4	100	52.5-55	SW	52.5-55	Gravelly sand with minor clay as above
	0.5	100	55-57.5	SW	55-57.5	Gravelly sand with minor clay as above
	0.5	100	57.5-60	SW	57.5-60	As above, solvent odor.
	2	100	60-62.5	SW	60-62.5	As above, solvent odor.
	1.1	100	62.5-65	SW	62.5-65	Gravelly sand with minor clay as above
	1.4	100	65-67.5	SW	65-67.5	Gravelly sand with minor clay as above
	0.7	100	67.5-70	SW	67.5-69.5	Gravelly sand with minor clay as above
	0.9	100	70-72.5	SW SW	69.5-70 70-72.5	Sand, brown (7.5YR 5/4), medium to very coarse grained, moderatley sorted, subrounded, loose, damp.. Sand as above.
	0.5	100	72.5-75	CL	72.5-74.5	Clay, brown (7.5YR 5/4), stiff, medium plasticiy, damp.
		100	75-77.5	SP SP	74.5-75 75-77.5	Sand, brown (7.5YR 5/4), medium grained, well sorted, subrounded to subanglar, loose, damp. Sand as above, damp.
		100	77.5-80	SP	77.5-80	Sand as above, wet.
		100	80-82.5	SP	80-82.5	Sand, brown (7.5YR 5/4), fine grained, subrounded, well sorted, loose, wet.
		100	82.5-85	SP	82.5-84	Sand as above.
				SW	84-85	Gravelly sand, brown (7.5YR 5/3), medium to very coarse grained, poorly sorted, subrounded to subangular, loose, granite gravel. Weathered granite.
			85-87.5	SW	85-87.5	Gravely sand as above.
			87.5-90	SP	87.5-90	Sand, brown (7.5YR 5/4), fine grained, subrounded, well sorted, loose, saturated.
			90-92	SP	90-92	Sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/8/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690285.77 TOC Elevation: 6619.75
Easting: 1712725.96

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-13

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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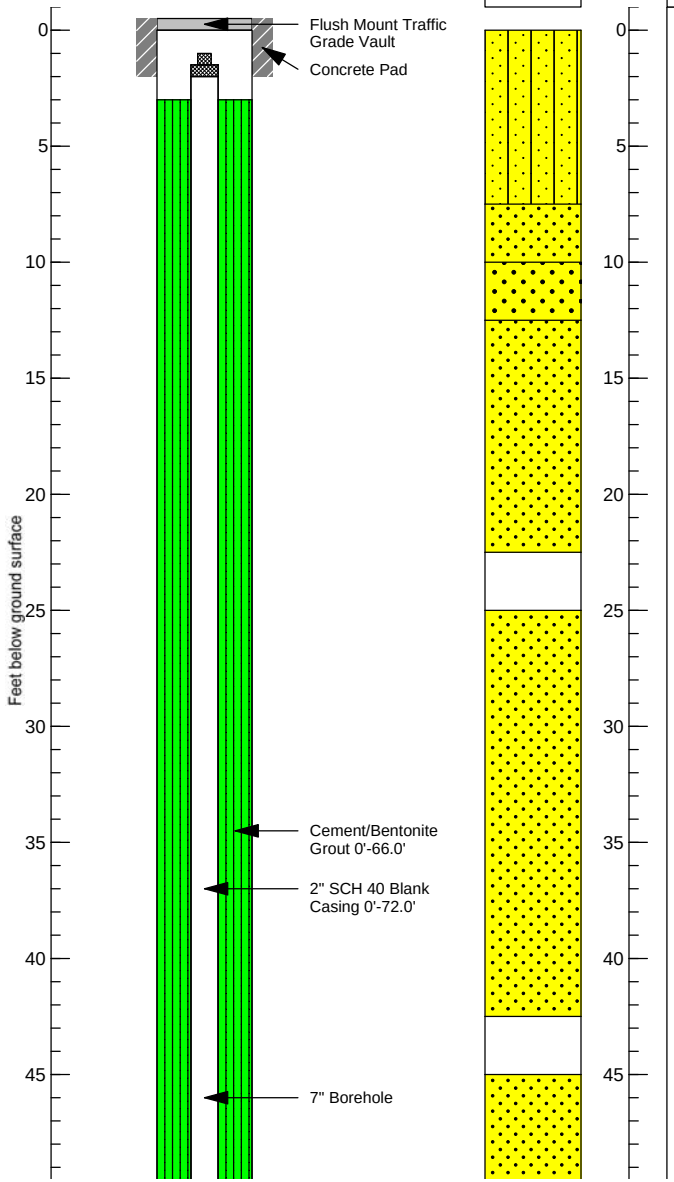

Grahic Log	PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
	0.2	100	0-5	SM	0-5	Silty sand with gravel and minor clay, brown (7.5YR 5/3), very fine to coarse grained, poorly sorted, subrounded to subangular, loose, clay is stiff, dry, strong HC odor (cuttings).
	0.4	75	5-7.5	SM	5-7.5	Silty sand as above with granite gravel.
	0.5	100	7.5-10	SW	7.5-10	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, granite gravel.
	0.8	100	10-12.5	SP	10-12.5	Sand with gravel, yellowish red (7.5YR 5/6), fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, granite gravel.
	0.6	75	12.5-15	SW	12.5-15	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel.
	0.7	100	15-17.5	SW	15-17.5	Gravelly sand as above.
	0.4	75	17.5-20	SW	17.5-20	Gravelly sand as above.
	0.2	100	20-22.5	SW	20-22.5	Gravelly sand as above.
		0	22.5-25		22.5-25	No recovery.
	0.6	100	25-27.5	SW	25-27.5	Gravelly sand as above.
	0.2	100	27.5-30	SW	27.5-30	Gravelly sand as above.
	0.2	50	30-32.5	SW	30-32.5	Gravelly sand as above.
	0.2	100	32.5-35	SW	32.5-35	Gravelly sand as above.
	0.3	100	35-37.5	SW	35-37.5	Gravelly sand as above, with minor clay.
	0.2	100	37.5-40	SW	37.5-40	Gravelly sand as above.
	0.6	100	40-42.5	SW	40-42.5	Gravelly sand as above.
		0	42.5-45		42.5-45	No recovery.
	0.7	100	45-47.5	SW	45-47.5	Gravelly sand as above.
	0.5	100	47.5-50	SW	47.5-50	Gravelly sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/7/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690354.49 TOC Elevation: 6623.61
Easting: 1712635.20

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-14

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

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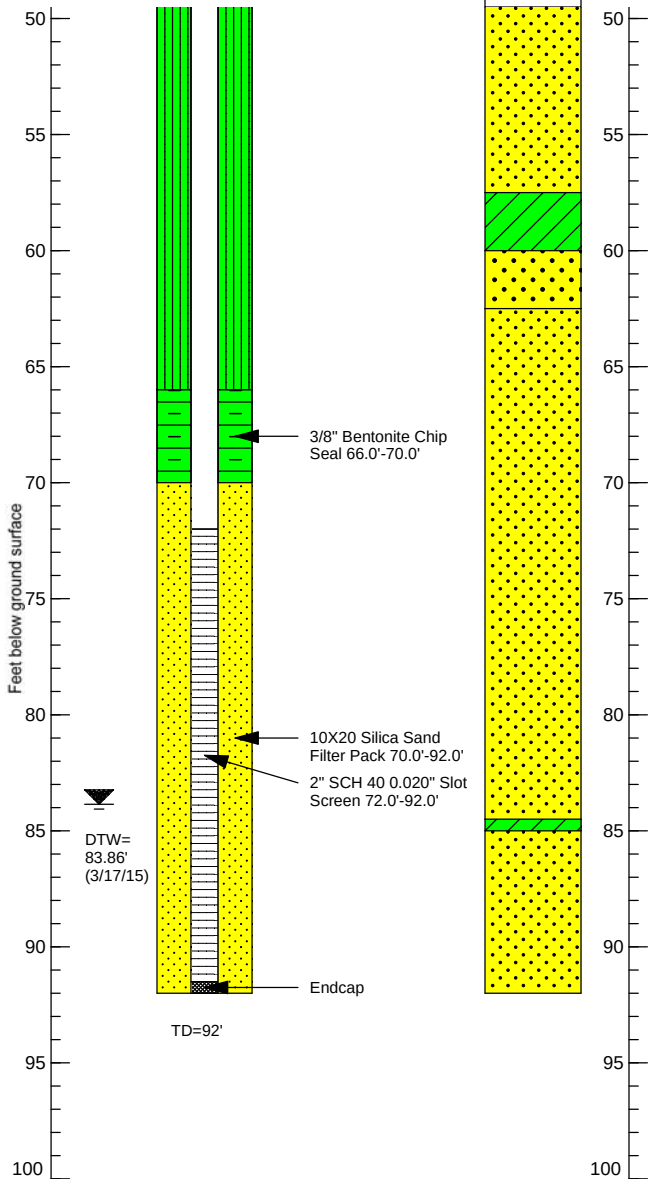

PID reading (ppm)	Sample Recovery (%)	Sample Interval (ft bgs)	USCS Symbol	Lithology Interval	Comments and Lithology
1.5	100	50-52.5	SW	50-52.5	Gravelly sand as above, with minor clay.
0.7	100	52.5-55	SW	52.5-55	Gravelly sand as above, with minor clay.
1.1	100	55-57.5	SW	55-57.5	Gravelly sand as above, with minor clay.
1.3	100	57.5-60	CL	57.5-60	Clay, brown (7.5YR 5/4), stiff, medium plasticiy, damp.
1.3	100	60-62.5	SP	60-62.5	Sand, brown (7.5YR 5/4), fine grained, well sorted, subrounded, damp.
3.2	100	62.5-65	SW	62.5-65	Gravelly sand, brown (7.5YR 5/3), very fine to medium grained, moderately sorted, subrounded to subangular, loose, dry, weathered granite gravel. Slight solvent odor
3.4	100	65-67.5	SW	65-67.5	Gravelly sand as above with minor clay. Solvent odor, damp.
7.4	100	67.5-70	SW	67.5-70	Gravelly sand as above, odorless.
1.3	100	70-72.5	SW	70-72.5	Sand, brown (7.5YR 5/4), medium to very coarse grained, moderatley sorted, subrounded, loose, damp.
2	100	72.5-75	SW	72.5-75	Sand, light brown (7.5YR 6/3), medium to very coarse grained, moderately sorted, subrounded to subangular, loose, damp, solvent odor.
1.7	100	75-77.5	SW	75-77.5	Sand as above.
	100	77.5-80	SW	77.5-80	Sand as above, wet.
	50	80-82.5	SW	80-82.5	Sand as above, saturated.
	100	82.5-85	SW	82.5-84.5	Sand as above.
			CL	84.5-85	Clay, reddish brown (5YR 5/4), stiff, wet, low plasticity.
	100	85-87.5	SW	85-87.5	Sand as above.
		87.5-90	SW	87.5-90	Sand as above.
		90-92	SW	90-92	Sand as above.

Geologist: P. Barlow
Driller: National
Date completed: 3/7/15

Drilling method: Hollow Stem Auger
Bit diameter: 7" O.D.
Sampling method: Split Spoon

DTW= Depth to water measured below top of casing (feet)
New Mexico State Plane Grid Coordinates - Central Zone, NAD 83
Northing: 1690354.49 TOC Elevation: 6623.61
Easting: 1712635.20

SHAMROCK #63
3624 CERILLOS ROAD
SANTA FE, NEW MEXICO

Well Completion Diagram and Geologic Log: MW-14

Daniel B. Stephens & Associates, Inc.
5/12/2015 JN BE14.0012

Appendix 5
Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-73894-1
TestAmerica SDG: BE14.0012.00.00003.0001
Client Project/Site: Shamrock 63

For:
Daniel B. Stephens & Associates Inc.
208 Parker Avenue, Suite E
Durango, Colorado 81303

Attn: Mr. John Casey

Cathy Gartner

Authorized for release by:
3/20/2015 10:02:12 AM
Cathy Gartner, Project Manager I
(615)301-5041
cathy.gartner@testamericainc.com

Designee for

Leah Klingensmith, Senior Project Manager
(615)301-5038
leah.klingensmith@testamericainc.com

Table of Contents

Sample Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-73894-1	MW-10 (50-52.5)	Soil	03/02/15 16:50	03/11/15 10:00
490-73894-2	MW-10 (77.5-80)	Soil	03/03/15 12:00	03/11/15 10:00
490-73894-3	MW-9 (15-17.5)	Soil	03/03/15 15:00	03/11/15 10:00
490-73894-4	MW-9 (77.5-80)	Soil	03/04/15 11:45	03/11/15 10:00
490-73894-5	MW-11 (62.5-65)	Soil	03/05/15 10:45	03/11/15 10:00
490-73894-6	MW-11 (77.5-80)	Soil	03/05/15 12:20	03/11/15 10:00
490-73894-7	MW-12 (75-77.5)	Soil	03/06/15 12:45	03/11/15 10:00
490-73894-8	MW-14 (77.5-80)	Soil	03/07/15 13:00	03/11/15 10:00
490-73894-9	MW-13 (80-82.5)	Soil	03/08/15 13:10	03/11/15 10:00

Job ID: 490-73894-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-73894-1

Comments
No additional comments.

Receipt
The samples were received on 3/11/2015 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

Except:

One or more containers for the following sample(s) was received broken or leaking: MW-11 (77.5-80) (490-73894-6).

GC/MS VOA
Method(s) 8260B: The laboratory control sample (LCS) for batch 233629 recovered outside control limits for the following analyte: dichlorobromomethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for batch 233629 recovered outside control limits for the following analyte(s): trichlorofluoromethane. Trichlorofluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: The laboratory control sample (LCS) for batch 234052 recovered outside control limits for the following analyte(s): trichlorofluoromethane and chloroethane. Trichlorofluoromethane and chloroethane have been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: The laboratory control sample duplicate (LCSD) for batch 234052 recovered outside control limits for the following analyte(s): trichlorofluoromethane. Trichlorofluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method(s) 8260B: The following sample(s) was diluted due to the nature of the sample matrix: MW-11 (62.5-65) (490-73894-5), MW-9 (77.5-80) (490-73894-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 234052.

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 233879.

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

GC VOA
Method(s) 8015B: Surrogate recovery for the following sample(s) was outside control limits: MW-10 (50-52.5) (490-73894-1), MW-11 (62.5-65) (490-73894-5), MW-11 (77.5-80) (490-73894-6), MW-9 (15-17.5) (490-73894-3), MW-9 (77.5-80) (490-73894-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8015B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 2323312.

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

GC Semi VOA
Method(s) 8015B: The following sample(s) required a dilution due to the nature of the sample matrix: MW-9 (77.5-80) (490-73894-4). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not

Job ID: 490-73894-1 (Continued)

Laboratory: TestAmerica Nashville (Continued)

provide useful information.

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
F1	MS and/or MSD Recovery exceeds the control limits
E	Result exceeded calibration range.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-10 (50-52.5)
Date Collected: 03/02/15 16:50
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-1
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.23		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Benzene	**0.753**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Bromobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Bromochloromethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Bromodichloromethane	ND	*	0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Bromoform	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Bromomethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
2-Butanone (MEK)	ND		2.23		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Carbon disulfide	ND		0.223		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Carbon tetrachloride	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Chlorobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Chlorodibromomethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Chloroethane	ND		0.223		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Chloroform	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Chloromethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
2-Chlorotoluene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
4-Chlorotoluene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
cis-1,2-Dichloroethene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
cis-1,3-Dichloropropene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2-Dibromo-3-Chloropropane	ND		0.223		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2-Dibromoethane (EDB)	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Dibromomethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2-Dichlorobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,3-Dichlorobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,4-Dichlorobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Dichlorodifluoromethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,1-Dichloroethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2-Dichloroethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,1-Dichloroethene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2-Dichloropropane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,3-Dichloropropane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
2,2-Dichloropropane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,1-Dichloropropene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Ethylbenzene	**4.53**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Hexachlorobutadiene	ND		0.223		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
2-Hexanone	ND		2.23		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Isopropylbenzene	**0.307**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Methylene Chloride	ND		0.446		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
2-Methylnaphthalene	**29.7**		2.23		mg/Kg		03/02/15 16:50	03/16/15 19:41	10
4-Methyl-2-pentanone (MIBK)	ND		2.23		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Methyl tert-butyl ether	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Naphthalene	**5.72**		0.223		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
n-Butylbenzene	**2.11**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
N-Propylbenzene	**1.52**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
p-Isopropyltoluene	**0.130**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
sec-Butylbenzene	**0.141**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Styrene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
tert-Butylbenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,1,1,2-Tetrachloroethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-10 (50-52.5)
Date Collected: 03/02/15 16:50
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-1
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Tetrachloroethene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Toluene	**12.1**		0.892		mg/Kg		03/02/15 16:50	03/14/15 18:28	10
trans-1,2-Dichloroethene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
trans-1,3-Dichloropropene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2,3-Trichlorobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2,4-Trichlorobenzene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,1,1-Trichloroethane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,1,2-Trichloroethane	ND		0.223		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Trichloroethene	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Trichlorofluoromethane	ND	*	0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2,3-Trichloropropane	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
1,2,4-Trimethylbenzene	**18.3**		0.892		mg/Kg		03/02/15 16:50	03/14/15 18:28	10
1,3,5-Trimethylbenzene	**5.47**		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Vinyl chloride	ND		0.0892		mg/Kg		03/02/15 16:50	03/14/15 18:01	1
Xylenes, Total	**30.9**		1.34		mg/Kg		03/02/15 16:50	03/14/15 18:28	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*3.16*	*T J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/02/15 16:50*	*03/14/15 18:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*126*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:01*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:28*	*10*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*03/02/15 16:50*	*03/16/15 19:41*	*10*
Dibromofluoromethane (Surr)	*81*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:01*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:28*	*10*
Dibromofluoromethane (Surr)	*92*		*70 - 130*	*03/02/15 16:50*	*03/16/15 19:41*	*10*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:28*	*10*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*	*03/02/15 16:50*	*03/16/15 19:41*	*10*
Toluene-d8 (Surr)	*81*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:01*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*03/02/15 16:50*	*03/14/15 18:28*	*10*
Toluene-d8 (Surr)	*97*		*70 - 130*	*03/02/15 16:50*	*03/16/15 19:41*	*10*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**793**		8.77		mg/Kg		03/02/15 16:50	03/12/15 18:20	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*4917*	*X*	*50 - 150*	*03/02/15 16:50*	*03/12/15 18:20*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**126**		4.92		mg/Kg		03/11/15 10:09	03/13/15 07:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*87*		*50 - 150*	*03/11/15 10:09*	*03/13/15 07:22*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-10 (77.5-80)
Date Collected: 03/03/15 12:00
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-2
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1.95		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Benzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Bromobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Bromochloromethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Bromodichloromethane	ND	*	0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Bromoform	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Bromomethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
2-Butanone (MEK)	ND		1.95		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Carbon disulfide	ND		0.195		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Carbon tetrachloride	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Chlorobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Chlorodibromomethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Chloroethane	ND		0.195		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Chloroform	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Chloromethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
2-Chlorotoluene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
4-Chlorotoluene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
cis-1,2-Dichloroethene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
cis-1,3-Dichloropropene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2-Dibromo-3-Chloropropane	ND		0.195		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2-Dibromoethane (EDB)	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Dibromomethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2-Dichlorobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,3-Dichlorobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,4-Dichlorobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Dichlorodifluoromethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,1-Dichloroethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2-Dichloroethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,1-Dichloroethene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2-Dichloropropane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,3-Dichloropropane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
2,2-Dichloropropane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,1-Dichloropropene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Ethylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Hexachlorobutadiene	ND		0.195		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
2-Hexanone	ND		1.95		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Isopropylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Methylene Chloride	ND		0.389		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
2-Methylnaphthalene	**0.606**		0.195		mg/Kg		03/03/15 12:00	03/16/15 18:15	1
4-Methyl-2-pentanone (MIBK)	ND		1.95		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Methyl tert-butyl ether	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Naphthalene	ND		0.195		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
n-Butylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
N-Propylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
p-Isopropyltoluene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
sec-Butylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Styrene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
tert-Butylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,1,1,2-Tetrachloroethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1

Client Sample ID: MW-10 (77.5-80)
Date Collected: 03/03/15 12:00
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-2
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Tetrachloroethene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Toluene	**0.0806**		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
trans-1,2-Dichloroethene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
trans-1,3-Dichloropropene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2,3-Trichlorobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2,4-Trichlorobenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,1,1-Trichloroethane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,1,2-Trichloroethane	ND		0.195		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Trichloroethene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Trichlorofluoromethane	ND	*	0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2,3-Trichloropropane	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,2,4-Trimethylbenzene	**0.130**		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
1,3,5-Trimethylbenzene	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Vinyl chloride	ND		0.0778		mg/Kg		03/03/15 12:00	03/14/15 22:58	1
Xylenes, Total	**0.140**		0.117		mg/Kg		03/03/15 12:00	03/14/15 22:58	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.148*	*T J N*	*mg/Kg*		*11.85*	*90-12-0*	*03/03/15 12:00*	*03/14/15 22:58*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*03/03/15 12:00*	*03/14/15 22:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*	*03/03/15 12:00*	*03/16/15 18:15*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*03/03/15 12:00*	*03/14/15 22:58*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*03/03/15 12:00*	*03/16/15 18:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*	*03/03/15 12:00*	*03/14/15 22:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*	*03/03/15 12:00*	*03/16/15 18:15*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*03/03/15 12:00*	*03/14/15 22:58*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*03/03/15 12:00*	*03/16/15 18:15*	*1*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**5.18**		4.02		mg/Kg		03/03/15 12:00	03/12/15 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*144*		*50 - 150*	*03/03/15 12:00*	*03/12/15 20:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**14.1**		4.89		mg/Kg		03/11/15 10:09	03/13/15 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*81*		*50 - 150*	*03/11/15 10:09*	*03/13/15 07:39*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-9 (15-17.5)
Date Collected: 03/03/15 15:00
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-3
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.26		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Benzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Bromobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Bromochloromethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Bromodichloromethane	ND	*	0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Bromoform	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Bromomethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
2-Butanone (MEK)	ND		2.26		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Carbon disulfide	ND		0.226		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Carbon tetrachloride	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Chlorobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Chlorodibromomethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Chloroethane	ND		0.226		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Chloroform	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Chloromethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
2-Chlorotoluene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
4-Chlorotoluene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
cis-1,2-Dichloroethene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
cis-1,3-Dichloropropene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2-Dibromo-3-Chloropropane	ND		0.226		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2-Dibromoethane (EDB)	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Dibromomethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2-Dichlorobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,3-Dichlorobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,4-Dichlorobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Dichlorodifluoromethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,1-Dichloroethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2-Dichloroethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,1-Dichloroethene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2-Dichloropropane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,3-Dichloropropane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
2,2-Dichloropropane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,1-Dichloropropene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Ethylbenzene	**2.19**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Hexachlorobutadiene	ND		0.226		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
2-Hexanone	ND		2.26		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Isopropylbenzene	**0.520**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Methylene Chloride	ND		0.452		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
2-Methylnaphthalene	**3.78**		0.226		mg/Kg		03/03/15 15:00	03/16/15 18:44	1
4-Methyl-2-pentanone (MIBK)	ND		2.26		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Methyl tert-butyl ether	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Naphthalene	**2.29**		0.226		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
n-Butylbenzene	**1.73**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
N-Propylbenzene	**1.68**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
p-Isopropyltoluene	**0.250**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
sec-Butylbenzene	**0.305**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Styrene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
tert-Butylbenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,1,1,2-Tetrachloroethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-9 (15-17.5)
Date Collected: 03/03/15 15:00
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-3
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Tetrachloroethene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Toluene	**2.39**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
trans-1,2-Dichloroethene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
trans-1,3-Dichloropropene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2,3-Trichlorobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2,4-Trichlorobenzene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,1,1-Trichloroethane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,1,2-Trichloroethane	ND		0.226		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Trichloroethene	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Trichlorofluoromethane	ND	*	0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2,3-Trichloropropane	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
1,2,4-Trimethylbenzene	**9.61**		0.904		mg/Kg		03/03/15 15:00	03/17/15 13:33	10
1,3,5-Trimethylbenzene	**2.85**		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Vinyl chloride	ND		0.0904		mg/Kg		03/03/15 15:00	03/14/15 23:52	1
Xylenes, Total	**12.6**		1.36		mg/Kg		03/03/15 15:00	03/17/15 13:33	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*2.41*	*T J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/03/15 15:00*	*03/14/15 23:52*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*03/03/15 15:00*	*03/14/15 23:52*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/03/15 15:00*	*03/16/15 18:44*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/03/15 15:00*	*03/17/15 13:33*	*10*
Dibromofluoromethane (Surr)	*96*		*70 - 130*	*03/03/15 15:00*	*03/14/15 23:52*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*03/03/15 15:00*	*03/16/15 18:44*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*	*03/03/15 15:00*	*03/17/15 13:33*	*10*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*	*03/03/15 15:00*	*03/14/15 23:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*	*03/03/15 15:00*	*03/16/15 18:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*	*03/03/15 15:00*	*03/17/15 13:33*	*10*
Toluene-d8 (Surr)	*103*		*70 - 130*	*03/03/15 15:00*	*03/14/15 23:52*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*	*03/03/15 15:00*	*03/16/15 18:44*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*	*03/03/15 15:00*	*03/17/15 13:33*	*10*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**294**		4.51		mg/Kg		03/03/15 15:00	03/12/15 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*171*	*X*	*50 - 150*	*03/03/15 15:00*	*03/12/15 20:55*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**127**		4.87		mg/Kg		03/11/15 10:09	03/13/15 07:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*81*		*50 - 150*	*03/11/15 10:09*	*03/13/15 07:55*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-9 (77.5-80)
Date Collected: 03/04/15 11:45
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-4
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		22.1		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Benzene	**5.73**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Bromobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Bromochloromethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Bromodichloromethane	ND	F1 *	0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Bromoform	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Bromomethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
2-Butanone (MEK)	ND		22.1		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Carbon disulfide	ND		2.21		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Carbon tetrachloride	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Chlorobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Chlorodibromomethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Chloroethane	ND		2.21		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Chloroform	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Chloromethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
2-Chlorotoluene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
4-Chlorotoluene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
cis-1,2-Dichloroethene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
cis-1,3-Dichloropropene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2-Dibromo-3-Chloropropane	ND		2.21		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2-Dibromoethane (EDB)	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Dibromomethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2-Dichlorobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,3-Dichlorobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,4-Dichlorobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Dichlorodifluoromethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,1-Dichloroethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2-Dichloroethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,1-Dichloroethene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2-Dichloropropane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,3-Dichloropropane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
2,2-Dichloropropane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,1-Dichloropropene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Ethylbenzene	**8.03**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Hexachlorobutadiene	ND		2.21		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
2-Hexanone	ND		22.1		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Isopropylbenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Methylene Chloride	ND		4.43		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
2-Methylnaphthalene	**57.3**		2.21		mg/Kg		03/04/15 11:45	03/16/15 20:09	10
4-Methyl-2-pentanone (MIBK)	ND		22.1		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Methyl tert-butyl ether	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Naphthalene	**9.80**		2.21		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
n-Butylbenzene	**2.89**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
N-Propylbenzene	**2.49**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
p-Isopropyltoluene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
sec-Butylbenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Styrene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
tert-Butylbenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,1,1,2-Tetrachloroethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10

Client Sample ID: MW-9 (77.5-80)
Date Collected: 03/04/15 11:45
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-4
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Tetrachloroethene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Toluene	**13.3**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
trans-1,2-Dichloroethene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
trans-1,3-Dichloropropene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2,3-Trichlorobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2,4-Trichlorobenzene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,1,1-Trichloroethane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,1,2-Trichloroethane	ND		2.21		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Trichloroethene	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Trichlorofluoromethane	ND	*	0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2,3-Trichloropropane	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,2,4-Trimethylbenzene	**19.1**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
1,3,5-Trimethylbenzene	**5.89**		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Vinyl chloride	ND		0.885		mg/Kg		03/04/15 11:45	03/14/15 23:25	10
Xylenes, Total	**47.0**		1.33		mg/Kg		03/04/15 11:45	03/14/15 23:25	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2,2,3,3-tetramethyl-	*64.0*	*T J N*	*mg/Kg*		*3.46*	*594-82-1*	*03/04/15 11:45*	*03/14/15 23:25*	*10*
1-Methylnaphthalene	*31.9*	*T J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/04/15 11:45*	*03/14/15 23:25*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*03/04/15 11:45*	*03/14/15 23:25*	*10*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*03/04/15 11:45*	*03/16/15 20:09*	*10*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*03/04/15 11:45*	*03/14/15 23:25*	*10*
Dibromofluoromethane (Surr)	*91*		*70 - 130*	*03/04/15 11:45*	*03/16/15 20:09*	*10*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 130*	*03/04/15 11:45*	*03/14/15 23:25*	*10*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*	*03/04/15 11:45*	*03/16/15 20:09*	*10*
Toluene-d8 (Surr)	*101*		*70 - 130*	*03/04/15 11:45*	*03/14/15 23:25*	*10*
Toluene-d8 (Surr)	*98*		*70 - 130*	*03/04/15 11:45*	*03/16/15 20:09*	*10*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**1150**		7.49		mg/Kg		03/04/15 11:45	03/12/15 18:51	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*261*	*X*	*50 - 150*	*03/04/15 11:45*	*03/12/15 18:51*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**3770**		98.7		mg/Kg		03/11/15 10:09	03/13/15 09:16	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*422*	*X*	*50 - 150*	*03/11/15 10:09*	*03/13/15 09:16*	*20*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-11 (62.5-65)
Date Collected: 03/05/15 10:45
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-5
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		11.6		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Benzene	**4.43**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Bromobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Bromochloromethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Bromodichloromethane	ND	*	0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Bromoform	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Bromomethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
2-Butanone (MEK)	ND		11.6		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Carbon disulfide	ND		1.16		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Carbon tetrachloride	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Chlorobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Chlorodibromomethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Chloroethane	ND		1.16		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Chloroform	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Chloromethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
2-Chlorotoluene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
4-Chlorotoluene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
cis-1,2-Dichloroethene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
cis-1,3-Dichloropropene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2-Dibromo-3-Chloropropane	ND		1.16		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2-Dibromoethane (EDB)	**0.987**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Dibromomethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2-Dichlorobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,3-Dichlorobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,4-Dichlorobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Dichlorodifluoromethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,1-Dichloroethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2-Dichloroethane	**0.911**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,1-Dichloroethene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2-Dichloropropane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,3-Dichloropropane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
2,2-Dichloropropane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,1-Dichloropropene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Ethylbenzene	**19.1**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Hexachlorobutadiene	ND		1.16		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
2-Hexanone	ND		11.6		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Isopropylbenzene	**1.97**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Methylene Chloride	ND		2.32		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
2-Methylnaphthalene	**24.2**		1.16		mg/Kg		03/05/15 10:45	03/16/15 19:12	5
4-Methyl-2-pentanone (MIBK)	ND		11.6		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Methyl tert-butyl ether	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Naphthalene	**13.2**		1.16		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
n-Butylbenzene	**5.44**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
N-Propylbenzene	**7.66**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
p-Isopropyltoluene	**0.721**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
sec-Butylbenzene	**0.781**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Styrene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
tert-Butylbenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,1,1,2-Tetrachloroethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5

