

FINAL REMEDIATION PLAN. REVISION 1 MOBERG'S GARAGE AND TEXACO STATION NEW MEXICO HIGHWAY 161 WATROUS, NEW MEXICO

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Submitted to:

New Mexico Environment Department Petroleum Storage Tank Bureau 2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505

Submitted by:

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Signed Electronically by V. Mustafin on 06/01/2020

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EA Project No. 6350901

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1.0 INTRODUCTION

1.1. Contractual

EA Engineering, Science, and Technology, Inc. PBC (EA) has prepared this Final Remediation Plan (FRP) to implement injection of Oxygen Release Compound Advanced® (ORC-A®) to address groundwater contamination at the Moberg's Garage and Texaco Station State Lead Site (the site) in Watrous, New Mexico. This revised FRP incorporates the newly presented September 2018 Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) data. The site layout is shown on Drawing G-1. The FRP has been prepared under Contract number 19-667-3200-0006 and in accordance with the New Mexico Petroleum Storage Tank Regulations 20.5.119.1923 NMAC and work plan identification (WPID) numbers 4086 and 4091, approved by the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) on September 26 and September 27, 2019, respectively.

1.2. Site Description

The Moberg's Garage and Texaco Station State Lead Site is located on the west side of New Mexico Highway 161 (NM 161) in Watrous, New Mexico (Drawing G-1). The Gallegos residence and Concord Street are located between the two sites, which are approximately 200 feet apart. Moberg's Garage remains an active automobile repair facility and the former Texaco Station is now the Moberg residence.

Adjacent properties are primarily residential to the north, west, and south; Burlington Northern Santa Fe (BNSF) railroad right-of-way (ROW) abuts NM 161 to the east. The Watrous Mutual Domestic Water Consumers' Association (MDWCA) North Supply Well is located approximately 500 feet east of Moberg's Garage at the base of the sandstone bluff (Drawing G-1). The MDWCA south supply well is located approximately 1,200 feet to the southwest.

A gas station was reportedly operated at the Moberg's Garage from 1927 to 1968. A release was confirmed during removal of the underground storage tanks (USTs) in May 1992. Billings and Associates, Inc. (BAI) conducted the on-site investigation at the Moberg's Garage Site (BAI 1998). The investigation revealed hydrocarbon contamination in subsurface soils throughout the site and nonaqueous-phase liquid (NAPL) was present in two monitoring wells.

Gasoline was dispensed from several small-volume USTs at the former Texaco Station until November 1992 when the last of the tanks were removed. A release was confirmed at that time. BAI conducted an on-site investigation in June 1999 that revealed high concentrations of hydrocarbon contamination in both soil and groundwater beneath the site.

After 1999, investigation and monitoring activities at the two sites were conducted concurrently. Additional investigations were conducted by BAI in 2001, 2002/2003, and 2007 that included in

the installation of 35 soil borings and 27 groundwater monitoring wells. In addition to drilling and well installation, BAI conducted a NAPL bail-down test in 2004 and an SVE pilot test in 2006. Groundwater monitoring was performed by BAI through 2009. In 2009, the two sites were designated as State Lead due to the presence of comingled dissolved-phase petroleum hydrocarbon plumes.

Golder Associates, Inc. (Golder) completed a monitoring well assessment and single groundwater monitoring event in March 2012. Golder reported a significant number of site wells as missing or destroyed, leaving the extent of hydrocarbon contamination in groundwater undefined.

In May 2015, Daniel B. Stephens & Associates, Inc. (DBS&A) was awarded a four-year contract for State Lead remediation services. In February 2016, they performed additional site investigation and baseline groundwater monitoring at the site. The investigation included well installation, indoor air sampling, and tap sampling. Between November 2016 and January 2017, four horizontal SVE wells and three horizontal air sparge wells were installed. The conveyance piping and remediation system was installed in January and February 2017, and remediation system shakedown and startup occurred in March 2017.

Quarterly operations and maintenance (O&M) and groundwater monitoring were conducted by DBS&A after system startup, with a temporary shutdown of the system