Client Sample ID: MW-11 (62.5-65)
Date Collected: 03/05/15 10:45
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-5
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Tetrachloroethene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Toluene	**41.2**		1.86		mg/Kg		03/05/15 10:45	03/17/15 13:06	20
trans-1,2-Dichloroethene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
trans-1,3-Dichloropropene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2,3-Trichlorobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2,4-Trichlorobenzene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,1,1-Trichloroethane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,1,2-Trichloroethane	ND		1.16		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Trichloroethene	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Trichlorofluoromethane	ND	*	0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2,3-Trichloropropane	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
1,2,4-Trimethylbenzene	**52.9**		1.86		mg/Kg		03/05/15 10:45	03/17/15 13:06	20
1,3,5-Trimethylbenzene	**16.6**		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Vinyl chloride	ND		0.465		mg/Kg		03/05/15 10:45	03/15/15 00:19	5
Xylenes, Total	**103**		2.79		mg/Kg		03/05/15 10:45	03/17/15 13:06	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*15.4*	*T J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/05/15 10:45*	*03/15/15 00:19*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*03/05/15 10:45*	*03/15/15 00:19*	*5*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*	*03/05/15 10:45*	*03/16/15 19:12*	*5*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*	*03/05/15 10:45*	*03/17/15 13:06*	*20*
Dibromofluoromethane (Surr)	*94*		*70 - 130*	*03/05/15 10:45*	*03/15/15 00:19*	*5*
Dibromofluoromethane (Surr)	*90*		*70 - 130*	*03/05/15 10:45*	*03/16/15 19:12*	*5*
Dibromofluoromethane (Surr)	*99*		*70 - 130*	*03/05/15 10:45*	*03/17/15 13:06*	*20*
1,2-Dichloroethane-d4 (Surr)	*126*		*70 - 130*	*03/05/15 10:45*	*03/15/15 00:19*	*5*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*	*03/05/15 10:45*	*03/16/15 19:12*	*5*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*	*03/05/15 10:45*	*03/17/15 13:06*	*20*
Toluene-d8 (Surr)	*102*		*70 - 130*	*03/05/15 10:45*	*03/15/15 00:19*	*5*
Toluene-d8 (Surr)	*97*		*70 - 130*	*03/05/15 10:45*	*03/16/15 19:12*	*5*
Toluene-d8 (Surr)	*98*		*70 - 130*	*03/05/15 10:45*	*03/17/15 13:06*	*20*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**3290**		43.4		mg/Kg		03/05/15 10:45	03/12/15 19:22	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*575*	*X*	*50 - 150*	*03/05/15 10:45*	*03/12/15 19:22*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**768**		49.8		mg/Kg		03/11/15 10:09	03/13/15 09:32	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*93*		*50 - 150*	*03/11/15 10:09*	*03/13/15 09:32*	*10*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-11 (77.5-80)
Date Collected: 03/05/15 12:20
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-6
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1.93		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Benzene	**0.213**		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Bromobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Bromochloromethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Bromodichloromethane	ND	*	0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Bromoform	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Bromomethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
2-Butanone (MEK)	ND		1.93		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Carbon disulfide	ND		0.193		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Carbon tetrachloride	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Chlorobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Chlorodibromomethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Chloroethane	ND		0.193		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Chloroform	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Chloromethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
2-Chlorotoluene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
4-Chlorotoluene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
cis-1,2-Dichloroethene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
cis-1,3-Dichloropropene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2-Dibromo-3-Chloropropane	ND		0.193		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2-Dibromoethane (EDB)	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Dibromomethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2-Dichlorobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,3-Dichlorobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,4-Dichlorobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Dichlorodifluoromethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,1-Dichloroethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2-Dichloroethane	**0.306**		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,1-Dichloroethene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2-Dichloropropane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,3-Dichloropropane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
2,2-Dichloropropane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,1-Dichloropropene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Ethylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Hexachlorobutadiene	ND		0.193		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
2-Hexanone	ND		1.93		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Isopropylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Methylene Chloride	ND		0.387		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
2-Methylnaphthalene	**0.477**		0.193		mg/Kg		03/05/15 12:20	03/16/15 17:47	1
4-Methyl-2-pentanone (MIBK)	ND		1.93		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Methyl tert-butyl ether	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Naphthalene	ND		0.193		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
n-Butylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
N-Propylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
p-Isopropyltoluene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
sec-Butylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Styrene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
tert-Butylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,1,1,2-Tetrachloroethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1

Client Sample ID: MW-11 (77.5-80)
Date Collected: 03/05/15 12:20
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-6
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Tetrachloroethene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Toluene	**0.127**		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
trans-1,2-Dichloroethene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
trans-1,3-Dichloropropene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2,3-Trichlorobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2,4-Trichlorobenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,1,1-Trichloroethane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,1,2-Trichloroethane	ND		0.193		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Trichloroethene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Trichlorofluoromethane	ND	*	0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2,3-Trichloropropane	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,2,4-Trimethylbenzene	**0.165**		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
1,3,5-Trimethylbenzene	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Vinyl chloride	ND		0.0773		mg/Kg		03/05/15 12:20	03/14/15 21:10	1
Xylenes, Total	**0.428**		0.116		mg/Kg		03/05/15 12:20	03/14/15 21:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.151*	*T J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/05/15 12:20*	*03/14/15 21:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/05/15 12:20*	*03/14/15 21:10*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*03/05/15 12:20*	*03/16/15 17:47*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*	*03/05/15 12:20*	*03/14/15 21:10*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*	*03/05/15 12:20*	*03/16/15 17:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*	*03/05/15 12:20*	*03/14/15 21:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 130*	*03/05/15 12:20*	*03/16/15 17:47*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*03/05/15 12:20*	*03/14/15 21:10*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*03/05/15 12:20*	*03/16/15 17:47*	*1*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	**33.5**		3.51		mg/Kg		03/05/15 12:20	03/12/15 21:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*198*	*X*	*50 - 150*	*03/05/15 12:20*	*03/12/15 21:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**39.7**		4.98		mg/Kg		03/11/15 10:09	03/13/15 08:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*93*		*50 - 150*	*03/11/15 10:09*	*03/13/15 08:11*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-12 (75-77.5)
Date Collected: 03/06/15 12:45
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-7
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.14		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Benzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Bromobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Bromochloromethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Bromodichloromethane	ND	*	0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Bromoform	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Bromomethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
2-Butanone (MEK)	ND		2.14		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Carbon disulfide	ND		0.214		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Carbon tetrachloride	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Chlorobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Chlorodibromomethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Chloroethane	ND		0.214		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Chloroform	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Chloromethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
2-Chlorotoluene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
4-Chlorotoluene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
cis-1,2-Dichloroethene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
cis-1,3-Dichloropropene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2-Dibromo-3-Chloropropane	ND		0.214		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2-Dibromoethane (EDB)	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Dibromomethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2-Dichlorobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,3-Dichlorobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,4-Dichlorobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Dichlorodifluoromethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,1-Dichloroethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2-Dichloroethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,1-Dichloroethene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2-Dichloropropane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,3-Dichloropropane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
2,2-Dichloropropane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,1-Dichloropropene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Ethylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Hexachlorobutadiene	ND		0.214		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
2-Hexanone	ND		2.14		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Isopropylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Methylene Chloride	ND		0.429		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
2-Methylnaphthalene	ND		0.214		mg/Kg		03/06/15 12:45	03/16/15 16:21	1
4-Methyl-2-pentanone (MIBK)	ND		2.14		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Methyl tert-butyl ether	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Naphthalene	ND		0.214		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
n-Butylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
N-Propylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
p-Isopropyltoluene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
sec-Butylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Styrene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
tert-Butylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,1,1,2-Tetrachloroethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-12 (75-77.5)
Date Collected: 03/06/15 12:45
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-7
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Tetrachloroethene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Toluene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
trans-1,2-Dichloroethene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
trans-1,3-Dichloropropene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2,3-Trichlorobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2,4-Trichlorobenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,1,1-Trichloroethane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,1,2-Trichloroethane	ND		0.214		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Trichloroethene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Trichlorofluoromethane	ND	*	0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2,3-Trichloropropane	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,2,4-Trimethylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
1,3,5-Trimethylbenzene	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Vinyl chloride	ND		0.0857		mg/Kg		03/06/15 12:45	03/14/15 21:37	1
Xylenes, Total	ND		0.129		mg/Kg		03/06/15 12:45	03/14/15 21:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.0864*	*T J N*	*mg/Kg*		*11.85*	*90-12-0*	*03/06/15 12:45*	*03/14/15 21:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*03/06/15 12:45*	*03/14/15 21:37*	*1*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*03/06/15 12:45*	*03/16/15 16:21*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*	*03/06/15 12:45*	*03/14/15 21:37*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*	*03/06/15 12:45*	*03/16/15 16:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*	*03/06/15 12:45*	*03/14/15 21:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*	*03/06/15 12:45*	*03/16/15 16:21*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*	*03/06/15 12:45*	*03/14/15 21:37*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*03/06/15 12:45*	*03/16/15 16:21*	*1*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		3.71		mg/Kg		03/06/15 12:45	03/12/15 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*144*		*50 - 150*	*03/06/15 12:45*	*03/12/15 21:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.92		mg/Kg		03/11/15 10:09	03/13/15 08:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*81*		*50 - 150*	*03/11/15 10:09*	*03/13/15 08:27*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-14 (77.5-80)
Date Collected: 03/07/15 13:00
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-8
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.38		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Benzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Bromobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Bromochloromethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Bromodichloromethane	ND	*	0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Bromoform	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Bromomethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
2-Butanone (MEK)	ND		2.38		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Carbon disulfide	ND		0.238		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Carbon tetrachloride	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Chlorobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Chlorodibromomethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Chloroethane	ND		0.238		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Chloroform	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Chloromethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
2-Chlorotoluene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
4-Chlorotoluene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
cis-1,2-Dichloroethene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
cis-1,3-Dichloropropene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2-Dibromo-3-Chloropropane	ND		0.238		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2-Dibromoethane (EDB)	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Dibromomethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2-Dichlorobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,3-Dichlorobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,4-Dichlorobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Dichlorodifluoromethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,1-Dichloroethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2-Dichloroethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,1-Dichloroethene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2-Dichloropropane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,3-Dichloropropane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
2,2-Dichloropropane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,1-Dichloropropene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Ethylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Hexachlorobutadiene	ND		0.238		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
2-Hexanone	ND		2.38		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Isopropylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Methylene Chloride	ND		0.476		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
2-Methylnaphthalene	ND		0.238		mg/Kg		03/07/15 13:00	03/16/15 16:50	1
4-Methyl-2-pentanone (MIBK)	ND		2.38		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Methyl tert-butyl ether	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Naphthalene	ND		0.238		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
n-Butylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
N-Propylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
p-Isopropyltoluene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
sec-Butylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Styrene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
tert-Butylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,1,1,2-Tetrachloroethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-14 (77.5-80)
Date Collected: 03/07/15 13:00
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-8
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Tetrachloroethene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Toluene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
trans-1,2-Dichloroethene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
trans-1,3-Dichloropropene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2,3-Trichlorobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2,4-Trichlorobenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,1,1-Trichloroethane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,1,2-Trichloroethane	ND		0.238		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Trichloroethene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Trichlorofluoromethane	ND	*	0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2,3-Trichloropropane	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,2,4-Trimethylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
1,3,5-Trimethylbenzene	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Vinyl chloride	ND		0.0951		mg/Kg		03/07/15 13:00	03/14/15 22:04	1
Xylenes, Total	ND		0.143		mg/Kg		03/07/15 13:00	03/14/15 22:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.000*	*J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/07/15 13:00*	*03/14/15 22:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*	*03/07/15 13:00*	*03/14/15 22:04*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*	*03/07/15 13:00*	*03/16/15 16:50*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*	*03/07/15 13:00*	*03/14/15 22:04*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*	*03/07/15 13:00*	*03/16/15 16:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*	*03/07/15 13:00*	*03/14/15 22:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*120*		*70 - 130*	*03/07/15 13:00*	*03/16/15 16:50*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*	*03/07/15 13:00*	*03/14/15 22:04*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*	*03/07/15 13:00*	*03/16/15 16:50*	*1*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		4.54		mg/Kg		03/07/15 13:00	03/12/15 22:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*147*		*50 - 150*	*03/07/15 13:00*	*03/12/15 22:28*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.92		mg/Kg		03/11/15 10:09	03/13/15 08:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*91*		*50 - 150*	*03/11/15 10:09*	*03/13/15 08:43*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-13 (80-82.5)
Date Collected: 03/08/15 13:10
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-9
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1.74		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Benzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Bromobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Bromochloromethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Bromodichloromethane	ND	*	0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Bromoform	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Bromomethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
2-Butanone (MEK)	ND		1.74		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Carbon disulfide	ND		0.174		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Carbon tetrachloride	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Chlorobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Chlorodibromomethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Chloroethane	ND		0.174		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Chloroform	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Chloromethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
2-Chlorotoluene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
4-Chlorotoluene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
cis-1,2-Dichloroethene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
cis-1,3-Dichloropropene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2-Dibromo-3-Chloropropane	ND		0.174		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2-Dibromoethane (EDB)	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Dibromomethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2-Dichlorobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,3-Dichlorobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,4-Dichlorobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Dichlorodifluoromethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,1-Dichloroethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2-Dichloroethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,1-Dichloroethene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2-Dichloropropane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,3-Dichloropropane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
2,2-Dichloropropane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,1-Dichloropropene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Ethylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Hexachlorobutadiene	ND		0.174		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
2-Hexanone	ND		1.74		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Isopropylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Methylene Chloride	ND		0.348		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
2-Methylnaphthalene	ND		0.174		mg/Kg		03/08/15 13:10	03/16/15 17:18	1
4-Methyl-2-pentanone (MIBK)	ND		1.74		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Methyl tert-butyl ether	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Naphthalene	ND		0.174		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
n-Butylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
N-Propylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
p-Isopropyltoluene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
sec-Butylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Styrene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
tert-Butylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,1,1,2-Tetrachloroethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-13 (80-82.5)
Date Collected: 03/08/15 13:10
Date Received: 03/11/15 10:00

Lab Sample ID: 490-73894-9
Matrix: Soil

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Tetrachloroethene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Toluene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
trans-1,2-Dichloroethene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
trans-1,3-Dichloropropene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2,3-Trichlorobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2,4-Trichlorobenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,1,1-Trichloroethane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,1,2-Trichloroethane	ND		0.174		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Trichloroethene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Trichlorofluoromethane	ND	*	0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2,3-Trichloropropane	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,2,4-Trimethylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
1,3,5-Trimethylbenzene	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Vinyl chloride	ND		0.0695		mg/Kg		03/08/15 13:10	03/14/15 22:31	1
Xylenes, Total	ND		0.104		mg/Kg		03/08/15 13:10	03/14/15 22:31	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.000*	*J N*	*mg/Kg*		*11.84*	*90-12-0*	*03/08/15 13:10*	*03/14/15 22:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*	*03/08/15 13:10*	*03/14/15 22:31*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*	*03/08/15 13:10*	*03/16/15 17:18*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*	*03/08/15 13:10*	*03/14/15 22:31*	*1*
Dibromofluoromethane (Surr)	*87*		*70 - 130*	*03/08/15 13:10*	*03/16/15 17:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*	*03/08/15 13:10*	*03/14/15 22:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*	*03/08/15 13:10*	*03/16/15 17:18*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*	*03/08/15 13:10*	*03/14/15 22:31*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*03/08/15 13:10*	*03/16/15 17:18*	*1*

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		3.97		mg/Kg		03/08/15 13:10	03/12/15 22:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*145*		*50 - 150*	*03/08/15 13:10*	*03/12/15 22:59*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		4.94		mg/Kg		03/11/15 10:09	03/13/15 09:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl (Surr)	*75*		*50 - 150*	*03/11/15 10:09*	*03/13/15 09:00*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: 490-73894-4 MS
Matrix: Soil
Analysis Batch: 233629

Client Sample ID: MW-9 (77.5-80)
Prep Type: Total/NA
Prep Batch: 232789

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		111	113.7		mg/Kg		103	19 - 175
Benzene	5.73		22.1	25.25		mg/Kg		88	31 - 143
Bromobenzene	ND		22.1	21.00		mg/Kg		95	12 - 157
Bromochloromethane	ND		22.1	18.11		mg/Kg		82	31 - 141
Bromodichloromethane	ND	F1 *	22.1	30.91	E	mg/Kg		140	19 - 148
Bromoform	ND		22.1	16.92		mg/Kg		76	10 - 165
Bromomethane	ND		22.1	11.82		mg/Kg		53	10 - 164
2-Butanone (MEK)	ND		111	106.3		mg/Kg		96	18 - 153
Carbon disulfide	ND		22.1	16.65		mg/Kg		75	32 - 144
Carbon tetrachloride	ND		22.1	20.00		mg/Kg		90	31 - 149
Chlorobenzene	ND		22.1	19.71		mg/Kg		89	25 - 152
Chlorodibromomethane	ND		22.1	18.76		mg/Kg		85	14 - 146
Chloroethane	ND		22.1	20.15		mg/Kg		91	10 - 151
Chloroform	ND		22.1	18.95		mg/Kg		86	34 - 160
Chloromethane	ND		22.1	16.98		mg/Kg		77	10 - 156
2-Chlorotoluene	ND		22.1	22.89		mg/Kg		103	20 - 156
4-Chlorotoluene	ND		22.1	22.14		mg/Kg		100	17 - 159
cis-1,2-Dichloroethene	ND		22.1	21.28		mg/Kg		96	36 - 139
cis-1,3-Dichloropropene	ND		22.1	20.98		mg/Kg		95	15 - 166
1,2-Dibromo-3-Chloropropane	ND		22.1	19.64		mg/Kg		89	10 - 147
1,2-Dibromoethane (EDB)	ND		22.1	19.51		mg/Kg		88	18 - 156
Dibromomethane	ND		22.1	16.67		mg/Kg		75	20 - 146
1,2-Dichlorobenzene	ND		22.1	20.00		mg/Kg		90	10 - 160
1,3-Dichlorobenzene	ND		22.1	19.51		mg/Kg		88	10 - 162
1,4-Dichlorobenzene	ND		22.1	19.88		mg/Kg		90	11 - 159
Dichlorodifluoromethane	ND		22.1	16.03		mg/Kg		72	10 - 143
1,1-Dichloroethane	ND		22.1	21.37		mg/Kg		97	42 - 136
1,2-Dichloroethane	ND		22.1	20.34		mg/Kg		92	28 - 138
1,1-Dichloroethene	ND		22.1	19.40		mg/Kg		88	41 - 143
1,2-Dichloropropane	ND		22.1	20.26		mg/Kg		92	20 - 146
1,3-Dichloropropane	ND		22.1	19.91		mg/Kg		90	22 - 148
2,2-Dichloropropane	ND		22.1	20.87		mg/Kg		94	33 - 148
1,1-Dichloropropene	ND		22.1	18.92		mg/Kg		85	38 - 145
Ethylbenzene	8.03		22.1	28.89		mg/Kg		94	23 - 161
Hexachlorobutadiene	ND		22.1	30.50		mg/Kg		138	10 - 171
2-Hexanone	ND		111	115.0		mg/Kg		104	10 - 169
Isopropylbenzene	ND		22.1	21.74		mg/Kg		95	23 - 181
Methylene Chloride	ND		22.1	19.28		mg/Kg		87	24 - 182
4-Methyl-2-pentanone (MIBK)	ND		111	117.8		mg/Kg		106	10 - 168
Methyl tert-butyl ether	ND		22.1	20.50		mg/Kg		93	28 - 141
Naphthalene	9.80		22.1	31.87		mg/Kg		100	10 - 176
n-Butylbenzene	2.89		22.1	25.44		mg/Kg		102	10 - 175
N-Propylbenzene	2.49		22.1	23.05		mg/Kg		93	19 - 162
p-Isopropyltoluene	ND		22.1	22.12		mg/Kg		97	12 - 168
sec-Butylbenzene	ND		22.1	21.61		mg/Kg		94	12 - 170
Styrene	ND		22.1	17.61		mg/Kg		80	10 - 165
tert-Butylbenzene	ND		22.1	20.82		mg/Kg		94	20 - 164
1,1,1,2-Tetrachloroethane	ND		22.1	18.91		mg/Kg		85	19 - 158

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-73894-4 MS — **Client Sample ID: MW-9 (77.5-80)**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 233629 — **Prep Batch: 232789**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	ND		22.1	20.31		mg/Kg		92	10 - 162
Tetrachloroethene	ND		22.1	20.20		mg/Kg		91	33 - 161
Toluene	13.3		22.1	31.79		mg/Kg		83	30 - 155
trans-1,2-Dichloroethene	ND		22.1	19.75		mg/Kg		89	39 - 140
trans-1,3-Dichloropropene	ND		22.1	19.93		mg/Kg		90	10 - 157
1,2,3-Trichlorobenzene	ND		22.1	19.87		mg/Kg		90	10 - 157
1,2,4-Trichlorobenzene	ND		22.1	20.78		mg/Kg		94	10 - 167
1,1,1-Trichloroethane	ND		22.1	20.22		mg/Kg		91	35 - 149
1,1,2-Trichloroethane	ND		22.1	19.43		mg/Kg		88	19 - 157
Trichloroethene	ND		22.1	18.20		mg/Kg		82	27 - 153
Trichlorofluoromethane	ND	*	22.1	18.68		mg/Kg		84	25 - 140
1,2,3-Trichloropropane	ND		22.1	19.38		mg/Kg		88	10 - 157
1,2,4-Trimethylbenzene	19.1		22.1	41.26		mg/Kg		100	14 - 165
1,3,5-Trimethylbenzene	5.89		22.1	26.75		mg/Kg		94	18 - 164
Vinyl chloride	ND		22.1	19.49		mg/Kg		88	20 - 141
Xylenes, Total	47.0		44.3	91.27		mg/Kg		100	25 - 162

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: 490-73894-4 MSD — **Client Sample ID: MW-9 (77.5-80)**
Matrix: Soil — **Prep Type: Total/NA**
Analysis Batch: 233629 — **Prep Batch: 232789**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		111	114.9		mg/Kg		104	19 - 175	1	50
Benzene	5.73		22.1	26.24		mg/Kg		93	31 - 143	4	50
Bromobenzene	ND		22.1	21.84		mg/Kg		99	12 - 157	4	50
Bromochloromethane	ND		22.1	18.27		mg/Kg		83	31 - 141	1	50
Bromodichloromethane	ND	F1 *	22.1	33.22	E F1	mg/Kg		150	19 - 148	7	50
Bromoform	ND		22.1	17.51		mg/Kg		79	10 - 165	3	50
Bromomethane	ND		22.1	13.69		mg/Kg		62	10 - 164	15	50
2-Butanone (MEK)	ND		111	108.6		mg/Kg		98	18 - 153	2	50
Carbon disulfide	ND		22.1	17.64		mg/Kg		80	32 - 144	6	50
Carbon tetrachloride	ND		22.1	21.36		mg/Kg		97	31 - 149	7	50
Chlorobenzene	ND		22.1	20.82		mg/Kg		94	25 - 152	5	50
Chlorodibromomethane	ND		22.1	19.91		mg/Kg		90	14 - 146	6	50
Chloroethane	ND		22.1	20.82		mg/Kg		94	10 - 151	3	50
Chloroform	ND		22.1	19.75		mg/Kg		89	34 - 160	4	49
Chloromethane	ND		22.1	18.24		mg/Kg		82	10 - 156	7	50
2-Chlorotoluene	ND		22.1	24.32		mg/Kg		110	20 - 156	6	50
4-Chlorotoluene	ND		22.1	22.85		mg/Kg		103	17 - 159	3	50
cis-1,2-Dichloroethene	ND		22.1	22.46		mg/Kg		101	36 - 139	5	50
cis-1,3-Dichloropropene	ND		22.1	21.72		mg/Kg		98	15 - 166	3	50
1,2-Dibromo-3-Chloropropane	ND		22.1	20.55		mg/Kg		93	10 - 147	5	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-73894-4 MSD
Matrix: Soil
Analysis Batch: 233629

Client Sample ID: MW-9 (77.5-80)
Prep Type: Total/NA
Prep Batch: 232789

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	ND		22.1	20.34		mg/Kg		92	18 - 156	4	50
Dibromomethane	ND		22.1	17.39		mg/Kg		79	20 - 146	4	50
1,2-Dichlorobenzene	ND		22.1	20.94		mg/Kg		95	10 - 160	5	50
1,3-Dichlorobenzene	ND		22.1	20.99		mg/Kg		95	10 - 162	7	50
1,4-Dichlorobenzene	ND		22.1	21.23		mg/Kg		96	11 - 159	7	50
Dichlorodifluoromethane	ND		22.1	16.72		mg/Kg		76	10 - 143	4	50
1,1-Dichloroethane	ND		22.1	22.42		mg/Kg		101	42 - 136	5	50
1,2-Dichloroethane	ND		22.1	21.21		mg/Kg		96	28 - 138	4	50
1,1-Dichloroethene	ND		22.1	20.71		mg/Kg		94	41 - 143	7	50
1,2-Dichloropropane	ND		22.1	21.28		mg/Kg		96	20 - 146	5	50
1,3-Dichloropropane	ND		22.1	21.51		mg/Kg		97	22 - 148	8	42
2,2-Dichloropropane	ND		22.1	21.66		mg/Kg		98	33 - 148	4	50
1,1-Dichloropropene	ND		22.1	20.31		mg/Kg		92	38 - 145	7	50
Ethylbenzene	8.03		22.1	30.38		mg/Kg		101	23 - 161	5	50
Hexachlorobutadiene	ND		22.1	34.82		mg/Kg		157	10 - 171	13	50
2-Hexanone	ND		111	121.1		mg/Kg		109	10 - 169	5	50
Isopropylbenzene	ND		22.1	23.10		mg/Kg		101	23 - 181	6	50
Methylene Chloride	ND		22.1	20.26		mg/Kg		92	24 - 182	5	50
4-Methyl-2-pentanone (MIBK)	ND		111	110.9		mg/Kg		100	10 - 168	6	50
Methyl tert-butyl ether	ND		22.1	21.36		mg/Kg		97	28 - 141	4	50
Naphthalene	9.80		22.1	34.28		mg/Kg		111	10 - 176	7	50
n-Butylbenzene	2.89		22.1	27.03		mg/Kg		109	10 - 175	6	50
N-Propylbenzene	2.49		22.1	24.17		mg/Kg		98	19 - 162	5	50
p-Isopropyltoluene	ND		22.1	23.46		mg/Kg		103	12 - 168	6	50
sec-Butylbenzene	ND		22.1	22.70		mg/Kg		99	12 - 170	5	50
Styrene	ND		22.1	18.68		mg/Kg		84	10 - 165	6	50
tert-Butylbenzene	ND		22.1	22.05		mg/Kg		100	20 - 164	6	50
1,1,1,2-Tetrachloroethane	ND		22.1	20.05		mg/Kg		91	19 - 158	6	50
1,1,2,2-Tetrachloroethane	ND		22.1	20.91		mg/Kg		94	10 - 162	3	50
Tetrachloroethene	ND		22.1	21.68		mg/Kg		98	33 - 161	7	50
Toluene	13.3		22.1	33.66		mg/Kg		92	30 - 155	6	50
trans-1,2-Dichloroethene	ND		22.1	20.80		mg/Kg		94	39 - 140	5	50
trans-1,3-Dichloropropene	ND		22.1	21.29		mg/Kg		96	10 - 157	7	50
1,2,3-Trichlorobenzene	ND		22.1	23.41		mg/Kg		106	10 - 157	16	50
1,2,4-Trichlorobenzene	ND		22.1	23.53		mg/Kg		106	10 - 167	12	50
1,1,1-Trichloroethane	ND		22.1	21.08		mg/Kg		95	35 - 149	4	50
1,1,2-Trichloroethane	ND		22.1	19.97		mg/Kg		90	19 - 157	3	50
Trichloroethene	ND		22.1	19.51		mg/Kg		88	27 - 153	7	50
Trichlorofluoromethane	ND	*	22.1	19.78		mg/Kg		89	25 - 140	6	50
1,2,3-Trichloropropane	ND		22.1	19.63		mg/Kg		89	10 - 157	1	50
1,2,4-Trimethylbenzene	19.1		22.1	42.89		mg/Kg		108	14 - 165	4	50
1,3,5-Trimethylbenzene	5.89		22.1	27.97		mg/Kg		100	18 - 164	4	50
Vinyl chloride	ND		22.1	20.30		mg/Kg		92	20 - 141	4	50
Xylenes, Total	47.0		44.3	95.65		mg/Kg		110	25 - 162	5	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-73894-4 MSD
Matrix: Soil
Analysis Batch: 233629

Client Sample ID: MW-9 (77.5-80)
Prep Type: Total/NA
Prep Batch: 232789

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*121*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: MB 490-233629/11
Matrix: Solid
Analysis Batch: 233629

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.50		mg/Kg			03/14/15 17:34	1
Benzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Bromobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Bromochloromethane	ND		0.100		mg/Kg			03/14/15 17:34	1
Bromodichloromethane	ND		0.100		mg/Kg			03/14/15 17:34	1
Bromoform	ND		0.100		mg/Kg			03/14/15 17:34	1
Bromomethane	ND		0.100		mg/Kg			03/14/15 17:34	1
2-Butanone (MEK)	ND		2.50		mg/Kg			03/14/15 17:34	1
Carbon disulfide	ND		0.250		mg/Kg			03/14/15 17:34	1
Carbon tetrachloride	ND		0.100		mg/Kg			03/14/15 17:34	1
Chlorobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Chlorodibromomethane	ND		0.100		mg/Kg			03/14/15 17:34	1
Chloroethane	ND		0.250		mg/Kg			03/14/15 17:34	1
Chloroform	ND		0.100		mg/Kg			03/14/15 17:34	1
Chloromethane	ND		0.100		mg/Kg			03/14/15 17:34	1
2-Chlorotoluene	ND		0.100		mg/Kg			03/14/15 17:34	1
4-Chlorotoluene	ND		0.100		mg/Kg			03/14/15 17:34	1
cis-1,2-Dichloroethene	ND		0.100		mg/Kg			03/14/15 17:34	1
cis-1,3-Dichloropropene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			03/14/15 17:34	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			03/14/15 17:34	1
Dibromomethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Dichlorodifluoromethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1-Dichloroethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2-Dichloroethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1-Dichloroethene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2-Dichloropropane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,3-Dichloropropane	ND		0.100		mg/Kg			03/14/15 17:34	1
2,2-Dichloropropane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1-Dichloropropene	ND		0.100		mg/Kg			03/14/15 17:34	1
Ethylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Hexachlorobutadiene	ND		0.250		mg/Kg			03/14/15 17:34	1
2-Hexanone	ND		2.50		mg/Kg			03/14/15 17:34	1
Isopropylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Methylene Chloride	ND		0.500		mg/Kg			03/14/15 17:34	1
2-Methylnaphthalene	ND		0.250		mg/Kg			03/14/15 17:34	1
4-Methyl-2-pentanone (MIBK)	ND		2.50		mg/Kg			03/14/15 17:34	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-233629/11
Matrix: Solid
Analysis Batch: 233629

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.100		mg/Kg			03/14/15 17:34	1
Naphthalene	ND		0.250		mg/Kg			03/14/15 17:34	1
n-Butylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
N-Propylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
p-Isopropyltoluene	ND		0.100		mg/Kg			03/14/15 17:34	1
sec-Butylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Styrene	ND		0.100		mg/Kg			03/14/15 17:34	1
tert-Butylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1,1,2-Tetrachloroethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1,2,2-Tetrachloroethane	ND		0.100		mg/Kg			03/14/15 17:34	1
Tetrachloroethene	ND		0.100		mg/Kg			03/14/15 17:34	1
Toluene	ND		0.100		mg/Kg			03/14/15 17:34	1
trans-1,2-Dichloroethene	ND		0.100		mg/Kg			03/14/15 17:34	1
trans-1,3-Dichloropropene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2,3-Trichlorobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1,1-Trichloroethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,1,2-Trichloroethane	ND		0.250		mg/Kg			03/14/15 17:34	1
Trichloroethene	ND		0.100		mg/Kg			03/14/15 17:34	1
Trichlorofluoromethane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2,3-Trichloropropane	ND		0.100		mg/Kg			03/14/15 17:34	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			03/14/15 17:34	1
Vinyl chloride	ND		0.100		mg/Kg			03/14/15 17:34	1
Xylenes, Total	ND		0.150		mg/Kg			03/14/15 17:34	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.0000*	*J N*	*mg/Kg*		*11.84*	*90-12-0*		*03/14/15 17:34*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/14/15 17:34*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*03/14/15 17:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*03/14/15 17:34*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/14/15 17:34*	*1*

Lab Sample ID: LCS 490-233629/9
Matrix: Solid
Analysis Batch: 233629

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	5.00	5.707		mg/Kg		114	51 - 149
Benzene	1.00	1.005		mg/Kg		101	75 - 127
Bromobenzene	1.00	1.052		mg/Kg		105	75 - 130
Bromochloromethane	1.00	0.9581		mg/Kg		96	70 - 132
Bromodichloromethane	1.00	1.577	*	mg/Kg		158	68 - 135
Bromoform	1.00	0.8701		mg/Kg		87	36 - 150
Bromomethane	1.00	0.4719		mg/Kg		47	43 - 142

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-233629/9
Matrix: Solid
Analysis Batch: 233629

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	5.00	5.323		mg/Kg		106	61 - 132
Carbon disulfide	1.00	0.9846		mg/Kg		98	74 - 135
Carbon tetrachloride	1.00	1.061		mg/Kg		106	70 - 141
Chlorobenzene	1.00	1.045		mg/Kg		105	84 - 125
Chlorodibromomethane	1.00	0.9986		mg/Kg		100	66 - 134
Chloroethane	1.00	0.7178		mg/Kg		72	53 - 144
Chloroform	1.00	0.9533		mg/Kg		95	76 - 130
Chloromethane	1.00	0.9061		mg/Kg		91	23 - 150
2-Chlorotoluene	1.00	1.007		mg/Kg		101	78 - 132
4-Chlorotoluene	1.00	1.202		mg/Kg		120	77 - 138
cis-1,2-Dichloroethene	1.00	1.135		mg/Kg		114	75 - 125
cis-1,3-Dichloropropene	1.00	1.042		mg/Kg		104	73 - 148
1,2-Dibromo-3-Chloropropane	1.00	0.9340		mg/Kg		93	49 - 142
1,2-Dibromoethane (EDB)	1.00	0.9645		mg/Kg		96	80 - 135
Dibromomethane	1.00	1.001		mg/Kg		100	71 - 130
1,2-Dichlorobenzene	1.00	1.051		mg/Kg		105	80 - 134
1,3-Dichlorobenzene	1.00	1.079		mg/Kg		108	79 - 137
1,4-Dichlorobenzene	1.00	1.074		mg/Kg		107	77 - 139
Dichlorodifluoromethane	1.00	0.8267		mg/Kg		83	12 - 144
1,1-Dichloroethane	1.00	1.056		mg/Kg		106	75 - 124
1,2-Dichloroethane	1.00	1.122		mg/Kg		112	65 - 134
1,1-Dichloroethene	1.00	1.013		mg/Kg		101	75 - 131
1,2-Dichloropropane	1.00	1.079		mg/Kg		108	69 - 120
1,3-Dichloropropane	1.00	1.070		mg/Kg		107	78 - 126
2,2-Dichloropropane	1.00	1.143		mg/Kg		114	68 - 145
1,1-Dichloropropene	1.00	1.021		mg/Kg		102	79 - 127
Ethylbenzene	1.00	1.029		mg/Kg		103	80 - 134
Hexachlorobutadiene	1.00	1.139		mg/Kg		114	65 - 148
2-Hexanone	5.00	5.799		mg/Kg		116	57 - 148
Isopropylbenzene	1.00	1.084		mg/Kg		108	80 - 150
Methylene Chloride	1.00	0.9484		mg/Kg		95	68 - 144
4-Methyl-2-pentanone (MIBK)	5.00	5.639		mg/Kg		113	59 - 138
Methyl tert-butyl ether	1.00	1.028		mg/Kg		103	70 - 136
Naphthalene	1.00	0.8539		mg/Kg		85	69 - 150
n-Butylbenzene	1.00	1.051		mg/Kg		105	72 - 152
N-Propylbenzene	1.00	1.018		mg/Kg		102	75 - 137
p-Isopropyltoluene	1.00	1.046		mg/Kg		105	77 - 141
sec-Butylbenzene	1.00	1.042		mg/Kg		104	79 - 141
Styrene	1.00	0.9216		mg/Kg		92	82 - 137
tert-Butylbenzene	1.00	1.042		mg/Kg		104	80 - 132
1,1,1,2-Tetrachloroethane	1.00	0.9664		mg/Kg		97	80 - 136
1,1,2,2-Tetrachloroethane	1.00	1.017		mg/Kg		102	66 - 134
Tetrachloroethene	1.00	1.149		mg/Kg		115	78 - 140
Toluene	1.00	1.022		mg/Kg		102	80 - 132
trans-1,2-Dichloroethene	1.00	1.056		mg/Kg		106	76 - 128
trans-1,3-Dichloropropene	1.00	1.048		mg/Kg		105	62 - 139
1,2,3-Trichlorobenzene	1.00	0.9264		mg/Kg		93	70 - 150
1,2,4-Trichlorobenzene	1.00	0.9462		mg/Kg		95	62 - 150

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-233629/9
Matrix: Solid
Analysis Batch: 233629

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	1.00	1.040		mg/Kg		104	72 - 140
1,1,2-Trichloroethane	1.00	1.083		mg/Kg		108	78 - 128
Trichloroethene	1.00	1.003		mg/Kg		100	77 - 127
Trichlorofluoromethane	1.00	0.4605	*	mg/Kg		46	50 - 140
1,2,3-Trichloropropane	1.00	0.9355		mg/Kg		94	65 - 139
1,2,4-Trimethylbenzene	1.00	1.031		mg/Kg		103	77 - 139
1,3,5-Trimethylbenzene	1.00	0.9874		mg/Kg		99	78 - 138
Vinyl chloride	1.00	0.8822		mg/Kg		88	47 - 136
Xylenes, Total	2.00	2.088		mg/Kg		104	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: MB 490-233879/20
Matrix: Solid
Analysis Batch: 233879

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.50		mg/Kg			03/16/15 15:47	1
Benzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Bromobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Bromochloromethane	ND		0.100		mg/Kg			03/16/15 15:47	1
Bromodichloromethane	ND		0.100		mg/Kg			03/16/15 15:47	1
Bromoform	ND		0.100		mg/Kg			03/16/15 15:47	1
Bromomethane	ND		0.100		mg/Kg			03/16/15 15:47	1
2-Butanone (MEK)	ND		2.50		mg/Kg			03/16/15 15:47	1
Carbon disulfide	ND		0.250		mg/Kg			03/16/15 15:47	1
Carbon tetrachloride	ND		0.100		mg/Kg			03/16/15 15:47	1
Chlorobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Chlorodibromomethane	ND		0.100		mg/Kg			03/16/15 15:47	1
Chloroethane	ND		0.250		mg/Kg			03/16/15 15:47	1
Chloroform	ND		0.100		mg/Kg			03/16/15 15:47	1
Chloromethane	ND		0.100		mg/Kg			03/16/15 15:47	1
2-Chlorotoluene	ND		0.100		mg/Kg			03/16/15 15:47	1
4-Chlorotoluene	ND		0.100		mg/Kg			03/16/15 15:47	1
cis-1,2-Dichloroethene	ND		0.100		mg/Kg			03/16/15 15:47	1
cis-1,3-Dichloropropene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			03/16/15 15:47	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			03/16/15 15:47	1
Dibromomethane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Dichlorodifluoromethane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1-Dichloroethane	ND		0.100		mg/Kg			03/16/15 15:47	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-233879/20
Matrix: Solid
Analysis Batch: 233879

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1-Dichloroethene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2-Dichloropropane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,3-Dichloropropane	NC		0.100		mg/Kg			03/16/15 15:47	1
2,2-Dichloropropane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1-Dichloropropene	ND		0.100		mg/Kg			03/16/15 15:47	1
Ethylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Hexachlorobutadiene	ND		0.250		mg/Kg			03/16/15 15:47	1
2-Hexanone	NC		2.50		mg/Kg			03/16/15 15:47	1
Isopropylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Methylene Chloride	ND		0.500		mg/Kg			03/16/15 15:47	1
2-Methylnaphthalene	ND		0.250		mg/Kg			03/16/15 15:47	1
4-Methyl-2-pentanone (MIBK)	NC		2.50		mg/Kg			03/16/15 15:47	1
Methyl tert-butyl ether	ND		0.100		mg/Kg			03/16/15 15:47	1
Naphthalene	ND		0.250		mg/Kg			03/16/15 15:47	1
n-Butylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
N-Propylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
p-Isopropyltoluene	ND		0.100		mg/Kg			03/16/15 15:47	1
sec-Butylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Styrene	ND		0.100		mg/Kg			03/16/15 15:47	1
tert-Butylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1,1,2-Tetrachloroethane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1,2,2-Tetrachloroethane	ND		0.100		mg/Kg			03/16/15 15:47	1
Tetrachloroethene	ND		0.100		mg/Kg			03/16/15 15:47	1
Toluene	ND		0.100		mg/Kg			03/16/15 15:47	1
trans-1,2-Dichloroethene	ND		0.100		mg/Kg			03/16/15 15:47	1
trans-1,3-Dichloropropene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2,3-Trichlorobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1,1-Trichloroethane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,1,2-Trichloroethane	ND		0.250		mg/Kg			03/16/15 15:47	1
Trichloroethene	ND		0.100		mg/Kg			03/16/15 15:47	1
Trichlorofluoromethane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2,3-Trichloropropane	ND		0.100		mg/Kg			03/16/15 15:47	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			03/16/15 15:47	1
Vinyl chloride	ND		0.100		mg/Kg			03/16/15 15:47	1
Xylenes, Total	ND		0.150		mg/Kg			03/16/15 15:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/16/15 15:47*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/16/15 15:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*03/16/15 15:47*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/16/15 15:47*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-233879/5
Matrix: Solid
Analysis Batch: 233879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			2.50	2.347		mg/Kg		94	75 - 127		
1,2-Dibromoethane (EDB)			2.50	2.237		mg/Kg		89	80 - 135		
1,2-Dichloroethane			2.50	2.656		mg/Kg		106	65 - 134		
Ethylbenzene			2.50	2.653		mg/Kg		106	80 - 134		
Isopropylbenzene			2.50	2.747		mg/Kg		110	80 - 150		
2-Methylnaphthalene			2.50	2.522		mg/Kg		101	24 - 150		
Methyl tert-butyl ether			2.50	2.626		mg/Kg		105	70 - 136		
Naphthalene			2.50	2.454		mg/Kg		98	69 - 150		
n-Butylbenzene			2.50	2.352		mg/Kg		94	72 - 152		
N-Propylbenzene			2.50	2.395		mg/Kg		96	75 - 137		
p-Isopropyltoluene			2.50	2.532		mg/Kg		101	77 - 141		
sec-Butylbenzene			2.50	2.453		mg/Kg		98	79 - 141		
tert-Butylbenzene			2.50	2.457		mg/Kg		98	80 - 132		
Toluene			2.50	2.324		mg/Kg		93	80 - 132		
1,2,4-Trimethylbenzene			2.50	2.520		mg/Kg		101	77 - 139		
1,3,5-Trimethylbenzene			2.50	2.473		mg/Kg		99	78 - 138		
Xylenes, Total			7.50	8.045		mg/Kg		107	80 - 137		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*89*		*70 - 130*

Lab Sample ID: LCSD 490-233879/6
Matrix: Solid
Analysis Batch: 233879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			2.50	2.383		mg/Kg		95	75 - 127	2	50
1,2-Dibromoethane (EDB)			2.50	2.268		mg/Kg		91	80 - 135	1	50
1,2-Dichloroethane			2.50	2.768		mg/Kg		111	65 - 134	4	50
Ethylbenzene			2.50	2.714		mg/Kg		109	80 - 134	2	50
Isopropylbenzene			2.50	2.744		mg/Kg		110	80 - 150	0	50
2-Methylnaphthalene			2.50	2.619		mg/Kg		105	24 - 150	4	50
Methyl tert-butyl ether			2.50	2.823		mg/Kg		113	70 - 136	7	50
Naphthalene			2.50	2.513		mg/Kg		101	69 - 150	2	50
n-Butylbenzene			2.50	2.356		mg/Kg		94	72 - 152	0	50
N-Propylbenzene			2.50	2.478		mg/Kg		99	75 - 137	3	50
p-Isopropyltoluene			2.50	2.499		mg/Kg		100	77 - 141	1	50
sec-Butylbenzene			2.50	2.457		mg/Kg		98	79 - 141	0	50
tert-Butylbenzene			2.50	2.454		mg/Kg		98	80 - 132	0	50
Toluene			2.50	2.359		mg/Kg		94	80 - 132	1	50
1,2,4-Trimethylbenzene			2.50	2.544		mg/Kg		102	77 - 139	1	50
1,3,5-Trimethylbenzene			2.50	2.528		mg/Kg		101	78 - 138	2	50
Xylenes, Total			7.50	8.132		mg/Kg		108	80 - 137	1	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-233879/6
Matrix: Solid
Analysis Batch: 233879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*
Toluene-d8 (Surr)	*90*		*70 - 130*

Lab Sample ID: MB 490-234052/8
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		2.50		mg/Kg			03/17/15 12:12	1
Benzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Bromobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Bromochloromethane	ND		0.100		mg/Kg			03/17/15 12:12	1
Bromodichloromethane	ND		0.100		mg/Kg			03/17/15 12:12	1
Bromoform	ND		0.100		mg/Kg			03/17/15 12:12	1
Bromomethane	ND		0.100		mg/Kg			03/17/15 12:12	1
2-Butanone (MEK)	ND		2.50		mg/Kg			03/17/15 12:12	1
Carbon disulfide	ND		0.250		mg/Kg			03/17/15 12:12	1
Carbon tetrachloride	ND		0.100		mg/Kg			03/17/15 12:12	1
Chlorobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Chlorodibromomethane	ND		0.100		mg/Kg			03/17/15 12:12	1
Chloroethane	ND		0.250		mg/Kg			03/17/15 12:12	1
Chloroform	ND		0.100		mg/Kg			03/17/15 12:12	1
Chloromethane	ND		0.100		mg/Kg			03/17/15 12:12	1
2-Chlorotoluene	ND		0.100		mg/Kg			03/17/15 12:12	1
4-Chlorotoluene	ND		0.100		mg/Kg			03/17/15 12:12	1
cis-1,2-Dichloroethene	ND		0.100		mg/Kg			03/17/15 12:12	1
cis-1,3-Dichloropropene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2-Dibromo-3-Chloropropane	ND		0.250		mg/Kg			03/17/15 12:12	1
1,2-Dibromoethane (EDB)	ND		0.100		mg/Kg			03/17/15 12:12	1
Dibromomethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2-Dichlorobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,3-Dichlorobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,4-Dichlorobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Dichlorodifluoromethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1-Dichloroethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2-Dichloroethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1-Dichloroethene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2-Dichloropropane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,3-Dichloropropane	ND		0.100		mg/Kg			03/17/15 12:12	1
2,2-Dichloropropane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1-Dichloropropene	ND		0.100		mg/Kg			03/17/15 12:12	1
Ethylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Hexachlorobutadiene	ND		0.250		mg/Kg			03/17/15 12:12	1
2-Hexanone	ND		2.50		mg/Kg			03/17/15 12:12	1
Isopropylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Methylene Chloride	ND		0.500		mg/Kg			03/17/15 12:12	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-234052/8
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		0.250		mg/Kg			03/17/15 12:12	1
4-Methyl-2-pentanone (MIBK)	ND		2.50		mg/Kg			03/17/15 12:12	1
Methyl tert-butyl ether	ND		0.100		mg/Kg			03/17/15 12:12	1
Naphthalene	ND		0.250		mg/Kg			03/17/15 12:12	1
n-Butylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
N-Propylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
p-Isopropyltoluene	ND		0.100		mg/Kg			03/17/15 12:12	1
sec-Butylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Styrene	ND		0.100		mg/Kg			03/17/15 12:12	1
tert-Butylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1,1,2-Tetrachloroethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1,2,2-Tetrachloroethane	ND		0.100		mg/Kg			03/17/15 12:12	1
Tetrachloroethene	ND		0.100		mg/Kg			03/17/15 12:12	1
Toluene	ND		0.100		mg/Kg			03/17/15 12:12	1
trans-1,2-Dichloroethene	ND		0.100		mg/Kg			03/17/15 12:12	1
trans-1,3-Dichloropropene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2,3-Trichlorobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2,4-Trichlorobenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1,1-Trichloroethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,1,2-Trichloroethane	ND		0.250		mg/Kg			03/17/15 12:12	1
Trichloroethene	ND		0.100		mg/Kg			03/17/15 12:12	1
Trichlorofluoromethane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2,3-Trichloropropane	ND		0.100		mg/Kg			03/17/15 12:12	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			03/17/15 12:12	1
Vinyl chloride	ND		0.100		mg/Kg			03/17/15 12:12	1
Xylenes, Total	ND		0.150		mg/Kg			03/17/15 12:12	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.0000*	*J N*	*mg/Kg*		*11.84*	*90-12-0*		*03/17/15 12:12*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/17/15 12:12*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*03/17/15 12:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*03/17/15 12:12*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*03/17/15 12:12*	*1*

Lab Sample ID: LCS 490-234052/3
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	5.00	5.527		mg/Kg		111	51 - 149
Benzene	1.00	0.8954		mg/Kg		90	75 - 127
Bromobenzene	1.00	0.9472		mg/Kg		95	75 - 130
Bromochloromethane	1.00	0.8141		mg/Kg		81	70 - 132
Bromodichloromethane	1.00	1.386	*	mg/Kg		139	68 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-234052/3
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	1.00	0.8137		mg/Kg		81	36 - 150
Bromomethane	1.00	0.5092		mg/Kg		51	43 - 142
2-Butanone (MEK)	5.00	5.488		mg/Kg		110	61 - 132
Carbon disulfide	1.00	0.8673		mg/Kg		87	74 - 135
Carbon tetrachloride	1.00	0.8841		mg/Kg		88	70 - 141
Chlorobenzene	1.00	0.9251		mg/Kg		93	84 - 125
Chlorodibromomethane	1.00	0.8509		mg/Kg		85	66 - 134
Chloroethane	1.00	0.5223	*	mg/Kg		52	53 - 144
Chloroform	1.00	0.8203		mg/Kg		82	76 - 130
Chloromethane	1.00	0.9875		mg/Kg		99	23 - 150
2-Chlorotoluene	1.00	0.9258		mg/Kg		93	78 - 132
4-Chlorotoluene	1.00	0.9936		mg/Kg		99	77 - 138
cis-1,2-Dichloroethene	1.00	1.019		mg/Kg		102	75 - 125
cis-1,3-Dichloropropene	1.00	1.028		mg/Kg		103	73 - 148
1,2-Dibromo-3-Chloropropane	1.00	0.9701		mg/Kg		97	49 - 142
1,2-Dibromoethane (EDB)	1.00	0.8782		mg/Kg		88	80 - 135
Dibromomethane	1.00	0.9002		mg/Kg		90	71 - 130
1,2-Dichlorobenzene	1.00	0.9579		mg/Kg		96	80 - 134
1,3-Dichlorobenzene	1.00	0.9567		mg/Kg		96	79 - 137
1,4-Dichlorobenzene	1.00	0.9492		mg/Kg		95	77 - 139
Dichlorodifluoromethane	1.00	0.8606		mg/Kg		86	12 - 144
1,1-Dichloroethane	1.00	0.9247		mg/Kg		92	75 - 124
1,2-Dichloroethane	1.00	0.9901		mg/Kg		99	65 - 134
1,1-Dichloroethene	1.00	0.8268		mg/Kg		83	75 - 131
1,2-Dichloropropane	1.00	0.9728		mg/Kg		97	69 - 120
1,3-Dichloropropane	1.00	0.9538		mg/Kg		95	78 - 126
2,2-Dichloropropane	1.00	0.9751		mg/Kg		98	68 - 145
1,1-Dichloropropene	1.00	0.9070		mg/Kg		91	79 - 127
Ethylbenzene	1.00	0.8931		mg/Kg		89	80 - 134
Hexachlorobutadiene	1.00	1.189		mg/Kg		119	65 - 148
2-Hexanone	5.00	5.952		mg/Kg		119	57 - 148
Isopropylbenzene	1.00	0.9137		mg/Kg		91	80 - 150
Methylene Chloride	1.00	0.8078		mg/Kg		81	68 - 144
4-Methyl-2-pentanone (MIBK)	5.00	6.333		mg/Kg		127	59 - 138
Methyl tert-butyl ether	1.00	0.9667		mg/Kg		97	70 - 136
Naphthalene	1.00	0.9703		mg/Kg		97	69 - 150
n-Butylbenzene	1.00	0.9499		mg/Kg		95	72 - 152
N-Propylbenzene	1.00	0.9022		mg/Kg		90	75 - 137
p-Isopropyltoluene	1.00	0.9526		mg/Kg		95	77 - 141
sec-Butylbenzene	1.00	0.8933		mg/Kg		89	79 - 141
tert-Butylbenzene	1.00	0.9094		mg/Kg		91	80 - 132
1,1,1,2-Tetrachloroethane	1.00	0.8201		mg/Kg		82	80 - 136
1,1,2,2-Tetrachloroethane	1.00	0.9572		mg/Kg		96	66 - 134
Tetrachloroethene	1.00	0.9958		mg/Kg		100	78 - 140
Toluene	1.00	0.8778		mg/Kg		88	80 - 132
trans-1,2-Dichloroethene	1.00	0.9073		mg/Kg		91	76 - 128
trans-1,3-Dichloropropene	1.00	0.9194		mg/Kg		92	62 - 139
1,2,3-Trichlorobenzene	1.00	0.9847		mg/Kg		98	70 - 150

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-234052/3
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	1.00	1.004		mg/Kg		100	62 - 150
1,1,1-Trichloroethane	1.00	0.8724		mg/Kg		87	72 - 140
1,1,2-Trichloroethane	1.00	0.9406		mg/Kg		94	78 - 128
Trichloroethene	1.00	0.8326		mg/Kg		83	77 - 127
Trichlorofluoromethane	1.00	0.3869	*	mg/Kg		39	50 - 140
1,2,3-Trichloropropane	1.00	0.9074		mg/Kg		91	65 - 139
1,2,4-Trimethylbenzene	1.00	0.9066		mg/Kg		91	77 - 139
1,3,5-Trimethylbenzene	1.00	0.9002		mg/Kg		90	78 - 138
Vinyl chloride	1.00	0.8581		mg/Kg		86	47 - 136
Xylenes, Total	2.00	1.837		mg/Kg		92	80 - 137

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 490-234052/4
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	5.00	5.726		mg/Kg		115	51 - 149	4	50
Benzene	1.00	0.9857		mg/Kg		99	75 - 127	10	50
Bromobenzene	1.00	1.028		mg/Kg		103	75 - 130	8	50
Bromochloromethane	1.00	0.8847		mg/Kg		88	70 - 132	8	50
Bromodichloromethane	1.00	1.465	*	mg/Kg		147	68 - 135	6	50
Bromoform	1.00	0.8862		mg/Kg		89	36 - 150	9	50
Bromomethane	1.00	0.5404		mg/Kg		54	43 - 142	6	50
2-Butanone (MEK)	5.00	5.949		mg/Kg		119	61 - 132	8	50
Carbon disulfide	1.00	0.9589		mg/Kg		96	74 - 135	10	50
Carbon tetrachloride	1.00	0.9641		mg/Kg		96	70 - 141	9	50
Chlorobenzene	1.00	1.007		mg/Kg		101	84 - 125	8	50
Chlorodibromomethane	1.00	0.9528		mg/Kg		95	66 - 134	11	50
Chloroethane	1.00	0.6396		mg/Kg		64	53 - 144	20	50
Chloroform	1.00	0.9051		mg/Kg		91	76 - 130	10	49
Chloromethane	1.00	1.034		mg/Kg		103	23 - 150	5	50
2-Chlorotoluene	1.00	0.9780		mg/Kg		98	78 - 132	5	50
4-Chlorotoluene	1.00	1.005		mg/Kg		100	77 - 138	1	50
cis-1,2-Dichloroethene	1.00	1.148		mg/Kg		115	75 - 125	12	50
cis-1,3-Dichloropropene	1.00	1.119		mg/Kg		112	73 - 148	8	50
1,2-Dibromo-3-Chloropropane	1.00	0.9685		mg/Kg		97	49 - 142	0	50
1,2-Dibromoethane (EDB)	1.00	0.9499		mg/Kg		95	80 - 135	8	50
Dibromomethane	1.00	1.002		mg/Kg		100	71 - 130	11	50
1,2-Dichlorobenzene	1.00	1.039		mg/Kg		104	80 - 134	8	50
1,3-Dichlorobenzene	1.00	1.040		mg/Kg		104	79 - 137	8	50
1,4-Dichlorobenzene	1.00	1.038		mg/Kg		104	77 - 139	9	50
Dichlorodifluoromethane	1.00	0.9759		mg/Kg		98	12 - 144	13	50

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-234052/4
Matrix: Solid
Analysis Batch: 234052

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane			1.00	0.9831		mg/Kg		98	75 - 124	6	50
1,2-Dichloroethane			1.00	1.047		mg/Kg		105	65 - 134	6	50
1,1-Dichloroethene			1.00	0.9117		mg/Kg		91	75 - 131	10	50
1,2-Dichloropropane			1.00	1.098		mg/Kg		110	69 - 120	12	50
1,3-Dichloropropane			1.00	1.032		mg/Kg		103	78 - 126	8	42
2,2-Dichloropropane			1.00	1.079		mg/Kg		108	68 - 145	10	50
1,1-Dichloropropene			1.00	1.000		mg/Kg		100	79 - 127	10	50
Ethylbenzene			1.00	0.9840		mg/Kg		98	80 - 134	10	50
Hexachlorobutadiene			1.00	1.298		mg/Kg		130	65 - 148	9	50
2-Hexanone			5.00	6.404		mg/Kg		128	57 - 148	7	50
Isopropylbenzene			1.00	1.025		mg/Kg		103	80 - 150	12	50
Methylene Chloride			1.00	0.9257		mg/Kg		93	68 - 144	14	50
4-Methyl-2-pentanone (MIBK)			5.00	6.146		mg/Kg		123	59 - 138	3	50
Methyl tert-butyl ether			1.00	1.053		mg/Kg		105	70 - 136	9	50
Naphthalene			1.00	1.024		mg/Kg		102	69 - 150	5	50
n-Butylbenzene			1.00	1.028		mg/Kg		103	72 - 152	8	50
N-Propylbenzene			1.00	0.9867		mg/Kg		99	75 - 137	9	50
p-Isopropyltoluene			1.00	1.043		mg/Kg		104	77 - 141	9	50
sec-Butylbenzene			1.00	0.9688		mg/Kg		97	79 - 141	8	50
tert-Butylbenzene			1.00	1.012		mg/Kg		101	80 - 132	11	50
1,1,1,2-Tetrachloroethane			1.00	0.9082		mg/Kg		91	80 - 136	10	50
1,1,2,2-Tetrachloroethane			1.00	1.023		mg/Kg		102	66 - 134	7	50
Tetrachloroethene			1.00	1.124		mg/Kg		112	78 - 140	12	50
Toluene			1.00	0.9758		mg/Kg		98	80 - 132	11	50
trans-1,2-Dichloroethene			1.00	1.003		mg/Kg		100	76 - 128	10	50
trans-1,3-Dichloropropene			1.00	1.026		mg/Kg		103	62 - 139	11	50
1,2,3-Trichlorobenzene			1.00	1.069		mg/Kg		107	70 - 150	8	50
1,2,4-Trichlorobenzene			1.00	1.066		mg/Kg		107	62 - 150	6	50
1,1,1-Trichloroethane			1.00	0.9728		mg/Kg		97	72 - 140	11	50
1,1,2-Trichloroethane			1.00	1.022		mg/Kg		102	78 - 128	8	50
Trichloroethene			1.00	0.9837		mg/Kg		98	77 - 127	17	50
Trichlorofluoromethane			1.00	0.4328	*	mg/Kg		43	50 - 140	11	50
1,2,3-Trichloropropane			1.00	0.9754		mg/Kg		98	65 - 139	7	50
1,2,4-Trimethylbenzene			1.00	1.007		mg/Kg		101	77 - 139	10	50
1,3,5-Trimethylbenzene			1.00	0.9942		mg/Kg		99	78 - 138	10	50
Vinyl chloride			1.00	0.9474		mg/Kg		95	47 - 136	10	50
Xylenes, Total			2.00	2.015		mg/Kg		101	80 - 137	9	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 490-233312/2
Matrix: Solid
Analysis Batch: 233312

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C6-C10	ND		5.00		mg/Kg			03/12/15 16:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*147*		*50 - 150*		*03/12/15 16:49*	*1*

Lab Sample ID: LCS 490-233312/23
Matrix: Solid
Analysis Batch: 233312

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C6-C10			10.0	9.488		mg/Kg		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*69*		*50 - 150*

Lab Sample ID: LCSD 490-233312/24
Matrix: Solid
Analysis Batch: 233312

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C6-C10			10.0	10.45		mg/Kg		105	70 - 130	10	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*102*		*50 - 150*

GC/MS VOA

Prep Batch: 232789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	5035	
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	5035	
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	5035	
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	5035	
490-73894-4 MS	MW-9 (77.5-80)	Total/NA	Soil	5035	
490-73894-4 MSD	MW-9 (77.5-80)	Total/NA	Soil	5035	
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	5035	
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	5035	
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	5035	
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	5035	
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	5035	

Analysis Batch: 233629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	8260B	232789
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	8260B	232789
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	8260B	232789
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-4 MS	MW-9 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-4 MSD	MW-9 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	8260B	232789
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	8260B	232789
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	8260B	232789
LCS 490-233629/9	Lab Control Sample	Total/NA	Solid	8260B	
MB 490-233629/11	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 233879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	8260B	232789
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	8260B	232789
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	8260B	232789
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	8260B	232789
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	8260B	232789
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	8260B	232789
LCS 490-233879/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-233879/6	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-233879/20	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 234052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	8260B	232789
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	8260B	232789
LCS 490-234052/3	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 490-234052/4	Lab Control Sample Dup	Total/NA	Solid	8260B	
MB 490-234052/8	Method Blank	Total/NA	Solid	8260B	

GC VOA

Prep Batch: 232789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	5035	
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	5035	
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	5035	
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	5035	
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	5035	
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	5035	
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	5035	
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	5035	
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	5035	

Analysis Batch: 233312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	8015B	232789
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	8015B	232789
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	8015B	232789
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	8015B	232789
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	8015B	232789
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	8015B	232789
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	8015B	232789
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	8015B	232789
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	8015B	232789
LCS 490-233312/23	Lab Control Sample	Total/NA	Solid	8015B	
LCSD 490-233312/24	Lab Control Sample Dup	Total/NA	Solid	8015B	
MB 490-233312/2	Method Blank	Total/NA	Solid	8015B	

GC Semi VOA

Prep Batch: 232788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	3550B	
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	3550B	
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	3550B	
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	3550B	
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	3550B	
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	3550B	
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	3550B	
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	3550B	
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	3550B	

Analysis Batch: 233214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-73894-1	MW-10 (50-52.5)	Total/NA	Soil	8015B	232788
490-73894-2	MW-10 (77.5-80)	Total/NA	Soil	8015B	232788
490-73894-3	MW-9 (15-17.5)	Total/NA	Soil	8015B	232788
490-73894-4	MW-9 (77.5-80)	Total/NA	Soil	8015B	232788
490-73894-5	MW-11 (62.5-65)	Total/NA	Soil	8015B	232788
490-73894-6	MW-11 (77.5-80)	Total/NA	Soil	8015B	232788
490-73894-7	MW-12 (75-77.5)	Total/NA	Soil	8015B	232788
490-73894-8	MW-14 (77.5-80)	Total/NA	Soil	8015B	232788
490-73894-9	MW-13 (80-82.5)	Total/NA	Soil	8015B	232788

Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-10 (50-52.5)

Lab Sample ID: 490-73894-1

Date Collected: 03/02/15 16:50

Matrix: Soil

Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.604 g	5.0 mL	232789	03/02/15 16:50	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.604 g	5.0 mL	233629	03/14/15 18:01	JJR	TAL NSH
Total/NA	Prep	5035			5.604 g	5.0 mL	232789	03/02/15 16:50	JLP	TAL NSH
Total/NA	Analysis	8260B		10	5.604 g	5.0 mL	233629	03/14/15 18:28	JJR	TAL NSH
Total/NA	Prep	5035			5.604 g	5.0 mL	232789	03/02/15 16:50	JLP	TAL NSH
Total/NA	Analysis	8260B		10	5.604 g	5.0 mL	233879	03/16/15 19:41	KS	TAL NSH
Total/NA	Prep	5035			5.7 g	5.0 mL	232789	03/02/15 16:50	JLP	TAL NSH
Total/NA	Analysis	8015B		2	5.7 g	5.0 mL	233312	03/12/15 18:20	AMC	TAL NSH
Total/NA	Prep	3550B			25.42 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.42 g	1 mL	233214	03/13/15 07:22	TRF	TAL NSH

Client Sample ID: MW-10 (77.5-80)

Lab Sample ID: 490-73894-2

Date Collected: 03/03/15 12:00

Matrix: Soil

Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.424 g	5.0 mL	232789	03/03/15 12:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.424 g	5.0 mL	233629	03/14/15 22:58	JJR	TAL NSH
Total/NA	Prep	5035			6.424 g	5.0 mL	232789	03/03/15 12:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.424 g	5.0 mL	233879	03/16/15 18:15	KS	TAL NSH
Total/NA	Prep	5035			6.213 g	5.0 mL	232789	03/03/15 12:00	JLP	TAL NSH
Total/NA	Analysis	8015B		1	6.213 g	5.0 mL	233312	03/12/15 20:24	AMC	TAL NSH
Total/NA	Prep	3550B			25.56 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.56 g	1 mL	233214	03/13/15 07:39	TRF	TAL NSH

Client Sample ID: MW-9 (15-17.5)

Lab Sample ID: 490-73894-3

Date Collected: 03/03/15 15:00

Matrix: Soil

Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.53 g	5.0 mL	232789	03/03/15 15:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.53 g	5.0 mL	233629	03/14/15 23:52	JJR	TAL NSH
Total/NA	Prep	5035			5.53 g	5.0 mL	232789	03/03/15 15:00	JLP	TAL NSH
Total/NA	Analysis	8260B		10	5.53 g	5.0 mL	234052	03/17/15 13:33	JJR	TAL NSH
Total/NA	Prep	5035			5.53 g	5.0 mL	232789	03/03/15 15:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.53 g	5.0 mL	233879	03/16/15 18:44	KS	TAL NSH
Total/NA	Prep	5035			5.544 g	5.0 mL	232789	03/03/15 15:00	JLP	TAL NSH
Total/NA	Analysis	8015B		1	5.544 g	5.0 mL	233312	03/12/15 20:55	AMC	TAL NSH
Total/NA	Prep	3550B			25.67 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.67 g	1 mL	233214	03/13/15 07:55	TRF	TAL NSH

Client Sample ID: MW-9 (77.5-80)

Lab Sample ID: 490-73894-4

Date Collected: 03/04/15 11:45

Matrix: Soil

Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.647 g	5.0 mL	232789	03/04/15 11:45	JLP	TAL NSH
Total/NA	Analysis	8260B		10	5.647 g	5.0 mL	233629	03/14/15 23:25	JJR	TAL NSH
Total/NA	Prep	5035			5.647 g	5.0 mL	232789	03/04/15 11:45	JLP	TAL NSH
Total/NA	Analysis	8260B		10	5.647 g	5.0 mL	233879	03/16/15 20:09	KS	TAL NSH
Total/NA	Prep	5035			6.675 g	5.0 mL	232789	03/04/15 11:45	JLP	TAL NSH
Total/NA	Analysis	8015B		2	6.675 g	5.0 mL	233312	03/12/15 18:51	AMC	TAL NSH
Total/NA	Prep	3550B			25.33 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		20	25.33 g	1 mL	233214	03/13/15 09:16	TRF	TAL NSH

Client Sample ID: MW-11 (62.5-65)

Lab Sample ID: 490-73894-5

Date Collected: 03/05/15 10:45

Matrix: Soil

Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.379 g	5.0 mL	232789	03/05/15 10:45	JLP	TAL NSH
Total/NA	Analysis	8260B		5	5.379 g	5.0 mL	233629	03/15/15 00:19	JJR	TAL NSH
Total/NA	Prep	5035			5.379 g	5.0 mL	232789	03/05/15 10:45	JLP	TAL NSH
Total/NA	Analysis	8260B		20	5.379 g	5.0 mL	234052	03/17/15 13:06	JJR	TAL NSH
Total/NA	Prep	5035			5.379 g	5.0 mL	232789	03/05/15 10:45	JLP	TAL NSH
Total/NA	Analysis	8260B		5	5.379 g	5.0 mL	233879	03/16/15 19:12	KS	TAL NSH
Total/NA	Prep	5035			5.762 g	5.0 mL	232789	03/05/15 10:45	JLP	TAL NSH
Total/NA	Analysis	8015B		10	5.762 g	5.0 mL	233312	03/12/15 19:22	AMC	TAL NSH
Total/NA	Prep	3550B			25.10 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		10	25.10 g	1 mL	233214	03/13/15 09:32	TRF	TAL NSH

Client Sample ID: MW-11 (77.5-80)

Lab Sample ID: 490-73894-6

Date Collected: 03/05/15 12:20

Matrix: Soil

Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.465 g	5.0 mL	232789	03/05/15 12:20	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.465 g	5.0 mL	233629	03/14/15 21:10	JJR	TAL NSH
Total/NA	Prep	5035			6.465 g	5.0 mL	232789	03/05/15 12:20	JLP	TAL NSH
Total/NA	Analysis	8260B		1	6.465 g	5.0 mL	233879	03/16/15 17:47	KS	TAL NSH
Total/NA	Prep	5035			7.113 g	5.0 mL	232789	03/05/15 12:20	JLP	TAL NSH
Total/NA	Analysis	8015B		1	7.113 g	5.0 mL	233312	03/12/15 21:26	AMC	TAL NSH
Total/NA	Prep	3550B			25.08 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.08 g	1 mL	233214	03/13/15 08:11	TRF	TAL NSH

Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Client Sample ID: MW-12 (75-77.5)

Lab Sample ID: 490-73894-7

Date Collected: 03/06/15 12:45
Matrix: Soil
Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.832 g	5.0 mL	232789	03/06/15 12:45	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.832 g	5.0 mL	233629	03/14/15 21:37	JJR	TAL NSH
Total/NA	Prep	5035			5.832 g	5.0 mL	232789	03/06/15 12:45	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.832 g	5.0 mL	233879	03/16/15 16:21	KS	TAL NSH
Total/NA	Prep	5035			6.747 g	5.0 mL	232789	03/06/15 12:45	JLP	TAL NSH
Total/NA	Analysis	8015B		1	6.747 g	5.0 mL	233312	03/12/15 21:57	AMC	TAL NSH
Total/NA	Prep	3550B			25.39 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.39 g	1 mL	233214	03/13/15 08:27	TRF	TAL NSH

Client Sample ID: MW-14 (77.5-80)

Lab Sample ID: 490-73894-8

Date Collected: 03/07/15 13:00
Matrix: Soil
Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.255 g	5.0 mL	232789	03/07/15 13:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.255 g	5.0 mL	233629	03/14/15 22:04	JJR	TAL NSH
Total/NA	Prep	5035			5.255 g	5.0 mL	232789	03/07/15 13:00	JLP	TAL NSH
Total/NA	Analysis	8260B		1	5.255 g	5.0 mL	233879	03/16/15 16:50	KS	TAL NSH
Total/NA	Prep	5035			5.505 g	5.0 mL	232789	03/07/15 13:00	JLP	TAL NSH
Total/NA	Analysis	8015B		1	5.505 g	5.0 mL	233312	03/12/15 22:28	AMC	TAL NSH
Total/NA	Prep	3550B			25.41 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.41 g	1 mL	233214	03/13/15 08:43	TRF	TAL NSH

Client Sample ID: MW-13 (80-82.5)

Lab Sample ID: 490-73894-9

Date Collected: 03/08/15 13:10
Matrix: Soil
Date Received: 03/11/15 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.19 g	5.0 mL	232789	03/08/15 13:10	JLP	TAL NSH
Total/NA	Analysis	8260B		1	7.19 g	5.0 mL	233629	03/14/15 22:31	JJR	TAL NSH
Total/NA	Prep	5035			7.19 g	5.0 mL	232789	03/08/15 13:10	JLP	TAL NSH
Total/NA	Analysis	8260B		1	7.19 g	5.0 mL	233879	03/16/15 17:18	KS	TAL NSH
Total/NA	Prep	5035			6.294 g	5.0 mL	232789	03/08/15 13:10	JLP	TAL NSH
Total/NA	Analysis	8015B		1	6.294 g	5.0 mL	233312	03/12/15 22:59	AMC	TAL NSH
Total/NA	Prep	3550B			25.29 g	1 mL	232788	03/11/15 10:09	LDC	TAL NSH
Total/NA	Analysis	8015B		1	25.29 g	1 mL	233214	03/13/15 09:00	TRF	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
8015B	Gasoline Range Organics - (GC)	SW846	TAL NSH
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL NSH

Protocol References:

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock 63

TestAmerica Job ID: 490-73894-1
SDG: BE14.0012.00.00003.0001

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0473	05-05-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8015B	3550B	Soil	Diesel Range Organics [C10-C28]
8015B	5035	Soil	C6-C10
8260B	5035	Soil	1,1,1,2-Tetrachloroethane
8260B	5035	Soil	1,2,4-Trichlorobenzene
8260B	5035	Soil	1,2-Dibromo-3-Chloropropane
8260B	5035	Soil	2-Methylnaphthalene
8260B	5035	Soil	Dibromomethane
8260B	5035	Soil	Hexachlorobutadiene
8260B	5035	Soil	Isopropylbenzene

Utah	NELAP	8	TN00032	07-31-15

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
8260B	5035	Soil	2-Methylnaphthalene

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-73894 Chain of Custody

Cooler Received/Opened On 3/10/2015 @ 1000

1. Tracking # 2870 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 4.0 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: (2) Front/Back

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)..NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) MBM

7. Were custody seals on containers: YES (NO) and Intact YES...NO..(NA)

Were these signed and dated correctly? YES...NO..(NA)

8. Packing mat'l used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES) (NO)..NA DA 3-11-15 DA 3-10

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA

13a. Were VOA vials received? (YES)..NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO..(NA)

14. Was there a Trip Blank in this cooler? YES..(NO)..NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used YES...NO..(NA)

16. Was residual chlorine present? YES...NO..(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) DA

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)..NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) DA

I certify that I attached a label with the unique LIMS number to each container (intial) DA

21. Were there Non-Conformance issues at login? (YES)..NO Was a NCM generated? (YES)..NO...# 490-168024

X Sample-C-6 was BIS. Saved as much of sample as possible and put in different container.

BIS = Broken in shipment

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-0954

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

3/20/2015

Client Information	Sampler: P Barlow	Lab PM: Klingensmith, Leah	Carrier Tracking No(s): 661697 52655 2870	COC No:
Client Contact: ~~Mike McVey~~ J Raucci	Phone: 505-822-9400	E-Mail: leah.klingensmith@testamericainc.com		Page: Page 1 of 1
Company: Daniel B. Stephens & Associates				Job #:

Analysis Requested

Address: 6020 Academy Dr.	Due Date Requested:	
City: Albuquerque	TAT Requested (days): Standard	
State, Zip: NM, 87109		
Phone: 505-822-9400	PO #: Purchase Order not required	
Email: ~~mmcvey@dbstephens.com~~ jraucci@dbstephens.com	DBS&A Work Order#: BE14.0012.00.00003.0001	
Project Name: Shamrock 63	Laboratory Project Account #: 49001281	
Site State: NM	SSOW#:	

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B	TPH GRO, DRO 8015B	Total Number of containers	Special Instructions/Note:
	Preservation Code:							X	X		
1	MW-10 (50-52.5)	3/2/15	1150	G	S			X	X	3	
2	MW-10 (77.5-80)	3/3/15	1200	G	S			X	X	3	
3	MW-9 (15-17.5)	3/3/15	1500	G	S			X	X	3	
4	MW-9 (77.5-80)	3/4/15	1145	G	S			X	X	3	
5	MW-11 (62.5-65)	3/5/15	1045	G	S			X	X	3	
6	MW-11 (77.5-80)	3/5/15	1220	G	S			X	X	3	
7	MW-12 (75-77.5)	3/6/15	1245	G	S			X	X	3	
8	MW-14 (77.5-80)	3/7/15	1300	G	S			X	X	3	
9	MW-13 (80-82.5)	3/8/15	1310	G	S			X	X	3	

PM 3/9/15

Loc: 490
73894

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Patrice Barlow	Date/Time: 3/9/15 1600	Company DBSA	Received by:	Date/Time: 3-10-15 1000	Company TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 4.0

Login Sample Receipt Checklist

Client: Daniel B. Stephens & Associates Inc.

Job Number: 490-73894-1
SDG Number: BE14.0012.00.00003.0001

Login Number: 73894
List Number: 1
Creator: Armstrong, Daniel

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	Received broken. Transferred to new containers with minimal or no sample loss.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-74740-1
Client Project/Site: Shamrock #63

For:
Daniel B. Stephens & Associates Inc.
208 Parker Avenue, Suite E
Durango, Colorado 81303

Attn: Mr. John Casey

Cathy Gartner

Authorized for release by:
3/31/2015 6:51:13 PM

Cathy Gartner, Project Manager I
(615)301-5041
cathy.gartner@testamericainc.com

Table of Contents

Sample Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-74740-1	MW-1	Water	03/17/15 18:22	03/19/15 09:00
490-74740-2	MW-2	Water	03/17/15 16:55	03/19/15 09:00
490-74740-3	MW-3	Water	03/17/15 14:25	03/19/15 09:00
490-74740-4	MW-4	Water	03/17/15 15:30	03/19/15 09:00
490-74740-5	MW-5	Water	03/17/15 19:00	03/19/15 09:00
490-74740-6	MW-7	Water	03/17/15 17:30	03/19/15 09:00
490-74740-7	MW-8	Water	03/17/15 13:42	03/19/15 09:00
490-74740-8	MW-11	Water	03/17/15 21:00	03/19/15 09:00
490-74740-9	MW-12	Water	03/17/15 20:10	03/19/15 09:00
490-74740-10	MW-13	Water	03/17/15 12:15	03/19/15 09:00
490-74740-11	MW-14	Water	03/17/15 13:00	03/19/15 09:00

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Job ID: 490-74740-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-74740-1

Comments
No additional comments.

Receipt
The samples were received on 3/19/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2º C.

GC/MS VOA
Method(s) 8260B: The following sample(s) was unable to be prepared and/or analyzed due to Instrument failure: (LCS 490-236980/3).

Method(s) 8260B: Surrogate recovery for the following sample(s) was outside control limits: MW-5 (490-74740-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The following sample(s) was unable to be prepared and/or analyzed due to Instrument failure: (LCS 490-236985/4).

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

GC Semi VOA
Method(s) 504.1: The continuing calibration verification (CCV) associated with batch 237394 recovered above the upper control limit for Ethylene Dibromide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-13 (490-74740-10), MW-3 (490-74740-3), MW-4 (490-74740-4), MW-8 (490-74740-7).

Method(s) 504.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 236651.

Method(s) 504.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 237536.

Method(s) 504.1: The following samples required a dilution due to the nature of the sample matrix: MW-1 (490-74740-1), MW-11 (490-74740-8), MW-14 (490-74740-11), MW-5 (490-74740-5), MW-7 (490-74740-6). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

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

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-1
Date Collected: 03/17/15 18:22
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**178**		25.0		ug/L			03/26/15 20:48	1
Benzene	**3210**		20.0		ug/L			03/27/15 18:09	20
Bromobenzene	ND		1.00		ug/L			03/26/15 20:48	1
Bromochloromethane	ND		1.00		ug/L			03/26/15 20:48	1
Bromodichloromethane	ND		1.00		ug/L			03/26/15 20:48	1
Bromoform	ND		1.00		ug/L			03/26/15 20:48	1
Bromomethane	ND		1.00		ug/L			03/26/15 20:48	1
2-Butanone (MEK)	**83.9**		50.0		ug/L			03/26/15 20:48	1
Carbon disulfide	ND		1.00		ug/L			03/26/15 20:48	1
Carbon tetrachloride	ND		1.00		ug/L			03/26/15 20:48	1
Chlorobenzene	ND		1.00		ug/L			03/26/15 20:48	1
Chlorodibromomethane	ND		1.00		ug/L			03/26/15 20:48	1
Chloroethane	ND		1.00		ug/L			03/26/15 20:48	1
Chloroform	**15.7**		1.00		ug/L			03/26/15 20:48	1
Chloromethane	ND		1.00		ug/L			03/26/15 20:48	1
2-Chlorotoluene	ND		1.00		ug/L			03/26/15 20:48	1
4-Chlorotoluene	ND		1.00		ug/L			03/26/15 20:48	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 20:48	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 20:48	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/26/15 20:48	1
1,2-Dibromoethane (EDB)	**26.2**		1.00		ug/L			03/26/15 20:48	1
Dibromomethane	ND		1.00		ug/L			03/26/15 20:48	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/26/15 20:48	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/26/15 20:48	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/26/15 20:48	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/26/15 20:48	1
1,1-Dichloroethane	ND		1.00		ug/L			03/26/15 20:48	1
1,2-Dichloroethane	ND		1.00		ug/L			03/26/15 20:48	1
1,1-Dichloroethene	ND		1.00		ug/L			03/26/15 20:48	1
1,2-Dichloropropane	**15.0**		1.00		ug/L			03/26/15 20:48	1
1,3-Dichloropropane	ND		1.00		ug/L			03/26/15 20:48	1
2,2-Dichloropropane	ND		1.00		ug/L			03/26/15 20:48	1
1,1-Dichloropropene	ND		1.00		ug/L			03/26/15 20:48	1
Ethylbenzene	**58.9**		1.00		ug/L			03/26/15 20:48	1
Hexachlorobutadiene	ND		2.00		ug/L			03/26/15 20:48	1
2-Hexanone	ND		10.0		ug/L			03/26/15 20:48	1
Isopropylbenzene	**14.6**		1.00		ug/L			03/26/15 20:48	1
Methylene Chloride	ND		5.00		ug/L			03/26/15 20:48	1
2-Methylnaphthalene	**104**		50.0		ug/L			03/27/15 19:29	5
4-Methyl-2-pentanone (MIBK)	**68.3**		10.0		ug/L			03/26/15 20:48	1
Methyl tert-butyl ether	**1810**		20.0		ug/L			03/27/15 18:09	20
Naphthalene	**160**		5.00		ug/L			03/26/15 20:48	1
n-Butylbenzene	ND		1.00		ug/L			03/26/15 20:48	1
N-Propylbenzene	**31.7**		1.00		ug/L			03/26/15 20:48	1
p-Isopropyltoluene	**1.93**		1.00		ug/L			03/26/15 20:48	1
sec-Butylbenzene	**2.01**		1.00		ug/L			03/26/15 20:48	1
Styrene	ND		1.00		ug/L			03/26/15 20:48	1
tert-Butylbenzene	ND		1.00		ug/L			03/26/15 20:48	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 20:48	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-1
Date Collected: 03/17/15 18:22
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	**3.33**		1.00		ug/L			03/26/15 20:48	1
Tetrachloroethene	ND		1.00		ug/L			03/26/15 20:48	1
Toluene	**380**		20.0		ug/L			03/27/15 18:09	20
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 20:48	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 20:48	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/26/15 20:48	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/26/15 20:48	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/26/15 20:48	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/26/15 20:48	1
Trichloroethene	ND		1.00		ug/L			03/26/15 20:48	1
Trichlorofluoromethane	ND		1.00		ug/L			03/26/15 20:48	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/26/15 20:48	1
1,2,4-Trimethylbenzene	**370**		20.0		ug/L			03/27/15 18:09	20
1,3,5-Trimethylbenzene	**141**		1.00		ug/L			03/26/15 20:48	1
Vinyl chloride	ND		1.00		ug/L			03/26/15 20:48	1
Xylenes, Total	**1850**		40.0		ug/L			03/27/15 18:09	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*58.1*	*T J*	*ug/L*		*12.41*			*03/26/15 20:48*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/26/15 20:48*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 18:09*	*20*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 19:29*	*5*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/26/15 20:48*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/27/15 18:09*	*20*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/27/15 19:29*	*5*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*03/26/15 20:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*03/27/15 18:09*	*20*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*03/27/15 19:29*	*5*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/26/15 20:48*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*03/27/15 18:09*	*20*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 19:29*	*5*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**36.5**		1.98		ug/L		03/26/15 12:47	03/31/15 14:41	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*0*	*X*	*50 - 150*	*03/26/15 12:47*	*03/31/15 14:41*	*100*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-2
Date Collected: 03/17/15 16:55
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/26/15 21:16	1
Benzene	**1140**		10.0		ug/L			03/27/15 18:36	10
Bromobenzene	ND		1.00		ug/L			03/26/15 21:16	1
Bromochloromethane	ND		1.00		ug/L			03/26/15 21:16	1
Bromodichloromethane	ND		1.00		ug/L			03/26/15 21:16	1
Bromoform	ND		1.00		ug/L			03/26/15 21:16	1
Bromomethane	ND		1.00		ug/L			03/26/15 21:16	1
2-Butanone (MEK)	ND		50.0		ug/L			03/26/15 21:16	1
Carbon disulfide	ND		1.00		ug/L			03/26/15 21:16	1
Carbon tetrachloride	ND		1.00		ug/L			03/26/15 21:16	1
Chlorobenzene	ND		1.00		ug/L			03/26/15 21:16	1
Chlorodibromomethane	ND		1.00		ug/L			03/26/15 21:16	1
Chloroethane	ND		1.00		ug/L			03/26/15 21:16	1
Chloroform	**8.75**		1.00		ug/L			03/26/15 21:16	1
Chloromethane	ND		1.00		ug/L			03/26/15 21:16	1
2-Chlorotoluene	ND		1.00		ug/L			03/26/15 21:16	1
4-Chlorotoluene	ND		1.00		ug/L			03/26/15 21:16	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 21:16	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 21:16	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/26/15 21:16	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/26/15 21:16	1
Dibromomethane	ND		1.00		ug/L			03/26/15 21:16	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/26/15 21:16	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/26/15 21:16	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/26/15 21:16	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/26/15 21:16	1
1,1-Dichloroethane	ND		1.00		ug/L			03/26/15 21:16	1
1,2-Dichloroethane	ND		1.00		ug/L			03/26/15 21:16	1
1,1-Dichloroethene	ND		1.00		ug/L			03/26/15 21:16	1
1,2-Dichloropropane	**3.48**		1.00		ug/L			03/26/15 21:16	1
1,3-Dichloropropane	ND		1.00		ug/L			03/26/15 21:16	1
2,2-Dichloropropane	ND		1.00		ug/L			03/26/15 21:16	1
1,1-Dichloropropene	ND		1.00		ug/L			03/26/15 21:16	1
Ethylbenzene	**2.10**		1.00		ug/L			03/26/15 21:16	1
Hexachlorobutadiene	ND		2.00		ug/L			03/26/15 21:16	1
2-Hexanone	ND		10.0		ug/L			03/26/15 21:16	1
Isopropylbenzene	**7.95**		1.00		ug/L			03/26/15 21:16	1
Methylene Chloride	ND		5.00		ug/L			03/26/15 21:16	1
2-Methylnaphthalene	**15.5**		10.0		ug/L			03/27/15 19:01	1
4-Methyl-2-pentanone (MIBK)	**19.6**		10.0		ug/L			03/26/15 21:16	1
Methyl tert-butyl ether	**447**		10.0		ug/L			03/27/15 18:36	10
Naphthalene	**6.52**		5.00		ug/L			03/26/15 21:16	1
n-Butylbenzene	ND		1.00		ug/L			03/26/15 21:16	1
N-Propylbenzene	**7.09**		1.00		ug/L			03/26/15 21:16	1
p-Isopropyltoluene	**1.53**		1.00		ug/L			03/26/15 21:16	1
sec-Butylbenzene	**1.93**		1.00		ug/L			03/26/15 21:16	1
Styrene	ND		1.00		ug/L			03/26/15 21:16	1
tert-Butylbenzene	ND		1.00		ug/L			03/26/15 21:16	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 21:16	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-2
Date Collected: 03/17/15 16:55
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 21:16	1
Tetrachloroethene	ND		1.00		ug/L			03/26/15 21:16	1
Toluene	**30.7**		1.00		ug/L			03/26/15 21:16	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 21:16	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 21:16	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/26/15 21:16	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/26/15 21:16	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/26/15 21:16	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/26/15 21:16	1
Trichloroethene	ND		1.00		ug/L			03/26/15 21:16	1
Trichlorofluoromethane	ND		1.00		ug/L			03/26/15 21:16	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/26/15 21:16	1
1,2,4-Trimethylbenzene	**30.1**		1.00		ug/L			03/26/15 21:16	1
1,3,5-Trimethylbenzene	**27.0**		1.00		ug/L			03/26/15 21:16	1
Vinyl chloride	ND		1.00		ug/L			03/26/15 21:16	1
Xylenes, Total	**91.9**		20.0		ug/L			03/27/15 18:36	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*11.2*	*T J*	*ug/L*		*12.41*			*03/26/15 21:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/26/15 21:16*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*03/27/15 18:36*	*10*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/27/15 19:01*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*03/26/15 21:16*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/27/15 18:36*	*10*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/27/15 19:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*03/26/15 21:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 18:36*	*10*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*03/27/15 19:01*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/26/15 21:16*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*03/27/15 18:36*	*10*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/27/15 19:01*	*1*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**0.133**		0.0195		ug/L		03/26/15 12:47	03/31/15 11:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*127*		*50 - 150*	*03/26/15 12:47*	*03/31/15 11:12*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-3
Date Collected: 03/17/15 14:25
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/26/15 21:44	1
Benzene	**62.1**		1.00		ug/L			03/26/15 21:44	1
Bromobenzene	ND		1.00		ug/L			03/26/15 21:44	1
Bromochloromethane	ND		1.00		ug/L			03/26/15 21:44	1
Bromodichloromethane	ND		1.00		ug/L			03/26/15 21:44	1
Bromoform	ND		1.00		ug/L			03/26/15 21:44	1
Bromomethane	ND		1.00		ug/L			03/26/15 21:44	1
2-Butanone (MEK)	ND		50.0		ug/L			03/26/15 21:44	1
Carbon disulfide	ND		1.00		ug/L			03/26/15 21:44	1
Carbon tetrachloride	ND		1.00		ug/L			03/26/15 21:44	1
Chlorobenzene	ND		1.00		ug/L			03/26/15 21:44	1
Chlorodibromomethane	ND		1.00		ug/L			03/26/15 21:44	1
Chloroethane	ND		1.00		ug/L			03/26/15 21:44	1
Chloroform	ND		1.00		ug/L			03/26/15 21:44	1
Chloromethane	ND		1.00		ug/L			03/26/15 21:44	1
2-Chlorotoluene	ND		1.00		ug/L			03/26/15 21:44	1
4-Chlorotoluene	ND		1.00		ug/L			03/26/15 21:44	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 21:44	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 21:44	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/26/15 21:44	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/26/15 21:44	1
Dibromomethane	ND		1.00		ug/L			03/26/15 21:44	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/26/15 21:44	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/26/15 21:44	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/26/15 21:44	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/26/15 21:44	1
1,1-Dichloroethane	ND		1.00		ug/L			03/26/15 21:44	1
1,2-Dichloroethane	ND		1.00		ug/L			03/26/15 21:44	1
1,1-Dichloroethene	ND		1.00		ug/L			03/26/15 21:44	1
1,2-Dichloropropane	ND		1.00		ug/L			03/26/15 21:44	1
1,3-Dichloropropane	ND		1.00		ug/L			03/26/15 21:44	1
2,2-Dichloropropane	ND		1.00		ug/L			03/26/15 21:44	1
1,1-Dichloropropene	ND		1.00		ug/L			03/26/15 21:44	1
Ethylbenzene	ND		1.00		ug/L			03/26/15 21:44	1
Hexachlorobutadiene	ND		2.00		ug/L			03/26/15 21:44	1
2-Hexanone	ND		10.0		ug/L			03/26/15 21:44	1
Isopropylbenzene	**5.03**		1.00		ug/L			03/26/15 21:44	1
Methylene Chloride	**50.0**		5.00		ug/L			03/26/15 21:44	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 18:04	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/26/15 21:44	1
Methyl tert-butyl ether	**413**		10.0		ug/L			03/27/15 19:04	10
Naphthalene	ND		5.00		ug/L			03/26/15 21:44	1
n-Butylbenzene	**1.81**		1.00		ug/L			03/26/15 21:44	1
N-Propylbenzene	**1.29**		1.00		ug/L			03/26/15 21:44	1
p-Isopropyltoluene	ND		1.00		ug/L			03/26/15 21:44	1
sec-Butylbenzene	ND		1.00		ug/L			03/26/15 21:44	1
Styrene	ND		1.00		ug/L			03/26/15 21:44	1
tert-Butylbenzene	ND		1.00		ug/L			03/26/15 21:44	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 21:44	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-3
Date Collected: 03/17/15 14:25
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 21:44	1
Tetrachloroethene	ND		1.00		ug/L			03/26/15 21:44	1
Toluene	ND		1.00		ug/L			03/26/15 21:44	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 21:44	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 21:44	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/26/15 21:44	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/26/15 21:44	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/26/15 21:44	1
1,1,2-Trichloroethane	**12.8**		1.00		ug/L			03/26/15 21:44	1
Trichloroethene	ND		1.00		ug/L			03/26/15 21:44	1
Trichlorofluoromethane	ND		1.00		ug/L			03/26/15 21:44	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/26/15 21:44	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/26/15 21:44	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/26/15 21:44	1
Vinyl chloride	ND		1.00		ug/L			03/26/15 21:44	1
Xylenes, Total	**7.83**		2.00		ug/L			03/26/15 21:44	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*1.26*	*T J*	*ug/L*		*12.41*			*03/26/15 21:44*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/26/15 21:44*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 18:04*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/27/15 19:04*	*10*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*03/26/15 21:44*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*03/27/15 18:04*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/27/15 19:04*	*10*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*03/26/15 21:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*03/27/15 18:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 19:04*	*10*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/26/15 21:44*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 18:04*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/27/15 19:04*	*10*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.0201		ug/L		03/26/15 12:47	03/31/15 03:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*143*		*50 - 150*	*03/26/15 12:47*	*03/31/15 03:03*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-4
Date Collected: 03/17/15 15:30
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 15:49	1
Benzene	ND		1.00		ug/L			03/27/15 15:49	1
Bromobenzene	ND		1.00		ug/L			03/27/15 15:49	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 15:49	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 15:49	1
Bromoform	ND		1.00		ug/L			03/27/15 15:49	1
Bromomethane	ND		1.00		ug/L			03/27/15 15:49	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 15:49	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 15:49	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 15:49	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 15:49	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 15:49	1
Chloroethane	ND		1.00		ug/L			03/27/15 15:49	1
Chloroform	ND		1.00		ug/L			03/27/15 15:49	1
Chloromethane	ND		1.00		ug/L			03/27/15 15:49	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 15:49	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 15:49	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 15:49	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 15:49	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 15:49	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/27/15 15:49	1
Dibromomethane	ND		1.00		ug/L			03/27/15 15:49	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:49	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:49	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:49	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 15:49	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 15:49	1
1,2-Dichloroethane	**1.32**		1.00		ug/L			03/27/15 15:49	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 15:49	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 15:49	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 15:49	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 15:49	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 15:49	1
Ethylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 15:49	1
2-Hexanone	ND		10.0		ug/L			03/27/15 15:49	1
Isopropylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 15:49	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 16:11	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/27/15 15:49	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/27/15 15:49	1
Naphthalene	ND		5.00		ug/L			03/27/15 15:49	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
N-Propylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 15:49	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
Styrene	ND		1.00		ug/L			03/27/15 15:49	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 15:49	1

Client Sample ID: MW-4
Date Collected: 03/17/15 15:30
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 15:49	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 15:49	1
Toluene	ND		1.00		ug/L			03/27/15 15:49	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 15:49	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 15:49	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 15:49	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 15:49	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 15:49	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 15:49	1
Trichloroethene	ND		1.00		ug/L			03/27/15 15:49	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 15:49	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 15:49	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/27/15 15:49	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 15:49	1
Xylenes, Total	ND		2.00		ug/L			03/27/15 15:49	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.165*	*T J*	*ug/L*		*12.41*			*03/26/15 22:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/26/15 22:12*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/27/15 15:49*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*03/27/15 16:11*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/26/15 22:12*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*03/27/15 15:49*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/27/15 16:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*03/26/15 22:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*03/27/15 15:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*03/27/15 16:11*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/26/15 22:12*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/27/15 15:49*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 16:11*	*1*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.0200		ug/L		03/26/15 12:47	03/31/15 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*124*		*50 - 150*	*03/26/15 12:47*	*03/31/15 03:20*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-5
Date Collected: 03/17/15 19:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**249**		25.0		ug/L			03/26/15 22:40	1
Benzene	**3200**		50.0		ug/L			03/27/15 19:32	50
Bromobenzene	ND		1.00		ug/L			03/26/15 22:40	1
Bromochloromethane	ND		1.00		ug/L			03/26/15 22:40	1
Bromodichloromethane	ND		1.00		ug/L			03/26/15 22:40	1
Bromoform	ND		1.00		ug/L			03/26/15 22:40	1
Bromomethane	ND		1.00		ug/L			03/26/15 22:40	1
2-Butanone (MEK)	**85.7**		50.0		ug/L			03/26/15 22:40	1
Carbon disulfide	ND		1.00		ug/L			03/26/15 22:40	1
Carbon tetrachloride	ND		1.00		ug/L			03/26/15 22:40	1
Chlorobenzene	ND		1.00		ug/L			03/26/15 22:40	1
Chlorodibromomethane	ND		1.00		ug/L			03/26/15 22:40	1
Chloroethane	**1.68**		1.00		ug/L			03/26/15 22:40	1
Chloroform	ND		1.00		ug/L			03/26/15 22:40	1
Chloromethane	**1.71**		1.00		ug/L			03/26/15 22:40	1
2-Chlorotoluene	ND		1.00		ug/L			03/26/15 22:40	1
4-Chlorotoluene	ND		1.00		ug/L			03/26/15 22:40	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 22:40	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 22:40	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/26/15 22:40	1
1,2-Dibromoethane (EDB)	**458**		50.0		ug/L			03/27/15 19:32	50
Dibromomethane	ND		1.00		ug/L			03/26/15 22:40	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/26/15 22:40	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/26/15 22:40	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/26/15 22:40	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/26/15 22:40	1
1,1-Dichloroethane	ND		1.00		ug/L			03/26/15 22:40	1
1,2-Dichloroethane	ND		50.0		ug/L			03/27/15 19:32	50
1,1-Dichloroethene	ND		1.00		ug/L			03/26/15 22:40	1
1,2-Dichloropropane	**29.5**		1.00		ug/L			03/26/15 22:40	1
1,3-Dichloropropane	ND		1.00		ug/L			03/26/15 22:40	1
2,2-Dichloropropane	ND		1.00		ug/L			03/26/15 22:40	1
1,1-Dichloropropene	ND		1.00		ug/L			03/26/15 22:40	1
Ethylbenzene	**745**		50.0		ug/L			03/27/15 19:32	50
Hexachlorobutadiene	ND		2.00		ug/L			03/26/15 22:40	1
2-Hexanone	ND		10.0		ug/L			03/26/15 22:40	1
Isopropylbenzene	**24.7**		1.00		ug/L			03/26/15 22:40	1
Methylene Chloride	ND		5.00		ug/L			03/26/15 22:40	1
2-Methylnaphthalene	**394**		100		ug/L			03/27/15 19:58	10
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/26/15 22:40	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/26/15 22:40	1
Naphthalene	**519**		250		ug/L			03/27/15 19:32	50
n-Butylbenzene	ND		1.00		ug/L			03/26/15 22:40	1
N-Propylbenzene	**93.2**		1.00		ug/L			03/26/15 22:40	1
p-Isopropyltoluene	**3.53**		1.00		ug/L			03/26/15 22:40	1
sec-Butylbenzene	**4.13**		1.00		ug/L			03/26/15 22:40	1
Styrene	ND		1.00		ug/L			03/26/15 22:40	1
tert-Butylbenzene	ND		1.00		ug/L			03/26/15 22:40	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 22:40	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-5
Date Collected: 03/17/15 19:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-5
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 22:40	1
Tetrachloroethene	ND		1.00		ug/L			03/26/15 22:40	1
Toluene	**4890**		50.0		ug/L			03/27/15 19:32	50
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 22:40	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 22:40	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/26/15 22:40	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/26/15 22:40	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/26/15 22:40	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/26/15 22:40	1
Trichloroethene	ND		1.00		ug/L			03/26/15 22:40	1
Trichlorofluoromethane	ND		1.00		ug/L			03/26/15 22:40	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/26/15 22:40	1
1,2,4-Trimethylbenzene	**1040**		50.0		ug/L			03/27/15 19:32	50
1,3,5-Trimethylbenzene	**314**		50.0		ug/L			03/27/15 19:32	50
Vinyl chloride	ND		1.00		ug/L			03/26/15 22:40	1
Xylenes, Total	**5730**		100		ug/L			03/27/15 19:32	50

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*0.000*	*J*	*ug/L*					*03/26/15 22:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*137*	*X*	*70 - 130*		*03/26/15 22:40*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 19:32*	*50*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*03/27/15 19:58*	*10*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/26/15 22:40*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*03/27/15 19:32*	*50*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/27/15 19:58*	*10*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*03/26/15 22:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*		*03/27/15 19:32*	*50*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 19:58*	*10*
Toluene-d8 (Surr)	*110*		*70 - 130*		*03/26/15 22:40*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/27/15 19:32*	*50*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 19:58*	*10*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**711**		20.0		ug/L		03/26/15 12:47	03/31/15 14:59	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*0*	*X*	*50 - 150*	*03/26/15 12:47*	*03/31/15 14:59*	*1000*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-7
Date Collected: 03/17/15 17:30
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/26/15 23:08	1
Benzene	**2580**		20.0		ug/L			03/27/15 20:00	20
Bromobenzene	ND		1.00		ug/L			03/26/15 23:08	1
Bromochloromethane	ND		1.00		ug/L			03/26/15 23:08	1
Bromodichloromethane	ND		1.00		ug/L			03/26/15 23:08	1
Bromoform	ND		1.00		ug/L			03/26/15 23:08	1
Bromomethane	ND		1.00		ug/L			03/26/15 23:08	1
2-Butanone (MEK)	**50.4**		50.0		ug/L			03/26/15 23:08	1
Carbon disulfide	ND		1.00		ug/L			03/26/15 23:08	1
Carbon tetrachloride	ND		1.00		ug/L			03/26/15 23:08	1
Chlorobenzene	ND		1.00		ug/L			03/26/15 23:08	1
Chlorodibromomethane	ND		1.00		ug/L			03/26/15 23:08	1
Chloroethane	**1.97**		1.00		ug/L			03/26/15 23:08	1
Chloroform	**1.29**		1.00		ug/L			03/26/15 23:08	1
Chloromethane	ND		1.00		ug/L			03/26/15 23:08	1
2-Chlorotoluene	ND		1.00		ug/L			03/26/15 23:08	1
4-Chlorotoluene	ND		1.00		ug/L			03/26/15 23:08	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 23:08	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 23:08	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/26/15 23:08	1
1,2-Dibromoethane (EDB)	**195**		1.00		ug/L			03/26/15 23:08	1
Dibromomethane	ND		1.00		ug/L			03/26/15 23:08	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/26/15 23:08	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/26/15 23:08	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/26/15 23:08	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/26/15 23:08	1
1,1-Dichloroethane	ND		1.00		ug/L			03/26/15 23:08	1
1,2-Dichloroethane	ND		20.0		ug/L			03/27/15 20:00	20
1,1-Dichloroethene	ND		1.00		ug/L			03/26/15 23:08	1
1,2-Dichloropropane	**27.7**		1.00		ug/L			03/26/15 23:08	1
1,3-Dichloropropane	ND		1.00		ug/L			03/26/15 23:08	1
2,2-Dichloropropane	ND		1.00		ug/L			03/26/15 23:08	1
1,1-Dichloropropene	ND		1.00		ug/L			03/26/15 23:08	1
Ethylbenzene	**660**		20.0		ug/L			03/27/15 20:00	20
Hexachlorobutadiene	ND		2.00		ug/L			03/26/15 23:08	1
2-Hexanone	ND		10.0		ug/L			03/26/15 23:08	1
Isopropylbenzene	**19.5**		1.00		ug/L			03/26/15 23:08	1
Methylene Chloride	ND		5.00		ug/L			03/26/15 23:08	1
2-Methylnaphthalene	**639**		100		ug/L			03/27/15 20:26	10
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/26/15 23:08	1
Methyl tert-butyl ether	**66.9**		1.00		ug/L			03/26/15 23:08	1
Naphthalene	**466**		100		ug/L			03/27/15 20:00	20
n-Butylbenzene	**24.3**		1.00		ug/L			03/26/15 23:08	1
N-Propylbenzene	**67.4**		1.00		ug/L			03/26/15 23:08	1
p-Isopropyltoluene	**3.18**		1.00		ug/L			03/26/15 23:08	1
sec-Butylbenzene	**3.31**		1.00		ug/L			03/26/15 23:08	1
Styrene	ND		1.00		ug/L			03/26/15 23:08	1
tert-Butylbenzene	ND		1.00		ug/L			03/26/15 23:08	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 23:08	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-7
Date Collected: 03/17/15 17:30
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-6
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 23:08	1
Tetrachloroethene	ND		1.00		ug/L			03/26/15 23:08	1
Toluene	**2790**		20.0		ug/L			03/27/15 20:00	20
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 23:08	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 23:08	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/26/15 23:08	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/26/15 23:08	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/26/15 23:08	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/26/15 23:08	1
Trichloroethene	ND		1.00		ug/L			03/26/15 23:08	1
Trichlorofluoromethane	ND		1.00		ug/L			03/26/15 23:08	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/26/15 23:08	1
1,2,4-Trimethylbenzene	**994**		20.0		ug/L			03/27/15 20:00	20
1,3,5-Trimethylbenzene	**181**		1.00		ug/L			03/26/15 23:08	1
Vinyl chloride	ND		1.00		ug/L			03/26/15 23:08	1
Xylenes, Total	**4270**		40.0		ug/L			03/27/15 20:00	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*259*	*T J*	*ug/L*		*12.41*			*03/26/15 23:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*		*03/26/15 23:08*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/27/15 20:00*	*20*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/27/15 20:26*	*10*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*03/26/15 23:08*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/27/15 20:00*	*20*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/27/15 20:26*	*10*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*03/26/15 23:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*		*03/27/15 20:00*	*20*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*03/27/15 20:26*	*10*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/26/15 23:08*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/27/15 20:00*	*20*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 20:26*	*10*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**256**		9.80		ug/L		03/26/15 12:47	03/31/15 15:17	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*0*	*X*	*50 - 150*	*03/26/15 12:47*	*03/31/15 15:17*	*500*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-8
Date Collected: 03/17/15 13:42
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 16:17	1
Benzene	**5.06**		1.00		ug/L			03/27/15 16:17	1
Bromobenzene	ND		1.00		ug/L			03/27/15 16:17	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 16:17	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 16:17	1
Bromoform	ND		1.00		ug/L			03/27/15 16:17	1
Bromomethane	ND		1.00		ug/L			03/27/15 16:17	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 16:17	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 16:17	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 16:17	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 16:17	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 16:17	1
Chloroethane	ND		1.00		ug/L			03/27/15 16:17	1
Chloroform	ND		1.00		ug/L			03/27/15 16:17	1
Chloromethane	ND		1.00		ug/L			03/27/15 16:17	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 16:17	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 16:17	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 16:17	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 16:17	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 16:17	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/27/15 16:17	1
Dibromomethane	ND		1.00		ug/L			03/27/15 16:17	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 16:17	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 16:17	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 16:17	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 16:17	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 16:17	1
1,2-Dichloroethane	ND		1.00		ug/L			03/27/15 16:17	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 16:17	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 16:17	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 16:17	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 16:17	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 16:17	1
Ethylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 16:17	1
2-Hexanone	ND		10.0		ug/L			03/27/15 16:17	1
Isopropylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 16:17	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 17:36	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/27/15 16:17	1
Methyl tert-butyl ether	**7.38**		1.00		ug/L			03/27/15 16:17	1
Naphthalene	ND		5.00		ug/L			03/27/15 16:17	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
N-Propylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 16:17	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
Styrene	ND		1.00		ug/L			03/27/15 16:17	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 16:17	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-8
Date Collected: 03/17/15 13:42
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 16:17	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 16:17	1
Toluene	ND		1.00		ug/L			03/27/15 16:17	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 16:17	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 16:17	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 16:17	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 16:17	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 16:17	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 16:17	1
Trichloroethene	ND		1.00		ug/L			03/27/15 16:17	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 16:17	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 16:17	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/27/15 16:17	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 16:17	1
Xylenes, Total	ND		2.00		ug/L			03/27/15 16:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*31.0*	*T J*	*ug/L*		*12.41*			*03/26/15 23:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/26/15 23:36*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 16:17*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/27/15 17:36*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*03/26/15 23:36*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*03/27/15 16:17*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/27/15 17:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*03/26/15 23:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*03/27/15 16:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*03/27/15 17:36*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/26/15 23:36*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/27/15 16:17*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 17:36*	*1*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.0201		ug/L		03/26/15 12:47	03/31/15 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*134*		*50 - 150*	*03/26/15 12:47*	*03/31/15 04:12*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-11
Date Collected: 03/17/15 21:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**110**		25.0		ug/L			03/27/15 00:04	1
Benzene	**2740**		20.0		ug/L			03/27/15 20:28	20
Bromobenzene	ND		1.00		ug/L			03/27/15 00:04	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 00:04	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 00:04	1
Bromoform	ND		1.00		ug/L			03/27/15 00:04	1
Bromomethane	**1.42**		1.00		ug/L			03/27/15 00:04	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 00:04	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 00:04	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 00:04	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 00:04	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 00:04	1
Chloroethane	**1.97**		1.00		ug/L			03/27/15 00:04	1
Chloroform	**9.38**		1.00		ug/L			03/27/15 00:04	1
Chloromethane	ND		1.00		ug/L			03/27/15 00:04	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 00:04	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 00:04	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 00:04	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 00:04	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 00:04	1
1,2-Dibromoethane (EDB)	**220**		1.00		ug/L			03/27/15 00:04	1
Dibromomethane	ND		1.00		ug/L			03/27/15 00:04	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 00:04	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 00:04	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 00:04	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 00:04	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 00:04	1
1,2-Dichloroethane	ND		20.0		ug/L			03/27/15 20:28	20
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 00:04	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 00:04	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 00:04	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 00:04	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 00:04	1
Ethylbenzene	**126**		1.00		ug/L			03/27/15 00:04	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 00:04	1
2-Hexanone	ND		10.0		ug/L			03/27/15 00:04	1
Isopropylbenzene	**13.8**		1.00		ug/L			03/27/15 00:04	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 00:04	1
2-Methylnaphthalene	**236**		50.0		ug/L			03/27/15 20:54	5
4-Methyl-2-pentanone (MIBK)	**47.7**		10.0		ug/L			03/27/15 00:04	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/27/15 00:04	1
Naphthalene	**139**		5.00		ug/L			03/27/15 00:04	1
n-Butylbenzene	**8.57**		1.00		ug/L			03/27/15 00:04	1
N-Propylbenzene	**27.0**		1.00		ug/L			03/27/15 00:04	1
p-Isopropyltoluene	**2.57**		1.00		ug/L			03/27/15 00:04	1
sec-Butylbenzene	**2.24**		1.00		ug/L			03/27/15 00:04	1
Styrene	ND		1.00		ug/L			03/27/15 00:04	1
tert-Butylbenzene	**34.3**		1.00		ug/L			03/27/15 00:04	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 00:04	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-11
Date Collected: 03/17/15 21:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 00:04	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 00:04	1
Toluene	**1170**		20.0		ug/L			03/27/15 20:28	20
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 00:04	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 00:04	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 00:04	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 00:04	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 00:04	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 00:04	1
Trichloroethene	ND		1.00		ug/L			03/27/15 00:04	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 00:04	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 00:04	1
1,2,4-Trimethylbenzene	**195**		1.00		ug/L			03/27/15 00:04	1
1,3,5-Trimethylbenzene	**88.7**		1.00		ug/L			03/27/15 00:04	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 00:04	1
Xylenes, Total	**1760**		40.0		ug/L			03/27/15 20:28	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*130*	*T J*	*ug/L*		*12.41*			*03/27/15 00:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 00:04*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/27/15 20:28*	*20*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/27/15 20:54*	*5*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/27/15 00:04*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/27/15 20:28*	*20*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*03/27/15 20:54*	*5*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 00:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*		*03/27/15 20:28*	*20*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*		*03/27/15 20:54*	*5*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 00:04*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/27/15 20:28*	*20*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 20:54*	*5*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**304**		9.86		ug/L		03/26/15 12:47	03/31/15 15:34	500

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*0*	*X*	*50 - 150*	*03/26/15 12:47*	*03/31/15 15:34*	*500*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-12
Date Collected: 03/17/15 20:10
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 16:45	1
Benzene	ND		1.00		ug/L			03/27/15 16:45	1
Bromobenzene	ND		1.00		ug/L			03/27/15 16:45	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 16:45	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 16:45	1
Bromoform	ND		1.00		ug/L			03/27/15 16:45	1
Bromomethane	ND		1.00		ug/L			03/27/15 16:45	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 16:45	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 16:45	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 16:45	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 16:45	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 16:45	1
Chloroethane	ND		1.00		ug/L			03/27/15 16:45	1
Chloroform	ND		1.00		ug/L			03/27/15 16:45	1
Chloromethane	ND		1.00		ug/L			03/27/15 16:45	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 16:45	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 16:45	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 16:45	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 16:45	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 16:45	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/27/15 16:45	1
Dibromomethane	ND		1.00		ug/L			03/27/15 16:45	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 16:45	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 16:45	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 16:45	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 16:45	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 16:45	1
1,2-Dichloroethane	ND		1.00		ug/L			03/27/15 16:45	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 16:45	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 16:45	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 16:45	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 16:45	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 16:45	1
Ethylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 16:45	1
2-Hexanone	ND		10.0		ug/L			03/27/15 16:45	1
Isopropylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 16:45	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 17:07	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/27/15 16:45	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/27/15 16:45	1
Naphthalene	ND		5.00		ug/L			03/27/15 16:45	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
N-Propylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 16:45	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
Styrene	ND		1.00		ug/L			03/27/15 16:45	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 16:45	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-12
Date Collected: 03/17/15 20:10
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 16:45	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 16:45	1
Toluene	ND		1.00		ug/L			03/27/15 16:45	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 16:45	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 16:45	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 16:45	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 16:45	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 16:45	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 16:45	1
Trichloroethene	ND		1.00		ug/L			03/27/15 16:45	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 16:45	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 16:45	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/27/15 16:45	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 16:45	1
Xylenes, Total	ND		2.00		ug/L			03/27/15 16:45	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*15.7*	*T J*	*ug/L*		*12.41*			*03/27/15 00:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/27/15 00:32*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/27/15 16:45*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*03/27/15 17:07*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/27/15 00:32*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/27/15 16:45*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*03/27/15 17:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 00:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 16:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*03/27/15 17:07*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 00:32*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/27/15 16:45*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 17:07*	*1*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**0.0287**		0.0201		ug/L		03/26/15 12:47	03/31/15 11:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*130*		*50 - 150*	*03/26/15 12:47*	*03/31/15 11:29*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-13
Date Collected: 03/17/15 12:15
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 17:13	1
Benzene	**5.71**		1.00		ug/L			03/27/15 17:13	1
Bromobenzene	ND		1.00		ug/L			03/27/15 17:13	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 17:13	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 17:13	1
Bromoform	ND		1.00		ug/L			03/27/15 17:13	1
Bromomethane	ND		1.00		ug/L			03/27/15 17:13	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 17:13	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 17:13	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 17:13	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 17:13	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 17:13	1
Chloroethane	ND		1.00		ug/L			03/27/15 17:13	1
Chloroform	**1.81**		1.00		ug/L			03/27/15 17:13	1
Chloromethane	ND		1.00		ug/L			03/27/15 17:13	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 17:13	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 17:13	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 17:13	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 17:13	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 17:13	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/27/15 17:13	1
Dibromomethane	ND		1.00		ug/L			03/27/15 17:13	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 17:13	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 17:13	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 17:13	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 17:13	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 17:13	1
1,2-Dichloroethane	ND		1.00		ug/L			03/27/15 17:13	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 17:13	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 17:13	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 17:13	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 17:13	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 17:13	1
Ethylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 17:13	1
2-Hexanone	ND		10.0		ug/L			03/27/15 17:13	1
Isopropylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 17:13	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 16:39	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/27/15 17:13	1
Methyl tert-butyl ether	**5.24**		1.00		ug/L			03/27/15 17:13	1
Naphthalene	ND		5.00		ug/L			03/27/15 17:13	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
N-Propylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 17:13	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
Styrene	ND		1.00		ug/L			03/27/15 17:13	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 17:13	1

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-13
Date Collected: 03/17/15 12:15
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 17:13	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 17:13	1
Toluene	ND		1.00		ug/L			03/27/15 17:13	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 17:13	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 17:13	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 17:13	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 17:13	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 17:13	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 17:13	1
Trichloroethene	ND		1.00		ug/L			03/27/15 17:13	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 17:13	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 17:13	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/27/15 17:13	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 17:13	1
Xylenes, Total	ND		2.00		ug/L			03/27/15 17:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*2.61*	*T J*	*ug/L*		*12.41*			*03/27/15 01:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/27/15 01:00*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*03/27/15 16:39*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/27/15 17:13*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*03/27/15 01:00*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/27/15 16:39*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/27/15 17:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*		*03/27/15 01:00*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*03/27/15 16:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*03/27/15 17:13*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/27/15 01:00*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 16:39*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/27/15 17:13*	*1*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.0205		ug/L		03/26/15 12:47	03/31/15 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*121*		*50 - 150*	*03/26/15 12:47*	*03/31/15 05:03*	*1*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-14
Date Collected: 03/17/15 13:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 01:27	1
Benzene	**469**		10.0		ug/L			03/27/15 20:56	10
Bromobenzene	ND		1.00		ug/L			03/27/15 01:27	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 01:27	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 01:27	1
Bromoform	ND		1.00		ug/L			03/27/15 01:27	1
Bromomethane	ND		1.00		ug/L			03/27/15 01:27	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 01:27	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 01:27	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 01:27	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 01:27	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 01:27	1
Chloroethane	ND		1.00		ug/L			03/27/15 01:27	1
Chloroform	ND		1.00		ug/L			03/27/15 01:27	1
Chloromethane	ND		1.00		ug/L			03/27/15 01:27	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 01:27	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 01:27	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 01:27	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 01:27	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 01:27	1
1,2-Dibromoethane (EDB)	**13.4**		1.00		ug/L			03/27/15 01:27	1
Dibromomethane	ND		1.00		ug/L			03/27/15 01:27	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 01:27	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 01:27	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 01:27	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 01:27	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 01:27	1
1,2-Dichloroethane	ND		1.00		ug/L			03/27/15 01:27	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 01:27	1
1,2-Dichloropropane	**3.13**		1.00		ug/L			03/27/15 01:27	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 01:27	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 01:27	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 01:27	1
Ethylbenzene	**4.81**		1.00		ug/L			03/27/15 01:27	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 01:27	1
2-Hexanone	ND		10.0		ug/L			03/27/15 01:27	1
Isopropylbenzene	**1.96**		1.00		ug/L			03/27/15 01:27	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 01:27	1
2-Methylnaphthalene	**12.8**		10.0		ug/L			03/27/15 18:32	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/27/15 01:27	1
Methyl tert-butyl ether	**24.3**		1.00		ug/L			03/27/15 01:27	1
Naphthalene	**17.8**		5.00		ug/L			03/27/15 01:27	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 01:27	1
N-Propylbenzene	**2.28**		1.00		ug/L			03/27/15 01:27	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 01:27	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 01:27	1
Styrene	ND		1.00		ug/L			03/27/15 01:27	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 01:27	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 01:27	1

Client Sample ID: MW-14
Date Collected: 03/17/15 13:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 01:27	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 01:27	1
Toluene	**26.5**		1.00		ug/L			03/27/15 01:27	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 01:27	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 01:27	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 01:27	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 01:27	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 01:27	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 01:27	1
Trichloroethene	ND		1.00		ug/L			03/27/15 01:27	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 01:27	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 01:27	1
1,2,4-Trimethylbenzene	**29.6**		1.00		ug/L			03/27/15 01:27	1
1,3,5-Trimethylbenzene	**27.2**		1.00		ug/L			03/27/15 01:27	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 01:27	1
Xylenes, Total	**201**		2.00		ug/L			03/27/15 01:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
1-Methylnaphthalene	*11.8*	*T J*	*ug/L*		*12.41*			*03/27/15 01:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*03/27/15 01:27*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/27/15 18:32*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/27/15 20:56*	*10*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/27/15 01:27*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/27/15 18:32*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/27/15 20:56*	*10*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*		*03/27/15 01:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*03/27/15 18:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*		*03/27/15 20:56*	*10*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/27/15 01:27*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/27/15 18:32*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 20:56*	*10*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	**20.0**		0.994		ug/L		03/30/15 13:48	03/31/15 11:46	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*0*	*X*	*50 - 150*	*03/30/15 13:48*	*03/31/15 11:46*	*50*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-236717/7
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/26/15 19:53	1
Benzene	ND		1.00		ug/L			03/26/15 19:53	1
Bromobenzene	ND		1.00		ug/L			03/26/15 19:53	1
Bromochloromethane	ND		1.00		ug/L			03/26/15 19:53	1
Bromodichloromethane	ND		1.00		ug/L			03/26/15 19:53	1
Bromoform	ND		1.00		ug/L			03/26/15 19:53	1
Bromomethane	ND		1.00		ug/L			03/26/15 19:53	1
2-Butanone (MEK)	ND		50.0		ug/L			03/26/15 19:53	1
Carbon disulfide	ND		1.00		ug/L			03/26/15 19:53	1
Carbon tetrachloride	ND		1.00		ug/L			03/26/15 19:53	1
Chlorobenzene	ND		1.00		ug/L			03/26/15 19:53	1
Chlorodibromomethane	ND		1.00		ug/L			03/26/15 19:53	1
Chloroethane	ND		1.00		ug/L			03/26/15 19:53	1
Chloroform	ND		1.00		ug/L			03/26/15 19:53	1
Chloromethane	ND		1.00		ug/L			03/26/15 19:53	1
2-Chlorotoluene	ND		1.00		ug/L			03/26/15 19:53	1
4-Chlorotoluene	ND		1.00		ug/L			03/26/15 19:53	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 19:53	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 19:53	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/26/15 19:53	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/26/15 19:53	1
Dibromomethane	ND		1.00		ug/L			03/26/15 19:53	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/26/15 19:53	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/26/15 19:53	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/26/15 19:53	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/26/15 19:53	1
1,1-Dichloroethane	ND		1.00		ug/L			03/26/15 19:53	1
1,2-Dichloroethane	ND		1.00		ug/L			03/26/15 19:53	1
1,1-Dichloroethene	ND		1.00		ug/L			03/26/15 19:53	1
1,2-Dichloropropane	ND		1.00		ug/L			03/26/15 19:53	1
1,3-Dichloropropane	ND		1.00		ug/L			03/26/15 19:53	1
2,2-Dichloropropane	ND		1.00		ug/L			03/26/15 19:53	1
1,1-Dichloropropene	ND		1.00		ug/L			03/26/15 19:53	1
Ethylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
Hexachlorobutadiene	ND		2.00		ug/L			03/26/15 19:53	1
2-Hexanone	ND		10.0		ug/L			03/26/15 19:53	1
Isopropylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
Methylene Chloride	ND		5.00		ug/L			03/26/15 19:53	1
2-Methylnaphthalene	ND		10.0		ug/L			03/26/15 19:53	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/26/15 19:53	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/26/15 19:53	1
Naphthalene	ND		5.00		ug/L			03/26/15 19:53	1
n-Butylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
N-Propylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
p-Isopropyltoluene	ND		1.00		ug/L			03/26/15 19:53	1
sec-Butylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
Styrene	ND		1.00		ug/L			03/26/15 19:53	1
tert-Butylbenzene	ND		1.00		ug/L			03/26/15 19:53	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-236717/7
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 19:53	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/26/15 19:53	1
Tetrachloroethene	ND		1.00		ug/L			03/26/15 19:53	1
Toluene	ND		1.00		ug/L			03/26/15 19:53	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/26/15 19:53	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/26/15 19:53	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/26/15 19:53	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/26/15 19:53	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/26/15 19:53	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/26/15 19:53	1
Trichloroethene	ND		1.00		ug/L			03/26/15 19:53	1
Trichlorofluoromethane	ND		1.00		ug/L			03/26/15 19:53	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/26/15 19:53	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/26/15 19:53	1
Vinyl chloride	ND		1.00		ug/L			03/26/15 19:53	1
Xylenes, Total	ND		2.00		ug/L			03/26/15 19:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/26/15 19:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/26/15 19:53*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/26/15 19:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*03/26/15 19:53*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/26/15 19:53*	*1*

Lab Sample ID: LCS 490-236717/8
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	234.9		ug/L		94	54 - 145
Benzene	50.0	50.28		ug/L		101	80 - 121
Bromobenzene	50.0	48.35		ug/L		97	68 - 130
Bromochloromethane	50.0	51.35		ug/L		103	78 - 129
Bromodichloromethane	50.0	49.65		ug/L		99	75 - 129
Bromoform	50.0	45.69		ug/L		91	46 - 145
Bromomethane	50.0	57.42		ug/L		115	41 - 150
2-Butanone (MEK)	250	221.6		ug/L		89	62 - 133
Carbon disulfide	50.0	52.62		ug/L		105	77 - 126
Carbon tetrachloride	50.0	56.51		ug/L		113	64 - 147
Chlorobenzene	50.0	48.96		ug/L		98	80 - 120
Chlorodibromomethane	50.0	52.56		ug/L		105	69 - 133
Chloroethane	50.0	52.84		ug/L		106	72 - 120
Chloroform	50.0	59.11		ug/L		118	73 - 129
Chloromethane	50.0	61.73		ug/L		123	12 - 150

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-236717/8
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	50.0	49.87		ug/L		100	75 - 126
4-Chlorotoluene	50.0	48.51		ug/L		97	75 - 130
cis-1,2-Dichloroethene	50.0	56.90		ug/L		114	76 - 125
cis-1,3-Dichloropropene	50.0	51.60		ug/L		103	74 - 140
1,2-Dibromo-3-Chloropropane	50.0	52.23		ug/L		104	54 - 125
1,2-Dibromoethane (EDB)	50.0	49.36		ug/L		99	80 - 129
Dibromomethane	50.0	49.60		ug/L		99	71 - 125
1,2-Dichlorobenzene	50.0	48.88		ug/L		98	80 - 121
1,3-Dichlorobenzene	50.0	48.93		ug/L		98	80 - 122
1,4-Dichlorobenzene	50.0	47.53		ug/L		95	80 - 120
Dichlorodifluoromethane	50.0	47.42		ug/L		95	37 - 127
1,1-Dichloroethane	50.0	56.63		ug/L		113	78 - 125
1,2-Dichloroethane	50.0	57.50		ug/L		115	77 - 121
1,1-Dichloroethene	50.0	49.91		ug/L		100	79 - 124
1,2-Dichloropropane	50.0	50.00		ug/L		100	75 - 120
1,3-Dichloropropane	50.0	49.48		ug/L		99	80 - 125
2,2-Dichloropropane	50.0	57.68		ug/L		115	43 - 161
1,1-Dichloropropene	50.0	58.62		ug/L		117	80 - 122
Ethylbenzene	50.0	49.92		ug/L		100	80 - 130
Hexachlorobutadiene	50.0	54.08		ug/L		108	49 - 146
2-Hexanone	250	239.1		ug/L		96	60 - 142
Isopropylbenzene	50.0	50.62		ug/L		101	80 - 141
Methylene Chloride	50.0	51.43		ug/L		103	79 - 123
4-Methyl-2-pentanone (MIBK)	250	229.8		ug/L		92	60 - 137
Methyl tert-butyl ether	50.0	49.01		ug/L		98	72 - 133
Naphthalene	50.0	49.75		ug/L		100	62 - 138
n-Butylbenzene	50.0	51.76		ug/L		104	68 - 132
N-Propylbenzene	50.0	50.55		ug/L		101	75 - 129
p-Isopropyltoluene	50.0	50.24		ug/L		100	75 - 128
sec-Butylbenzene	50.0	49.40		ug/L		99	76 - 128
Styrene	50.0	50.20		ug/L		100	80 - 127
tert-Butylbenzene	50.0	48.28		ug/L		97	76 - 126
1,1,1,2-Tetrachloroethane	50.0	50.62		ug/L		101	74 - 135
1,1,2,2-Tetrachloroethane	50.0	43.47		ug/L		87	69 - 131
Tetrachloroethene	50.0	50.73		ug/L		101	80 - 126
Toluene	50.0	48.08		ug/L		96	80 - 126
trans-1,2-Dichloroethene	50.0	56.88		ug/L		114	79 - 126
trans-1,3-Dichloropropene	50.0	56.05		ug/L		112	63 - 134
1,2,3-Trichlorobenzene	50.0	51.54		ug/L		103	62 - 133
1,2,4-Trichlorobenzene	50.0	52.17		ug/L		104	63 - 133
1,1,1-Trichloroethane	50.0	52.95		ug/L		106	78 - 135
1,1,2-Trichloroethane	50.0	46.22		ug/L		92	80 - 124
Trichloroethene	50.0	49.46		ug/L		99	80 - 123
Trichlorofluoromethane	50.0	53.20		ug/L		106	65 - 124
1,2,3-Trichloropropane	50.0	45.25		ug/L		91	70 - 131
1,2,4-Trimethylbenzene	50.0	50.01		ug/L		100	77 - 126
1,3,5-Trimethylbenzene	50.0	49.77		ug/L		100	77 - 127
Vinyl chloride	50.0	54.59		ug/L		109	68 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-236717/8
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			100	100.1		ug/L		100	80 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 490-236717/9
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			250	227.3		ug/L		91	54 - 145	3	21
Benzene			50.0	47.94		ug/L		96	80 - 121	5	17
Bromobenzene			50.0	43.86		ug/L		88	68 - 130	10	20
Bromochloromethane			50.0	49.76		ug/L		100	78 - 129	3	17
Bromodichloromethane			50.0	48.93		ug/L		98	75 - 129	1	18
Bromoform			50.0	46.46		ug/L		93	46 - 145	2	16
Bromomethane			50.0	55.36		ug/L		111	41 - 150	4	50
2-Butanone (MEK)			250	229.3		ug/L		92	62 - 133	3	19
Carbon disulfide			50.0	49.41		ug/L		99	77 - 126	6	21
Carbon tetrachloride			50.0	54.90		ug/L		110	64 - 147	3	19
Chlorobenzene			50.0	47.70		ug/L		95	80 - 120	3	14
Chlorodibromomethane			50.0	52.33		ug/L		105	69 - 133	0	15
Chloroethane			50.0	50.05		ug/L		100	72 - 120	5	20
Chloroform			50.0	55.39		ug/L		111	73 - 129	6	18
Chloromethane			50.0	53.97		ug/L		108	12 - 150	13	31
2-Chlorotoluene			50.0	48.01		ug/L		96	75 - 126	4	17
4-Chlorotoluene			50.0	47.03		ug/L		94	75 - 130	3	18
cis-1,2-Dichloroethene			50.0	53.37		ug/L		107	76 - 125	6	17
cis-1,3-Dichloropropene			50.0	50.34		ug/L		101	74 - 140	2	15
1,2-Dibromo-3-Chloropropane			50.0	53.08		ug/L		106	54 - 125	2	24
1,2-Dibromoethane (EDB)			50.0	49.97		ug/L		100	80 - 129	1	15
Dibromomethane			50.0	49.08		ug/L		98	71 - 125	1	16
1,2-Dichlorobenzene			50.0	47.56		ug/L		95	80 - 121	3	15
1,3-Dichlorobenzene			50.0	47.03		ug/L		94	80 - 122	4	15
1,4-Dichlorobenzene			50.0	45.92		ug/L		92	80 - 120	3	15
Dichlorodifluoromethane			50.0	45.67		ug/L		91	37 - 127	4	18
1,1-Dichloroethane			50.0	54.36		ug/L		109	78 - 125	4	17
1,2-Dichloroethane			50.0	56.59		ug/L		113	77 - 121	2	17
1,1-Dichloroethene			50.0	47.45		ug/L		95	79 - 124	5	17
1,2-Dichloropropane			50.0	48.39		ug/L		97	75 - 120	3	17
1,3-Dichloropropane			50.0	49.47		ug/L		99	80 - 125	0	14
2,2-Dichloropropane			50.0	54.33		ug/L		109	43 - 161	6	18
1,1-Dichloropropene			50.0	55.29		ug/L		111	80 - 122	6	17
Ethylbenzene			50.0	48.26		ug/L		97	80 - 130	3	15
Hexachlorobutadiene			50.0	53.61		ug/L		107	49 - 146	1	23

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-236717/9
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	250	239.6		ug/L		96	60 - 142	0	15
Isopropylbenzene	50.0	49.62		ug/L		99	80 - 141	2	16
Methylene Chloride	50.0	50.11		ug/L		100	79 - 123	3	17
4-Methyl-2-pentanone (MIBK)	250	234.2		ug/L		94	60 - 137	2	17
Methyl tert-butyl ether	50.0	48.44		ug/L		97	72 - 133	1	16
Naphthalene	50.0	50.13		ug/L		100	62 - 138	1	26
n-Butylbenzene	50.0	49.04		ug/L		98	68 - 132	5	18
N-Propylbenzene	50.0	47.97		ug/L		96	75 - 129	5	17
p-Isopropyltoluene	50.0	48.31		ug/L		97	75 - 128	4	16
sec-Butylbenzene	50.0	47.26		ug/L		95	76 - 128	4	16
Styrene	50.0	49.50		ug/L		99	80 - 127	1	24
tert-Butylbenzene	50.0	46.93		ug/L		94	76 - 126	3	16
1,1,1,2-Tetrachloroethane	50.0	51.05		ug/L		102	74 - 135	1	16
1,1,2,2-Tetrachloroethane	50.0	44.72		ug/L		89	69 - 131	3	20
Tetrachloroethene	50.0	49.60		ug/L		99	80 - 126	2	16
Toluene	50.0	46.73		ug/L		93	80 - 126	3	15
trans-1,2-Dichloroethene	50.0	54.40		ug/L		109	79 - 126	4	16
trans-1,3-Dichloropropene	50.0	55.43		ug/L		111	63 - 134	1	14
1,2,3-Trichlorobenzene	50.0	50.51		ug/L		101	62 - 133	2	25
1,2,4-Trichlorobenzene	50.0	51.50		ug/L		103	63 - 133	1	19
1,1,1-Trichloroethane	50.0	50.35		ug/L		101	78 - 135	5	17
1,1,2-Trichloroethane	50.0	47.37		ug/L		95	80 - 124	2	15
Trichloroethene	50.0	47.60		ug/L		95	80 - 123	4	17
Trichlorofluoromethane	50.0	52.74		ug/L		105	65 - 124	1	18
1,2,3-Trichloropropane	50.0	45.94		ug/L		92	70 - 131	2	19
1,2,4-Trimethylbenzene	50.0	47.65		ug/L		95	77 - 126	5	16
1,3,5-Trimethylbenzene	50.0	47.38		ug/L		95	77 - 127	5	17
Vinyl chloride	50.0	51.28		ug/L		103	68 - 120	6	17
Xylenes, Total	100	98.32		ug/L		98	80 - 132	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 490-74504-B-1 MS
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		250	215.4		ug/L		86	45 - 141
Benzene	ND		50.0	53.79		ug/L		108	75 - 133
Bromobenzene	ND		50.0	48.18		ug/L		96	60 - 138
Bromochloromethane	ND		50.0	49.54		ug/L		99	67 - 139
Bromodichloromethane	ND		50.0	50.74		ug/L		101	70 - 140
Bromoform	ND		50.0	46.68		ug/L		93	42 - 147
Bromomethane	ND		50.0	52.30		ug/L		105	16 - 163

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-74504-B-1 MS
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	ND		250	212.7		ug/L		85	50 - 138
Carbon disulfide	ND		50.0	53.88		ug/L		108	48 - 152
Carbon tetrachloride	ND		50.0	61.18		ug/L		122	62 - 164
Chlorobenzene	ND		50.0	51.55		ug/L		103	80 - 129
Chlorodibromomethane	ND		50.0	52.39		ug/L		105	66 - 140
Chloroethane	ND		50.0	59.06		ug/L		118	58 - 137
Chloroform	ND		50.0	59.80		ug/L		120	66 - 138
Chloromethane	ND		50.0	63.94		ug/L		128	10 - 169
2-Chlorotoluene	ND		50.0	51.88		ug/L		104	67 - 138
4-Chlorotoluene	ND		50.0	50.20		ug/L		100	69 - 138
cis-1,2-Dichloroethene	ND		50.0	59.20		ug/L		118	68 - 138
cis-1,3-Dichloropropene	ND		50.0	54.26		ug/L		109	71 - 141
1,2-Dibromo-3-Chloropropane	ND		50.0	46.62		ug/L		93	52 - 126
1,2-Dibromoethane (EDB)	ND		50.0	48.17		ug/L		96	75 - 137
Dibromomethane	ND		50.0	48.57		ug/L		97	58 - 140
1,2-Dichlorobenzene	ND		50.0	47.14		ug/L		94	79 - 128
1,3-Dichlorobenzene	ND		50.0	49.37		ug/L		99	77 - 131
1,4-Dichlorobenzene	ND		50.0	47.13		ug/L		94	78 - 126
Dichlorodifluoromethane	ND		50.0	51.29		ug/L		103	40 - 127
1,1-Dichloroethane	ND		50.0	57.02		ug/L		114	71 - 139
1,2-Dichloroethane	ND		50.0	56.20		ug/L		112	64 - 136
1,1-Dichloroethene	ND		50.0	53.09		ug/L		106	70 - 142
1,2-Dichloropropane	ND		50.0	52.30		ug/L		105	67 - 131
1,3-Dichloropropane	ND		50.0	48.76		ug/L		98	72 - 134
2,2-Dichloropropane	ND		50.0	64.40		ug/L		129	37 - 175
1,1-Dichloropropene	ND		50.0	63.53		ug/L		127	76 - 139
Ethylbenzene	ND		50.0	53.92		ug/L		108	79 - 139
Hexachlorobutadiene	ND		50.0	58.79		ug/L		118	45 - 155
2-Hexanone	ND		250	223.4		ug/L		89	50 - 150
Isopropylbenzene	ND		50.0	54.68		ug/L		109	80 - 153
Methylene Chloride	ND		50.0	50.48		ug/L		101	64 - 139
4-Methyl-2-pentanone (MIBK)	ND		250	219.9		ug/L		88	50 - 147
Methyl tert-butyl ether	ND		50.0	44.79		ug/L		89	66 - 141
Naphthalene	ND		50.0	45.64		ug/L		91	55 - 140
n-Butylbenzene	ND		50.0	56.20		ug/L		112	66 - 141
N-Propylbenzene	ND		50.0	53.57		ug/L		107	69 - 142
p-Isopropyltoluene	ND		50.0	53.27		ug/L		107	71 - 137
sec-Butylbenzene	ND		50.0	53.70		ug/L		107	73 - 138
Styrene	ND		50.0	51.28		ug/L		103	61 - 148
tert-Butylbenzene	ND		50.0	51.70		ug/L		103	70 - 138
1,1,1,2-Tetrachloroethane	ND		50.0	52.30		ug/L		105	73 - 141
1,1,2,2-Tetrachloroethane	ND		50.0	40.75		ug/L		81	56 - 143
Tetrachloroethene	ND		50.0	55.91		ug/L		112	72 - 145
Toluene	ND		50.0	51.68		ug/L		103	75 - 136
trans-1,2-Dichloroethene	ND		50.0	58.82		ug/L		118	66 - 143
trans-1,3-Dichloropropene	ND		50.0	53.89		ug/L		108	59 - 135
1,2,3-Trichlorobenzene	ND		50.0	46.74		ug/L		93	55 - 138
1,2,4-Trichlorobenzene	ND		50.0	49.53		ug/L		99	60 - 136

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-74504-B-1 MS
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		50.0	57.61		ug/L		115	76 - 149
1,1,2-Trichloroethane	ND		50.0	46.96		ug/L		94	74 - 134
Trichloroethene	ND		50.0	53.35		ug/L		107	73 - 144
Trichlorofluoromethane	ND		50.0	65.31		ug/L		131	58 - 139
1,2,3-Trichloropropane	ND		50.0	41.49		ug/L		83	53 - 144
1,2,4-Trimethylbenzene	ND		50.0	51.21		ug/L		102	69 - 136
1,3,5-Trimethylbenzene	ND		50.0	51.68		ug/L		103	69 - 139
Vinyl chloride	ND		50.0	60.96		ug/L		122	56 - 129
Xylenes, Total	ND		100	107.5		ug/L		108	74 - 141

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 490-74504-C-1 MSD
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		250	218.9		ug/L		88	45 - 141	2	21
Benzene	ND		50.0	52.52		ug/L		105	75 - 133	2	17
Bromobenzene	ND		50.0	47.21		ug/L		94	60 - 138	2	20
Bromochloromethane	ND		50.0	50.49		ug/L		101	67 - 139	2	17
Bromodichloromethane	ND		50.0	51.52		ug/L		103	70 - 140	2	18
Bromoform	ND		50.0	48.50		ug/L		97	42 - 147	4	16
Bromomethane	ND		50.0	58.48		ug/L		117	16 - 163	11	50
2-Butanone (MEK)	ND		250	220.8		ug/L		88	50 - 138	4	19
Carbon disulfide	ND		50.0	51.69		ug/L		103	48 - 152	4	21
Carbon tetrachloride	ND		50.0	58.34		ug/L		117	62 - 164	5	19
Chlorobenzene	ND		50.0	50.36		ug/L		101	80 - 129	2	14
Chlorodibromomethane	ND		50.0	53.01		ug/L		106	66 - 140	1	15
Chloroethane	ND		50.0	58.77		ug/L		118	58 - 137	1	20
Chloroform	ND		50.0	58.66		ug/L		117	66 - 138	2	18
Chloromethane	ND		50.0	63.55		ug/L		127	10 - 169	1	31
2-Chlorotoluene	ND		50.0	49.89		ug/L		100	67 - 138	4	17
4-Chlorotoluene	ND		50.0	48.62		ug/L		97	69 - 138	3	18
cis-1,2-Dichloroethene	ND		50.0	57.56		ug/L		115	68 - 138	3	17
cis-1,3-Dichloropropene	ND		50.0	53.86		ug/L		108	71 - 141	1	15
1,2-Dibromo-3-Chloropropane	ND		50.0	50.23		ug/L		100	52 - 126	7	24
1,2-Dibromoethane (EDB)	ND		50.0	49.40		ug/L		99	75 - 137	3	15
Dibromomethane	ND		50.0	50.66		ug/L		101	58 - 140	4	16
1,2-Dichlorobenzene	ND		50.0	47.69		ug/L		95	79 - 128	1	15
1,3-Dichlorobenzene	ND		50.0	47.97		ug/L		96	77 - 131	3	15
1,4-Dichlorobenzene	ND		50.0	46.58		ug/L		93	78 - 126	1	15
Dichlorodifluoromethane	ND		50.0	51.61		ug/L		103	40 - 127	1	18
1,1-Dichloroethane	ND		50.0	56.10		ug/L		112	71 - 139	2	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-74504-C-1 MSD
Matrix: Water
Analysis Batch: 236717

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloroethane	ND		50.0	58.35		ug/L		117	64 - 136	4	17
1,1-Dichloroethene	ND		50.0	50.58		ug/L		101	70 - 142	5	17
1,2-Dichloropropane	ND		50.0	52.23		ug/L		104	67 - 131	0	17
1,3-Dichloropropane	ND		50.0	50.60		ug/L		101	72 - 134	4	14
2,2-Dichloropropane	ND		50.0	62.03		ug/L		124	37 - 175	4	18
1,1-Dichloropropene	ND		50.0	60.75		ug/L		122	76 - 139	4	17
Ethylbenzene	ND		50.0	51.31		ug/L		103	79 - 139	5	15
Hexachlorobutadiene	ND		50.0	55.83		ug/L		112	45 - 155	5	23
2-Hexanone	ND		250	250.7		ug/L		100	50 - 150	12	15
Isopropylbenzene	ND		50.0	52.73		ug/L		105	80 - 153	4	16
Methylene Chloride	ND		50.0	49.59		ug/L		99	64 - 139	2	17
4-Methyl-2-pentanone (MIBK)	ND		250	244.1		ug/L		98	50 - 147	10	17
Methyl tert-butyl ether	ND		50.0	48.51		ug/L		96	66 - 141	8	16
Naphthalene	ND		50.0	47.61		ug/L		95	55 - 140	4	26
n-Butylbenzene	ND		50.0	51.20		ug/L		102	66 - 141	9	18
N-Propylbenzene	ND		50.0	50.32		ug/L		101	69 - 142	6	17
p-Isopropyltoluene	ND		50.0	49.88		ug/L		100	71 - 137	7	16
sec-Butylbenzene	ND		50.0	49.84		ug/L		100	73 - 138	7	16
Styrene	ND		50.0	51.70		ug/L		103	61 - 148	1	24
tert-Butylbenzene	ND		50.0	48.70		ug/L		97	70 - 138	6	16
1,1,1,2-Tetrachloroethane	ND		50.0	52.33		ug/L		105	73 - 141	0	16
1,1,2,2-Tetrachloroethane	ND		50.0	42.83		ug/L		86	56 - 143	5	20
Tetrachloroethene	ND		50.0	54.16		ug/L		108	72 - 145	3	16
Toluene	ND		50.0	50.23		ug/L		100	75 - 136	3	15
trans-1,2-Dichloroethene	ND		50.0	57.22		ug/L		114	66 - 143	3	16
trans-1,3-Dichloropropene	ND		50.0	57.32		ug/L		115	59 - 135	6	14
1,2,3-Trichlorobenzene	ND		50.0	47.94		ug/L		96	55 - 138	3	25
1,2,4-Trichlorobenzene	ND		50.0	49.24		ug/L		98	60 - 136	1	19
1,1,1-Trichloroethane	ND		50.0	55.63		ug/L		111	76 - 149	3	17
1,1,2-Trichloroethane	ND		50.0	48.51		ug/L		97	74 - 134	3	15
Trichloroethene	ND		50.0	52.51		ug/L		105	73 - 144	2	17
Trichlorofluoromethane	ND		50.0	62.32		ug/L		125	58 - 139	5	18
1,2,3-Trichloropropane	ND		50.0	44.77		ug/L		90	53 - 144	8	19
1,2,4-Trimethylbenzene	ND		50.0	48.67		ug/L		97	69 - 136	5	16
1,3,5-Trimethylbenzene	ND		50.0	49.19		ug/L		98	69 - 139	5	17
Vinyl chloride	ND		50.0	60.96		ug/L		122	56 - 129	0	17
Xylenes, Total	ND		100	104.7		ug/L		105	74 - 141	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-236980/7
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 15:10	1
Benzene	ND		1.00		ug/L			03/27/15 15:10	1
Bromobenzene	ND		1.00		ug/L			03/27/15 15:10	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 15:10	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 15:10	1
Bromoform	ND		1.00		ug/L			03/27/15 15:10	1
Bromomethane	ND		1.00		ug/L			03/27/15 15:10	1
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 15:10	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 15:10	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 15:10	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 15:10	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 15:10	1
Chloroethane	ND		1.00		ug/L			03/27/15 15:10	1
Chloroform	ND		1.00		ug/L			03/27/15 15:10	1
Chloromethane	ND		1.00		ug/L			03/27/15 15:10	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 15:10	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 15:10	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 15:10	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 15:10	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 15:10	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/27/15 15:10	1
Dibromomethane	ND		1.00		ug/L			03/27/15 15:10	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:10	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:10	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:10	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 15:10	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 15:10	1
1,2-Dichloroethane	ND		1.00		ug/L			03/27/15 15:10	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 15:10	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 15:10	1
1,3-Dichloropropane	ND		1.00		ug/L			03/27/15 15:10	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 15:10	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 15:10	1
Ethylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 15:10	1
2-Hexanone	ND		10.0		ug/L			03/27/15 15:10	1
Isopropylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
Methylene Chloride	ND		5.00		ug/L			03/27/15 15:10	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 15:10	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/L			03/27/15 15:10	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/27/15 15:10	1
Naphthalene	ND		5.00		ug/L			03/27/15 15:10	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
N-Propylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 15:10	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
Styrene	ND		1.00		ug/L			03/27/15 15:10	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 15:10	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-236980/7
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 15:10	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 15:10	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 15:10	1
Toluene	ND		1.00		ug/L			03/27/15 15:10	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 15:10	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 15:10	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 15:10	1
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 15:10	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 15:10	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 15:10	1
Trichloroethene	ND		1.00		ug/L			03/27/15 15:10	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 15:10	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 15:10	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/27/15 15:10	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 15:10	1
Xylenes, Total	ND		2.00		ug/L			03/27/15 15:10	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/27/15 15:10*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*03/27/15 15:10*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*03/27/15 15:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*03/27/15 15:10*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*03/27/15 15:10*	*1*

Lab Sample ID: LCS 490-236980/3
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	231.9		ug/L		93	54 - 145
Benzene	50.0	50.58		ug/L		101	80 - 121
Bromobenzene	50.0	48.64		ug/L		97	68 - 130
Bromochloromethane	50.0	49.64		ug/L		99	78 - 129
Bromodichloromethane	50.0	50.33		ug/L		101	75 - 129
Bromoform	50.0	47.46		ug/L		95	46 - 145
Bromomethane	50.0	49.10		ug/L		98	41 - 150
2-Butanone (MEK)	250	222.1		ug/L		89	62 - 133
Carbon disulfide	50.0	50.08		ug/L		100	77 - 126
Carbon tetrachloride	50.0	55.33		ug/L		111	64 - 147
Chlorobenzene	50.0	50.43		ug/L		101	80 - 120
Chlorodibromomethane	50.0	52.88		ug/L		106	69 - 133
Chloroethane	50.0	52.12		ug/L		104	72 - 120
Chloroform	50.0	57.04		ug/L		114	73 - 129
Chloromethane	50.0	54.66		ug/L		109	12 - 150

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-236980/3
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chlorotoluene	50.0	50.48		ug/L		101	75 - 126
4-Chlorotoluene	50.0	48.61		ug/L		97	75 - 130
cis-1,2-Dichloroethene	50.0	57.29		ug/L		115	76 - 125
cis-1,3-Dichloropropene	50.0	52.81		ug/L		106	74 - 140
1,2-Dibromo-3-Chloropropane	50.0	50.20		ug/L		100	54 - 125
1,2-Dibromoethane (EDB)	50.0	49.39		ug/L		99	80 - 129
Dibromomethane	50.0	47.90		ug/L		96	71 - 125
1,2-Dichlorobenzene	50.0	47.82		ug/L		96	80 - 121
1,3-Dichlorobenzene	50.0	49.20		ug/L		98	80 - 122
1,4-Dichlorobenzene	50.0	46.80		ug/L		94	80 - 120
Dichlorodifluoromethane	50.0	47.81		ug/L		96	37 - 127
1,1-Dichloroethane	50.0	53.19		ug/L		106	78 - 125
1,2-Dichloroethane	50.0	54.78		ug/L		110	77 - 121
1,1-Dichloroethene	50.0	47.97		ug/L		96	79 - 124
1,2-Dichloropropane	50.0	50.83		ug/L		102	75 - 120
1,3-Dichloropropane	50.0	50.02		ug/L		100	80 - 125
2,2-Dichloropropane	50.0	58.46		ug/L		117	43 - 161
1,1-Dichloropropene	50.0	58.26		ug/L		117	80 - 122
Ethylbenzene	50.0	50.35		ug/L		101	80 - 130
Hexachlorobutadiene	50.0	55.57		ug/L		111	49 - 146
2-Hexanone	250	240.3		ug/L		96	60 - 142
Isopropylbenzene	50.0	51.48		ug/L		103	80 - 141
Methylene Chloride	50.0	48.38		ug/L		97	79 - 123
4-Methyl-2-pentanone (MIBK)	250	226.3		ug/L		91	60 - 137
Methyl tert-butyl ether	50.0	45.76		ug/L		92	72 - 133
Naphthalene	50.0	48.08		ug/L		96	62 - 138
n-Butylbenzene	50.0	51.37		ug/L		103	68 - 132
N-Propylbenzene	50.0	50.68		ug/L		101	75 - 129
p-Isopropyltoluene	50.0	50.18		ug/L		100	75 - 128
sec-Butylbenzene	50.0	49.84		ug/L		100	76 - 128
Styrene	50.0	50.09		ug/L		100	80 - 127
tert-Butylbenzene	50.0	49.14		ug/L		98	76 - 126
1,1,1,2-Tetrachloroethane	50.0	52.08		ug/L		104	74 - 135
1,1,2,2-Tetrachloroethane	50.0	44.16		ug/L		88	69 - 131
Tetrachloroethene	50.0	52.25		ug/L		105	80 - 126
Toluene	50.0	49.29		ug/L		99	80 - 126
trans-1,2-Dichloroethene	50.0	54.52		ug/L		109	79 - 126
trans-1,3-Dichloropropene	50.0	55.87		ug/L		112	63 - 134
1,2,3-Trichlorobenzene	50.0	49.56		ug/L		99	62 - 133
1,2,4-Trichlorobenzene	50.0	51.24		ug/L		102	63 - 133
1,1,1-Trichloroethane	50.0	51.98		ug/L		104	78 - 135
1,1,2-Trichloroethane	50.0	47.08		ug/L		94	80 - 124
Trichloroethene	50.0	50.70		ug/L		101	80 - 123
Trichlorofluoromethane	50.0	52.51		ug/L		105	65 - 124
1,2,3-Trichloropropane	50.0	44.56		ug/L		89	70 - 131
1,2,4-Trimethylbenzene	50.0	49.05		ug/L		98	77 - 126
1,3,5-Trimethylbenzene	50.0	49.64		ug/L		99	77 - 127
Vinyl chloride	50.0	52.84		ug/L		106	68 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-236980/3
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			100	100.8		ug/L		101	80 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 490-236980/4
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			250	229.4		ug/L		92	54 - 145	1	21
Benzene			50.0	49.57		ug/L		99	80 - 121	2	17
Bromobenzene			50.0	47.03		ug/L		94	68 - 130	3	20
Bromochloromethane			50.0	48.24		ug/L		96	78 - 129	3	17
Bromodichloromethane			50.0	49.31		ug/L		99	75 - 129	2	18
Bromoform			50.0	46.21		ug/L		92	46 - 145	3	16
Bromomethane			50.0	49.39		ug/L		99	41 - 150	1	50
2-Butanone (MEK)			250	214.0		ug/L		86	62 - 133	4	19
Carbon disulfide			50.0	49.34		ug/L		99	77 - 126	1	21
Carbon tetrachloride			50.0	54.09		ug/L		108	64 - 147	2	19
Chlorobenzene			50.0	47.57		ug/L		95	80 - 120	6	14
Chlorodibromomethane			50.0	51.47		ug/L		103	69 - 133	3	15
Chloroethane			50.0	51.36		ug/L		103	72 - 120	1	20
Chloroform			50.0	53.70		ug/L		107	73 - 129	6	18
Chloromethane			50.0	55.29		ug/L		111	12 - 150	1	31
2-Chlorotoluene			50.0	49.30		ug/L		99	75 - 126	2	17
4-Chlorotoluene			50.0	47.83		ug/L		96	75 - 130	2	18
cis-1,2-Dichloroethene			50.0	55.89		ug/L		112	76 - 125	2	17
cis-1,3-Dichloropropene			50.0	51.88		ug/L		104	74 - 140	2	15
1,2-Dibromo-3-Chloropropane			50.0	49.01		ug/L		98	54 - 125	2	24
1,2-Dibromoethane (EDB)			50.0	46.80		ug/L		94	80 - 129	5	15
Dibromomethane			50.0	47.02		ug/L		94	71 - 125	2	16
1,2-Dichlorobenzene			50.0	47.34		ug/L		95	80 - 121	1	15
1,3-Dichlorobenzene			50.0	47.80		ug/L		96	80 - 122	3	15
1,4-Dichlorobenzene			50.0	46.31		ug/L		93	80 - 120	1	15
Dichlorodifluoromethane			50.0	45.30		ug/L		91	37 - 127	5	18
1,1-Dichloroethane			50.0	51.54		ug/L		103	78 - 125	3	17
1,2-Dichloroethane			50.0	55.07		ug/L		110	77 - 121	1	17
1,1-Dichloroethene			50.0	48.29		ug/L		97	79 - 124	1	17
1,2-Dichloropropane			50.0	49.42		ug/L		99	75 - 120	3	17
1,3-Dichloropropane			50.0	47.59		ug/L		95	80 - 125	5	14
2,2-Dichloropropane			50.0	57.94		ug/L		116	43 - 161	1	18
1,1-Dichloropropene			50.0	56.98		ug/L		114	80 - 122	2	17
Ethylbenzene			50.0	48.31		ug/L		97	80 - 130	4	15
Hexachlorobutadiene			50.0	55.43		ug/L		111	49 - 146	0	23

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-236980/4
Matrix: Water
Analysis Batch: 236980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Hexanone	250	231.1		ug/L		92	60 - 142	4	15
Isopropylbenzene	50.0	49.22		ug/L		98	80 - 141	4	16
Methylene Chloride	50.0	47.71		ug/L		95	79 - 123	1	17
4-Methyl-2-pentanone (MIBK)	250	216.2		ug/L		86	60 - 137	5	17
Methyl tert-butyl ether	50.0	44.77		ug/L		90	72 - 133	2	16
Naphthalene	50.0	46.72		ug/L		93	62 - 138	3	26
n-Butylbenzene	50.0	50.17		ug/L		100	68 - 132	2	18
N-Propylbenzene	50.0	49.45		ug/L		99	75 - 129	2	17
p-Isopropyltoluene	50.0	48.95		ug/L		98	75 - 128	2	16
sec-Butylbenzene	50.0	48.87		ug/L		98	76 - 128	2	16
Styrene	50.0	48.20		ug/L		96	80 - 127	4	24
tert-Butylbenzene	50.0	47.13		ug/L		94	76 - 126	4	16
1,1,1,2-Tetrachloroethane	50.0	50.35		ug/L		101	74 - 135	3	16
1,1,2,2-Tetrachloroethane	50.0	42.52		ug/L		85	69 - 131	4	20
Tetrachloroethene	50.0	51.02		ug/L		102	80 - 126	2	16
Toluene	50.0	47.84		ug/L		96	80 - 126	3	15
trans-1,2-Dichloroethene	50.0	54.08		ug/L		108	79 - 126	1	16
trans-1,3-Dichloropropene	50.0	54.44		ug/L		109	63 - 134	3	14
1,2,3-Trichlorobenzene	50.0	47.68		ug/L		95	62 - 133	4	25
1,2,4-Trichlorobenzene	50.0	49.02		ug/L		98	63 - 133	4	19
1,1,1-Trichloroethane	50.0	51.81		ug/L		104	78 - 135	0	17
1,1,2-Trichloroethane	50.0	46.21		ug/L		92	80 - 124	2	15
Trichloroethene	50.0	48.94		ug/L		98	80 - 123	4	17
Trichlorofluoromethane	50.0	50.37		ug/L		101	65 - 124	4	18
1,2,3-Trichloropropane	50.0	43.91		ug/L		88	70 - 131	1	19
1,2,4-Trimethylbenzene	50.0	47.98		ug/L		96	77 - 126	2	16
1,3,5-Trimethylbenzene	50.0	48.62		ug/L		97	77 - 127	2	17
Vinyl chloride	50.0	52.14		ug/L		104	68 - 120	1	17
Xylenes, Total	100	97.92		ug/L		98	80 - 132	3	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: MB 490-236985/7
Matrix: Water
Analysis Batch: 236985

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0		ug/L			03/27/15 15:42	1
Benzene	ND		1.00		ug/L			03/27/15 15:42	1
Bromobenzene	ND		1.00		ug/L			03/27/15 15:42	1
Bromochloromethane	ND		1.00		ug/L			03/27/15 15:42	1
Bromodichloromethane	ND		1.00		ug/L			03/27/15 15:42	1
Bromoform	ND		1.00		ug/L			03/27/15 15:42	1
Bromomethane	ND		1.00		ug/L			03/27/15 15:42	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-236985/7
Matrix: Water
Analysis Batch: 236985

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		50.0		ug/L			03/27/15 15:42	1
Carbon disulfide	ND		1.00		ug/L			03/27/15 15:42	1
Carbon tetrachloride	ND		1.00		ug/L			03/27/15 15:42	1
Chlorobenzene	ND		1.00		ug/L			03/27/15 15:42	1
Chlorodibromomethane	ND		1.00		ug/L			03/27/15 15:42	1
Chloroethane	ND		1.00		ug/L			03/27/15 15:42	1
Chloroform	ND		1.00		ug/L			03/27/15 15:42	1
Chloromethane	NC		1.00		ug/L			03/27/15 15:42	1
2-Chlorotoluene	ND		1.00		ug/L			03/27/15 15:42	1
4-Chlorotoluene	ND		1.00		ug/L			03/27/15 15:42	1
cis-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 15:42	1
cis-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 15:42	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/L			03/27/15 15:42	1
1,2-Dibromoethane (EDB)	ND		1.00		ug/L			03/27/15 15:42	1
Dibromomethane	ND		1.00		ug/L			03/27/15 15:42	1
1,2-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:42	1
1,3-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:42	1
1,4-Dichlorobenzene	ND		1.00		ug/L			03/27/15 15:42	1
Dichlorodifluoromethane	ND		1.00		ug/L			03/27/15 15:42	1
1,1-Dichloroethane	ND		1.00		ug/L			03/27/15 15:42	1
1,2-Dichloroethane	ND		1.00		ug/L			03/27/15 15:42	1
1,1-Dichloroethene	ND		1.00		ug/L			03/27/15 15:42	1
1,2-Dichloropropane	ND		1.00		ug/L			03/27/15 15:42	1
1,3-Dichloropropane	NC		1.00		ug/L			03/27/15 15:42	1
2,2-Dichloropropane	ND		1.00		ug/L			03/27/15 15:42	1
1,1-Dichloropropene	ND		1.00		ug/L			03/27/15 15:42	1
Ethylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
Hexachlorobutadiene	ND		2.00		ug/L			03/27/15 15:42	1
2-Hexanone	NC		10.0		ug/L			03/27/15 15:42	1
Isopropylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
Methylene Chloride	NC		5.00		ug/L			03/27/15 15:42	1
2-Methylnaphthalene	ND		10.0		ug/L			03/27/15 15:42	1
4-Methyl-2-pentanone (MIBK)	NC		10.0		ug/L			03/27/15 15:42	1
Methyl tert-butyl ether	ND		1.00		ug/L			03/27/15 15:42	1
Naphthalene	ND		5.00		ug/L			03/27/15 15:42	1
n-Butylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
N-Propylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
p-Isopropyltoluene	ND		1.00		ug/L			03/27/15 15:42	1
sec-Butylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
Styrene	ND		1.00		ug/L			03/27/15 15:42	1
tert-Butylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
1,1,1,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 15:42	1
1,1,2,2-Tetrachloroethane	ND		1.00		ug/L			03/27/15 15:42	1
Tetrachloroethene	ND		1.00		ug/L			03/27/15 15:42	1
Toluene	ND		1.00		ug/L			03/27/15 15:42	1
trans-1,2-Dichloroethene	ND		1.00		ug/L			03/27/15 15:42	1
trans-1,3-Dichloropropene	ND		1.00		ug/L			03/27/15 15:42	1
1,2,3-Trichlorobenzene	ND		1.00		ug/L			03/27/15 15:42	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-236985/7
Matrix: Water
Analysis Batch: 236985

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.00		ug/L			03/27/15 15:42	1
1,1,1-Trichloroethane	ND		1.00		ug/L			03/27/15 15:42	1
1,1,2-Trichloroethane	ND		1.00		ug/L			03/27/15 15:42	1
Trichloroethene	ND		1.00		ug/L			03/27/15 15:42	1
Trichlorofluoromethane	ND		1.00		ug/L			03/27/15 15:42	1
1,2,3-Trichloropropane	ND		1.00		ug/L			03/27/15 15:42	1
1,2,4-Trimethylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
1,3,5-Trimethylbenzene	ND		1.00		ug/L			03/27/15 15:42	1
Vinyl chloride	ND		1.00		ug/L			03/27/15 15:42	1
Xylenes, Total	ND		2.00		ug/L			03/27/15 15:42	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/27/15 15:42*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*03/27/15 15:42*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*03/27/15 15:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*03/27/15 15:42*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*03/27/15 15:42*	*1*

Lab Sample ID: LCS 490-236985/4
Matrix: Water
Analysis Batch: 236985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.39		ug/L		95	80 - 121
1,2-Dibromoethane (EDB)	50.0	47.30		ug/L		95	80 - 129
1,2-Dichloroethane	50.0	52.18		ug/L		104	77 - 121
Ethylbenzene	50.0	51.59		ug/L		103	80 - 130
Isopropylbenzene	50.0	56.66		ug/L		113	80 - 141
2-Methylnaphthalene	50.0	46.60		ug/L		93	35 - 150
Methyl tert-butyl ether	50.0	52.33		ug/L		105	72 - 133
Naphthalene	50.0	46.23		ug/L		92	62 - 138
n-Butylbenzene	50.0	41.82		ug/L		84	68 - 132
N-Propylbenzene	50.0	49.34		ug/L		99	75 - 129
p-Isopropyltoluene	50.0	46.79		ug/L		94	75 - 128
sec-Butylbenzene	50.0	45.67		ug/L		91	76 - 128
tert-Butylbenzene	50.0	48.15		ug/L		96	76 - 126
Toluene	50.0	50.66		ug/L		101	80 - 126
1,2,4-Trimethylbenzene	50.0	49.18		ug/L		98	77 - 126
1,3,5-Trimethylbenzene	50.0	50.67		ug/L		101	77 - 127
Xylenes, Total	150	159.4		ug/L		106	80 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-236985/4
Matrix: Water
Analysis Batch: 236985

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 490-236985/8
Matrix: Water
Analysis Batch: 236985

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	46.80		ug/L		94	80 - 121	1	17
1,2-Dibromoethane (EDB)			50.0	47.60		ug/L		95	80 - 129	1	15
1,2-Dichloroethane			50.0	52.34		ug/L		105	77 - 121	0	17
Ethylbenzene			50.0	51.63		ug/L		103	80 - 130	0	15
Isopropylbenzene			50.0	56.04		ug/L		112	80 - 141	1	16
2-Methylnaphthalene			50.0	49.85		ug/L		100	35 - 150	7	50
Methyl tert-butyl ether			50.0	52.46		ug/L		105	72 - 133	0	16
Naphthalene			50.0	46.45		ug/L		93	62 - 138	0	26
n-Butylbenzene			50.0	41.79		ug/L		84	68 - 132	0	18
N-Propylbenzene			50.0	49.40		ug/L		99	75 - 129	0	17
p-Isopropyltoluene			50.0	47.08		ug/L		94	75 - 128	1	16
sec-Butylbenzene			50.0	45.83		ug/L		92	76 - 128	0	16
tert-Butylbenzene			50.0	47.95		ug/L		96	76 - 126	0	16
Toluene			50.0	50.50		ug/L		101	80 - 126	0	15
1,2,4-Trimethylbenzene			50.0	49.06		ug/L		98	77 - 126	0	16
1,3,5-Trimethylbenzene			50.0	50.54		ug/L		101	77 - 127	0	17
Xylenes, Total			150	153.5		ug/L		102	80 - 132	4	15

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MB 490-236651/2-A
Matrix: Water
Analysis Batch: 237394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 236651

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.0200		ug/L		03/26/15 12:47	03/30/15 17:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	*117*		*50 - 150*	*03/26/15 12:47*	*03/30/15 17:31*	*1*

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: LCS 490-236651/3-A
Matrix: Water
Analysis Batch: 237394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236651

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
EDB			0.286	0.3629		ug/L		127	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,3-Dichlorobenzene	*131*		*50 - 150*

Lab Sample ID: MB 490-237536/3-A
Matrix: Water
Analysis Batch: 237394

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 237536

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
EDB	ND		0.0200		ug/L		03/30/15 13:48	03/30/15 17:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,3-Dichlorobenzene	*135*		*50 - 150*	*03/30/15 13:48*	*03/30/15 17:49*	*1*

Lab Sample ID: LCS 490-237536/4-A
Matrix: Water
Analysis Batch: 237394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 237536

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
EDB			0.286	0.3657		ug/L		128	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,3-Dichlorobenzene	*127*		*50 - 150*

GC/MS VOA

Analysis Batch: 236717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74504-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
490-74504-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
490-74740-1	MW-1	Total/NA	Water	8260B	
490-74740-2	MW-2	Total/NA	Water	8260B	
490-74740-3	MW-3	Total/NA	Water	8260B	
490-74740-4	MW-4	Total/NA	Water	8260B	
490-74740-5	MW-5	Total/NA	Water	8260B	
490-74740-6	MW-7	Total/NA	Water	8260B	
490-74740-7	MW-8	Total/NA	Water	8260B	
490-74740-8	MW-11	Total/NA	Water	8260B	
490-74740-9	MW-12	Total/NA	Water	8260B	
490-74740-10	MW-13	Total/NA	Water	8260B	
490-74740-11	MW-14	Total/NA	Water	8260B	
LCS 490-236717/8	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-236717/9	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-236717/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 236980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74740-1	MW-1	Total/NA	Water	8260B	
490-74740-2	MW-2	Total/NA	Water	8260B	
490-74740-3	MW-3	Total/NA	Water	8260B	
490-74740-4	MW-4	Total/NA	Water	8260B	
490-74740-5	MW-5	Total/NA	Water	8260B	
490-74740-6	MW-7	Total/NA	Water	8260B	
490-74740-7	MW-8	Total/NA	Water	8260B	
490-74740-8	MW-11	Total/NA	Water	8260B	
490-74740-9	MW-12	Total/NA	Water	8260B	
490-74740-10	MW-13	Total/NA	Water	8260B	
490-74740-11	MW-14	Total/NA	Water	8260B	
LCS 490-236980/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-236980/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-236980/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 236985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74740-1	MW-1	Total/NA	Water	8260B	
490-74740-2	MW-2	Total/NA	Water	8260B	
490-74740-3	MW-3	Total/NA	Water	8260B	
490-74740-4	MW-4	Total/NA	Water	8260B	
490-74740-5	MW-5	Total/NA	Water	8260B	
490-74740-6	MW-7	Total/NA	Water	8260B	
490-74740-7	MW-8	Total/NA	Water	8260B	
490-74740-8	MW-11	Total/NA	Water	8260B	
490-74740-9	MW-12	Total/NA	Water	8260B	
490-74740-10	MW-13	Total/NA	Water	8260B	
490-74740-11	MW-14	Total/NA	Water	8260B	
LCS 490-236985/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-236985/8	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-236985/7	Method Blank	Total/NA	Water	8260B	

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

GC Semi VOA

Prep Batch: 236651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74740-1	MW-1	Total/NA	Water	504.1	
490-74740-2	MW-2	Total/NA	Water	504.1	
490-74740-3	MW-3	Total/NA	Water	504.1	
490-74740-4	MW-4	Total/NA	Water	504.1	
490-74740-5	MW-5	Total/NA	Water	504.1	
490-74740-6	MW-7	Total/NA	Water	504.1	
490-74740-7	MW-8	Total/NA	Water	504.1	
490-74740-8	MW-11	Total/NA	Water	504.1	
490-74740-9	MW-12	Total/NA	Water	504.1	
490-74740-10	MW-13	Total/NA	Water	504.1	
LCS 490-236651/3-A	Lab Control Sample	Total/NA	Water	504.1	
MB 490-236651/2-A	Method Blank	Total/NA	Water	504.1	

Analysis Batch: 237394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74740-1	MW-1	Total/NA	Water	504.1	236651
490-74740-2	MW-2	Total/NA	Water	504.1	236651
490-74740-3	MW-3	Total/NA	Water	504.1	236651
490-74740-4	MW-4	Total/NA	Water	504.1	236651
490-74740-5	MW-5	Total/NA	Water	504.1	236651
490-74740-6	MW-7	Total/NA	Water	504.1	236651
490-74740-7	MW-8	Total/NA	Water	504.1	236651
490-74740-8	MW-11	Total/NA	Water	504.1	236651
490-74740-9	MW-12	Total/NA	Water	504.1	236651
490-74740-10	MW-13	Total/NA	Water	504.1	236651
490-74740-11	MW-14	Total/NA	Water	504.1	237536
LCS 490-236651/3-A	Lab Control Sample	Total/NA	Water	504.1	236651
LCS 490-237536/4-A	Lab Control Sample	Total/NA	Water	504.1	237536
MB 490-236651/2-A	Method Blank	Total/NA	Water	504.1	236651
MB 490-237536/3-A	Method Blank	Total/NA	Water	504.1	237536

Prep Batch: 237536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74740-11	MW-14	Total/NA	Water	504.1	
LCS 490-237536/4-A	Lab Control Sample	Total/NA	Water	504.1	
MB 490-237536/3-A	Method Blank	Total/NA	Water	504.1	

Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-1

Lab Sample ID: 490-74740-1

Date Collected: 03/17/15 18:22

Matrix: Water

Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 20:48	NC	TAL NSH
Total/NA	Analysis	8260B		20	10 mL	10 mL	236980	03/27/15 18:09	NC	TAL NSH
Total/NA	Analysis	8260B		5	10 mL	10 mL	236985	03/27/15 19:29	NC	TAL NSH
Total/NA	Prep	504.1			35.3 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		100	35.3 mL	2 mL	237394	03/31/15 14:41	MWT	TAL NSH

Client Sample ID: MW-2

Lab Sample ID: 490-74740-2

Date Collected: 03/17/15 16:55

Matrix: Water

Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 21:16	NC	TAL NSH
Total/NA	Analysis	8260B		10	10 mL	10 mL	236980	03/27/15 18:36	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 19:01	NC	TAL NSH
Total/NA	Prep	504.1			35.9 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1	35.9 mL	2 mL	237394	03/31/15 11:12	MWT	TAL NSH

Client Sample ID: MW-3

Lab Sample ID: 490-74740-3

Date Collected: 03/17/15 14:25

Matrix: Water

Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 21:44	NC	TAL NSH
Total/NA	Analysis	8260B		10	10 mL	10 mL	236980	03/27/15 19:04	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 18:04	NC	TAL NSH
Total/NA	Prep	504.1			34.9 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1	34.9 mL	2 mL	237394	03/31/15 03:03	MWT	TAL NSH

Client Sample ID: MW-4

Lab Sample ID: 490-74740-4

Date Collected: 03/17/15 15:30

Matrix: Water

Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 22:12	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236980	03/27/15 15:49	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 16:11	NC	TAL NSH
Total/NA	Prep	504.1			35 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1	35 mL	2 mL	237394	03/31/15 03:20	MWT	TAL NSH

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-5

Lab Sample ID: 490-74740-5

Date Collected: 03/17/15 19:00
Matrix: Water
Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 22:40	NC	TAL NSH
Total/NA	Analysis	8260B		50	10 mL	10 mL	236980	03/27/15 19:32	NC	TAL NSH
Total/NA	Analysis	8260B		10	10 mL	10 mL	236985	03/27/15 19:58	NC	TAL NSH
Total/NA	Prep	504.1			35 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1000	35 mL	2 mL	237394	03/31/15 14:59	MWT	TAL NSH

Client Sample ID: MW-7

Lab Sample ID: 490-74740-6

Date Collected: 03/17/15 17:30
Matrix: Water
Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 23:08	NC	TAL NSH
Total/NA	Analysis	8260B		20	10 mL	10 mL	236980	03/27/15 20:00	NC	TAL NSH
Total/NA	Analysis	8260B		10	10 mL	10 mL	236985	03/27/15 20:26	NC	TAL NSH
Total/NA	Prep	504.1			35.7 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		500	35.7 mL	2 mL	237394	03/31/15 15:17	MWT	TAL NSH

Client Sample ID: MW-8

Lab Sample ID: 490-74740-7

Date Collected: 03/17/15 13:42
Matrix: Water
Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/26/15 23:36	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236980	03/27/15 16:17	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 17:36	NC	TAL NSH
Total/NA	Prep	504.1			34.8 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1	34.8 mL	2 mL	237394	03/31/15 04:12	MWT	TAL NSH

Client Sample ID: MW-11

Lab Sample ID: 490-74740-8

Date Collected: 03/17/15 21:00
Matrix: Water
Date Received: 03/19/15 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/27/15 00:04	NC	TAL NSH
Total/NA	Analysis	8260B		20	10 mL	10 mL	236980	03/27/15 20:28	NC	TAL NSH
Total/NA	Analysis	8260B		5	10 mL	10 mL	236985	03/27/15 20:54	NC	TAL NSH
Total/NA	Prep	504.1			35.5 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		500	35.5 mL	2 mL	237394	03/31/15 15:34	MWT	TAL NSH

Lab Chronicle

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Client Sample ID: MW-12

Date Collected: 03/17/15 20:10
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/27/15 00:32	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236980	03/27/15 16:45	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 17:07	NC	TAL NSH
Total/NA	Prep	504.1			34.8 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1	34.8 mL	2 mL	237394	03/31/15 11:29	MWT	TAL NSH

Client Sample ID: MW-13

Date Collected: 03/17/15 12:15
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/27/15 01:00	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236980	03/27/15 17:13	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 16:39	NC	TAL NSH
Total/NA	Prep	504.1			34.2 mL	2 mL	236651	03/26/15 12:47	MWT	TAL NSH
Total/NA	Analysis	504.1		1	34.2 mL	2 mL	237394	03/31/15 05:03	MWT	TAL NSH

Client Sample ID: MW-14

Date Collected: 03/17/15 13:00
Date Received: 03/19/15 09:00

Lab Sample ID: 490-74740-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	236717	03/27/15 01:27	NC	TAL NSH
Total/NA	Analysis	8260B		10	10 mL	10 mL	236980	03/27/15 20:56	NC	TAL NSH
Total/NA	Analysis	8260B		1	10 mL	10 mL	236985	03/27/15 18:32	NC	TAL NSH
Total/NA	Prep	504.1			35.2 mL	2 mL	237536	03/30/15 13:48	MWT	TAL NSH
Total/NA	Analysis	504.1		50	35.2 mL	2 mL	237394	03/31/15 11:46	MWT	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW	TAL NSH

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Daniel B. Stephens & Associates Inc.
Project/Site: Shamrock #63

TestAmerica Job ID: 490-74740-1

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0473	05-05-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,1,2-Tetrachloroethane
8260B		Water	1,2,4-Trichlorobenzene
8260B		Water	1,2-Dibromo-3-Chloropropane
8260B		Water	2-Methylnaphthalene
8260B		Water	Dibromomethane
8260B		Water	Hexachlorobutadiene

Utah	NELAP	8	TN00032	07-31-15

The following analytes are included in this report, but are not certified under this certification:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	2-Methylnaphthalene

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
504.1	504.1	Water	EDB

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-74740 Chain of Custody

Cooler Received/Opened On 3/19/2015 @ 900

1. Tracking # 7344 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 17610176

2. Temperature of rep. sample or temp blank when opened: 4.7 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) AJH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (intial) ELA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) ELA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) ELA

I certify that I attached a label with the unique LIMS number to each container (intial) ELA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-0954

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: J. Fisher	Lab PM: Klingensmith, Leah	Carrier Tracking No(s):	COC No:
Client Contact: John Casey	Phone: 970-769-2196	E-Mail: leah.klingensmith@testamericainc.com		Page: Page 1 of 1
Company: Daniel B. Stephens & Associates				Job #: BE14.0012.00.00003.0001
Address: 6020 Academy Dr.	Due Date Requested:			
City: Albuquerque	TAT Requested (days):			
State, Zip: NM, 87109				
Phone: 505-822-9400	PO #: Purchase Order not required			
Email: jcasey@dbstephens.com	DBS&A Work Order#: BE14.0012.00.00003.0001			
Basin Project Name: Shamrock #63	Laboratory Project Account #: 49001281			
Site State: NM	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B	8015B	504.1 EDB	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		R		
MW-1	3/19/15	1822	G	W			X		X		
MW-2		1655					X		X		
MW-3		1425					X		X		
MW-4		1530					X		X		
MW-5		1900					X		X		PRODUCT SHEEN
MW-7		1730					X		X		PRODUCT SHEEN
MW-8		1342					X		X		
MW-11		2100					X		V		
MW-12		2010					X		X		
MW-13		1215					X		X		
MW-14		1300					X		X		

Loc: 490
74740

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company		Date/Time:	Company
Relinquished by:	3/18/15 : 0830	DBS&A	Received by:	3-19-15 900	TAN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.2

3/31/2015

Login Sample Receipt Checklist

Client: Daniel B. Stephens & Associates Inc.

Job Number: 490-74740-1

Login Number: 74740

List Source: TestAmerica Nashville

List Number: 1

Creator: Abernathy, Eric

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

Appendix 6

Survey Report

SURVEYING CONTROL, INC.

131 Madison St., N.E.
Albuquerque, NM 87108
(505) 266-0935
Fax (505) 266-9985

March 17, 2015

Attn: Jason Raucci, P.G.
Daniel B. Stephens & Associates, Inc.
6020 Academy Road, N.E.
Suite 100
Albuquerque, NM 87109

Re: Coordinates & Elevations for Additional Monitor Wells on Shamrock #63 Site at Santa Fe, NM

Dear Jason:

The following are the coordinates and elevations for the additional monitor wells on the above referenced site. The coordinates are New Mexico State Plane Coordinates, Central Zone (NAD 83), and have been adjusted to the Arrow Engineering control point ñCP 1ò (N = 1690387.977ô, E = 1712653.816ô). The coordinates below are referred to the center of the lid for each well. The elevations are NAVD 88, and have been adjusted to ñCP 1ò as well (Elevation used = 6625.10ô). The elevations listed below as ñTop PVC Elev.ò are referred to the black Magic Marker spot on the northerly edge of the inside PVC well casing.

Well	Northing	Easting	Top Lid Elev.	Top PVC Elev.
MW-9	1690230.89	1712486.99	6619.89	6619.49
MW-10	1690195.50	1712444.19	6618.67	6618.39
MW-11	1690188.49	1712528.53	6618.26	6617.89
MW-12	1690107.31	1712616.92	6615.45	6615.09
MW-13	1690285.77	1712725.96	6620.04	6619.75
MW-14	1690354.49	1712635.20	6623.91	6623.61

NOTE: The coordinates & elevations above are expressed in U.S. Survey Feet.

Please do not hesitate to call if you have any questions or if you need any additional information.

Sincerely,

Stephen J. Toler, PS

Appendix 7
Sampling Protocol

Appendix 7. Sampling Protocol

1.1 Fluid Level and Parameter Measurements

Prior to collection of groundwater samples, a Solinst interface probe meter will be used to determine depths to water and nonaqueous phase liquid (NAPL), if present. Water level data will be used to construct a site potentiometric surface map. A YSI 556 multi-parameter water quality meter will be used to measure specific conductivity, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP) and temperature. Field parameters will be measured at the start and again at the completion of purging a well for sampling.

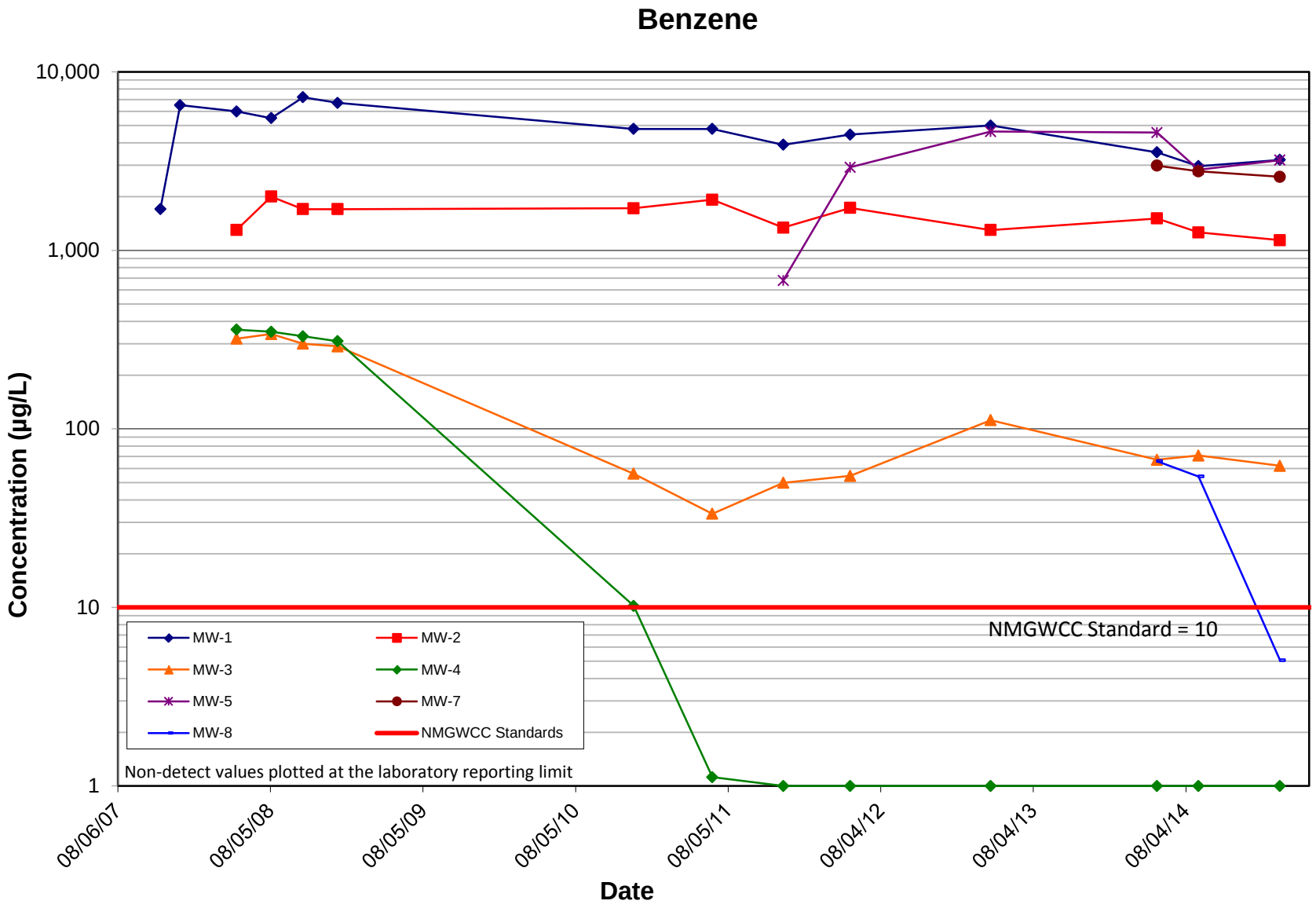
1.2 Groundwater Monitor Well Sampling

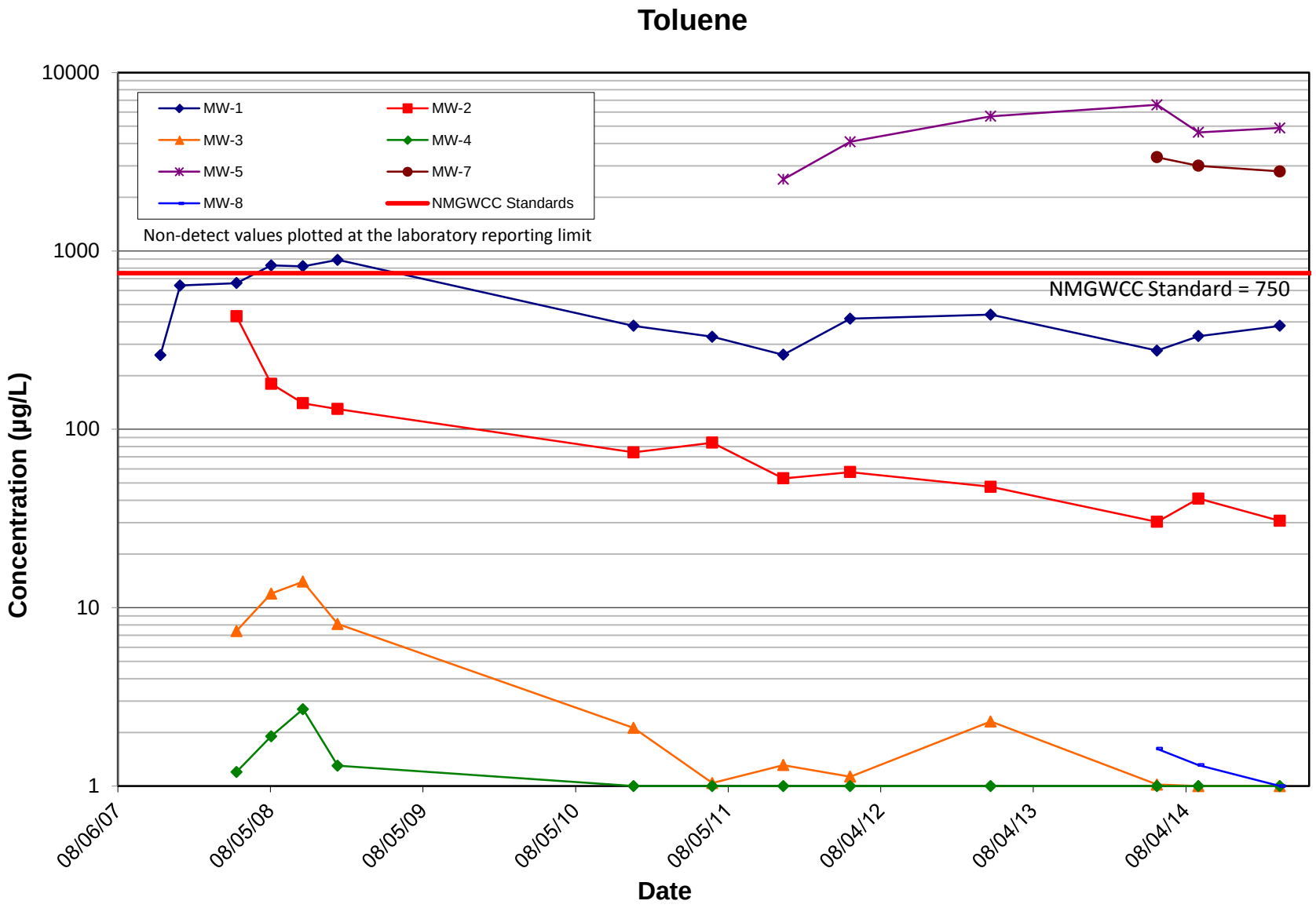
To ensure a fresh flow of groundwater into the well bore, a minimum of three casing volumes will be removed from each well prior to sampling. If a well is purged dry, it will be sampled when the well has recharged. Wells will be purged and sampled using dedicated, disposable, polyethylene bailers. To 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 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.

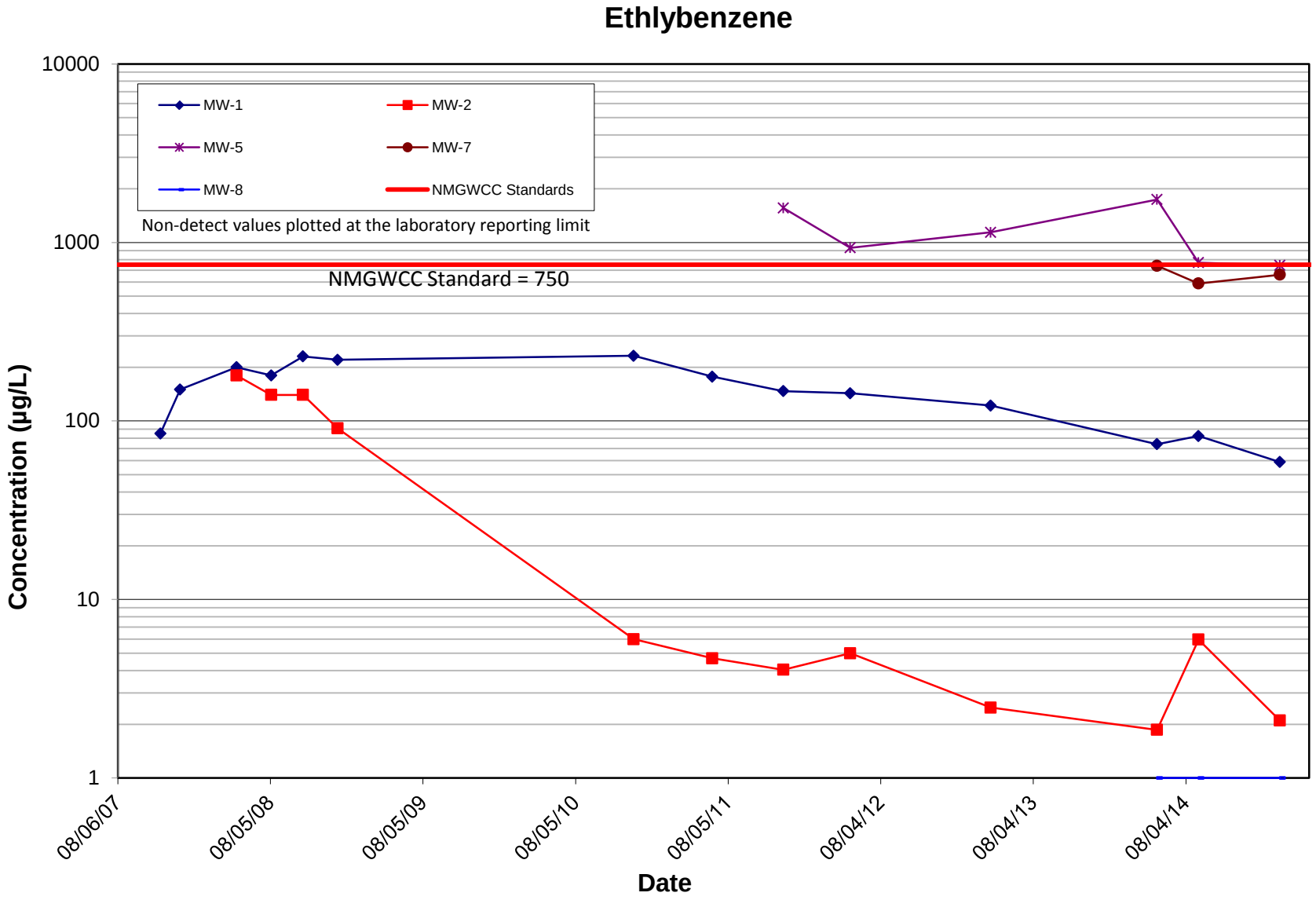
Immediately after collection, the sample containers will be placed on ice in an insulated cooler for delivery to the laboratory for analyses. Groundwater samples will be accompanied by full chain-of-custody documentation at all times.

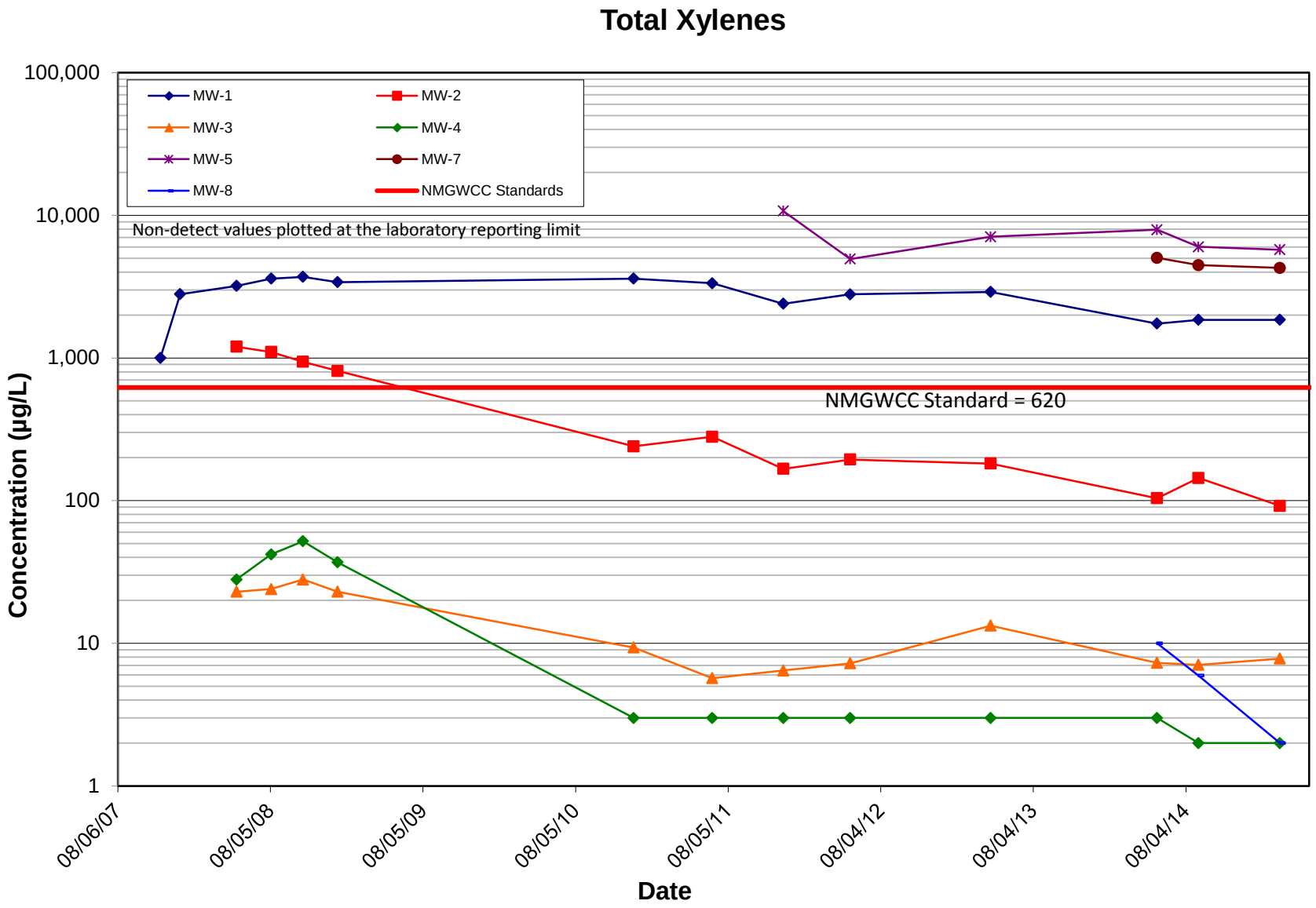
Appendix 8

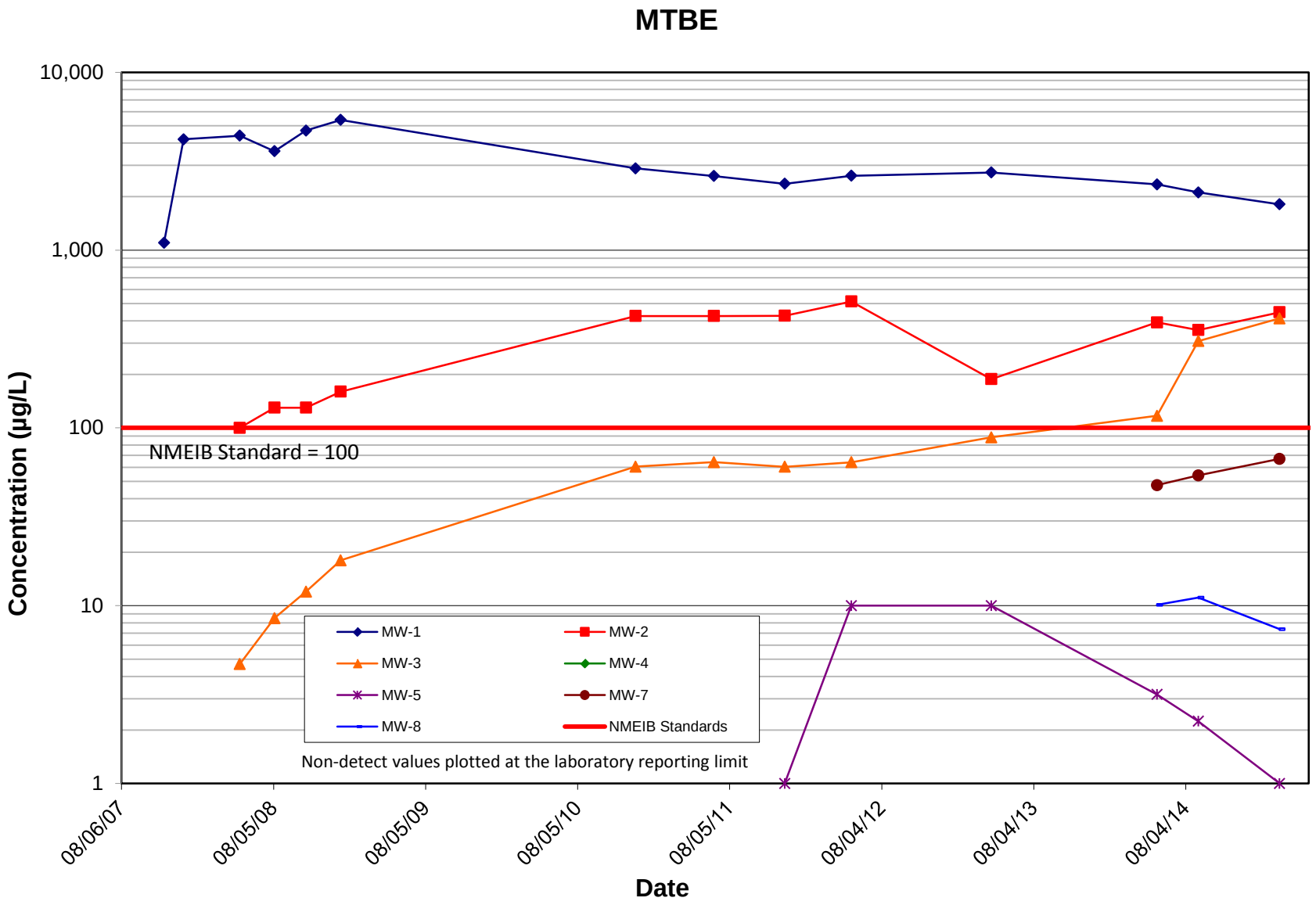
Graphs

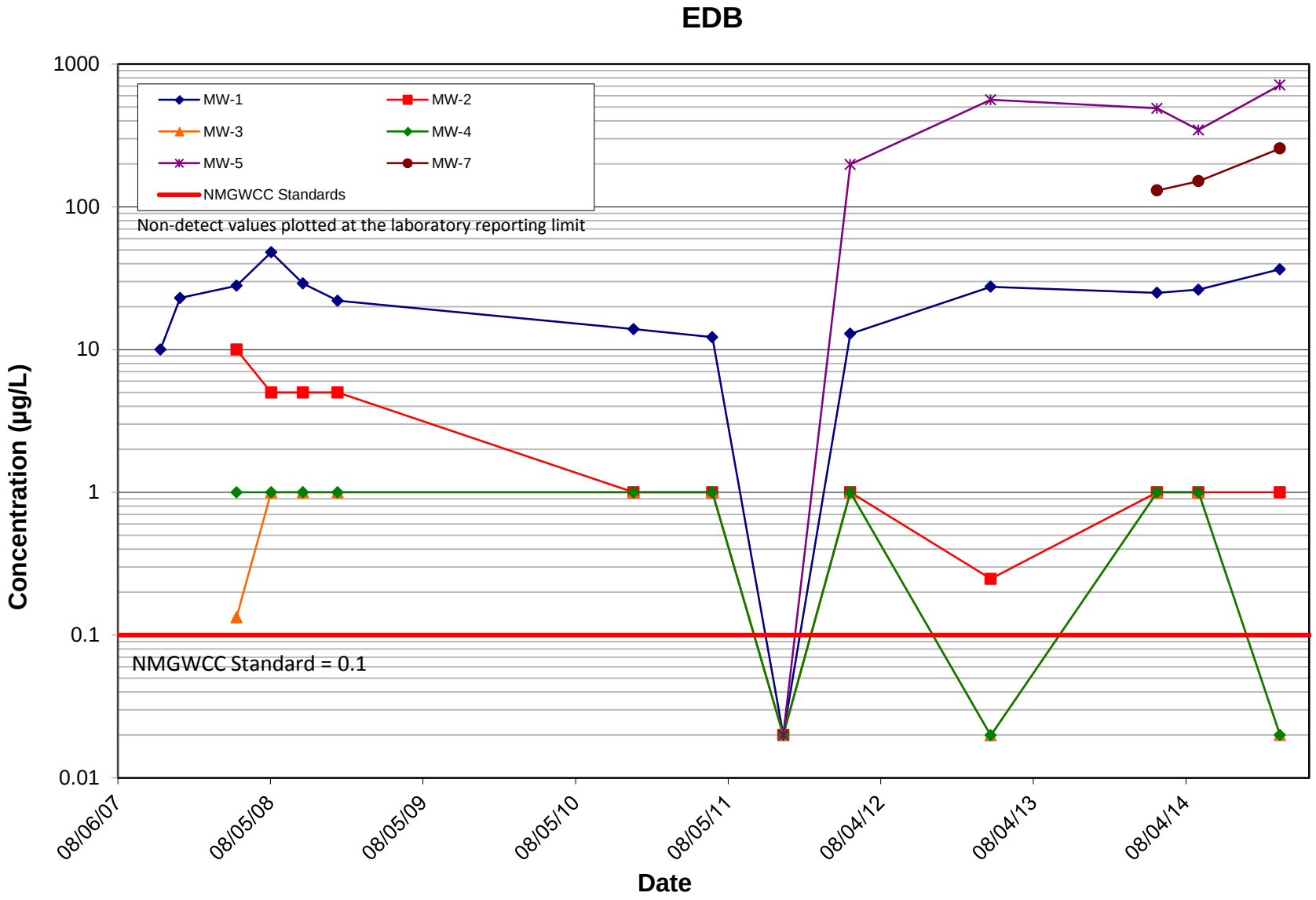

Benzene
10,000
1,000
100
10
1
Concentration (µg/L)
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
NMGWCC Standards
NMGWCC Standard = 10
Non-detect values plotted at the laboratory reporting limit
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date

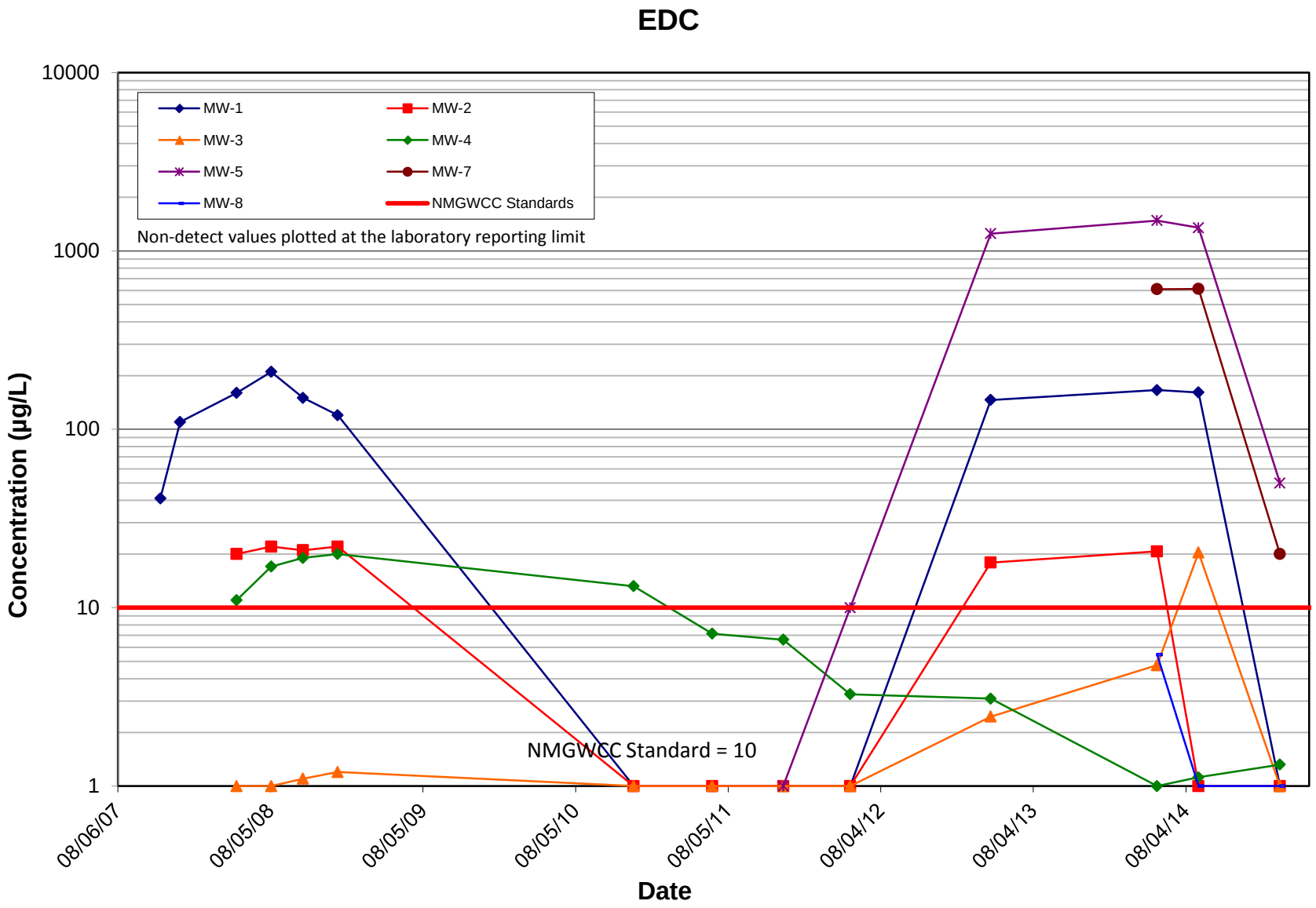

Toluene
10000
1000
100
10
1
Concentration (µg/L)
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
NMGWCC Standards
Non-detect values plotted at the laboratory reporting limit
NMGWCC Standard = 750
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date

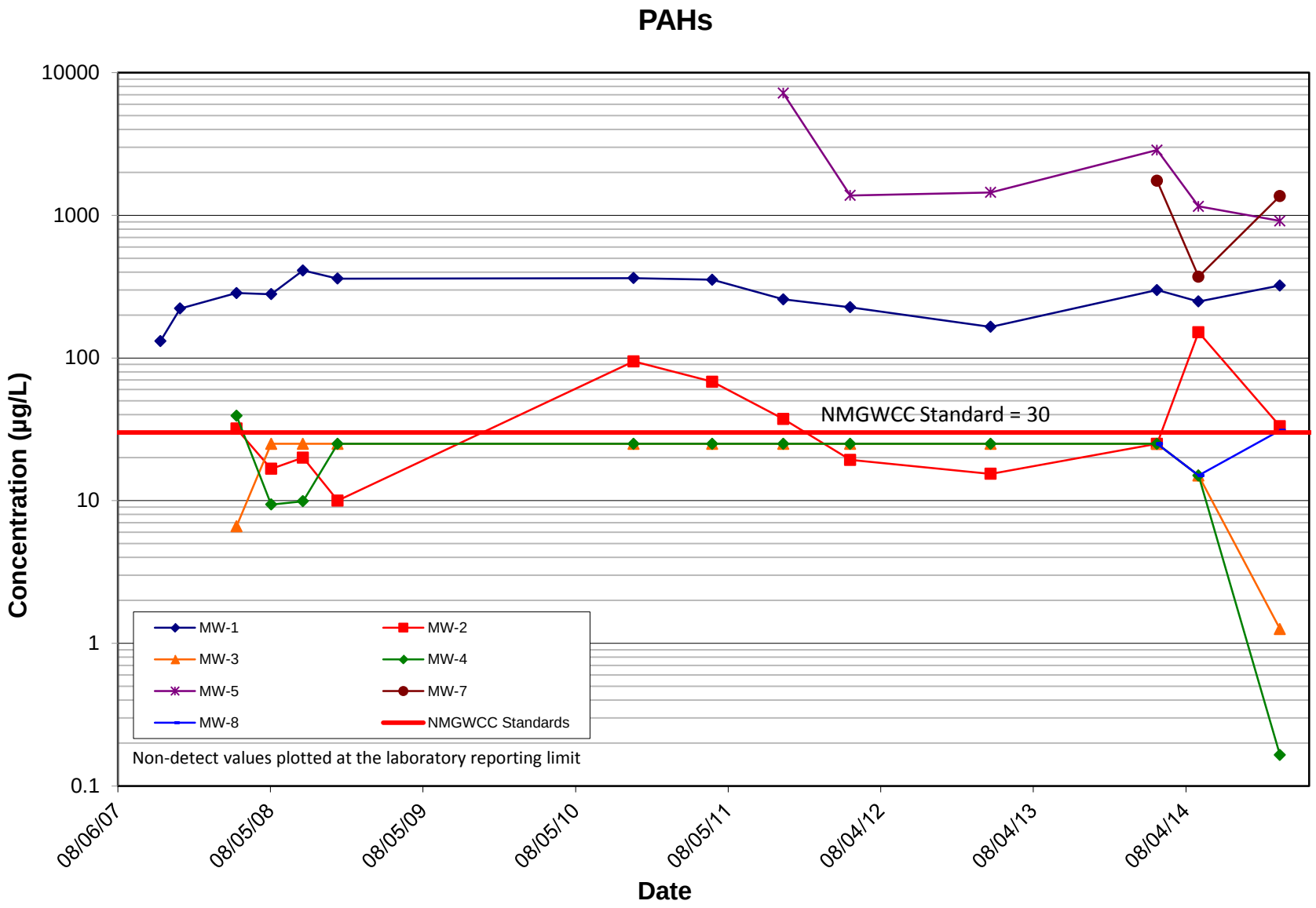

Ethlybenzene
10000
1000
100
10
1
Concentration (µg/L)
MW-1
MW-2
MW-5
MW-7
MW-8
NMGWCC Standards
Non-detect values plotted at the laboratory reporting limit
NMGWCC Standard = 750
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date


Total Xylenes
100,000
10,000
1,000
100
10
1
Concentration (µg/L)
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
NMGWCC Standards
Non-detect values plotted at the laboratory reporting limit
NMGWCC Standard = 620
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date


MTBE
10,000
1,000
100
10
1
Concentration (µg/L)
NMEIB Standard = 100
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
NMEIB Standards
Non-detect values plotted at the laboratory reporting limit
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date


EDB
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
NMGWCC Standards
Non-detect values plotted at the laboratory reporting limit
NMGWCC Standard = 0.1
Concentration (µg/L)
1000
100
10
1
0.1
0.01
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date


EDC
10000
1000
100
10
1
Concentration (µg/L)
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
NMGWCC Standards
Non-detect values plotted at the laboratory reporting limit
NMGWCC Standard = 10
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date


PAHs
10000
1000
100
10
1
0.1
Concentration (µg/L)
NMGWCC Standard = 30
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
NMGWCC Standards
Non-detect values plotted at the laboratory reporting limit
08/06/07
08/05/08
08/05/09
08/05/10
08/05/11
08/04/12
08/04/13
08/04/14
Date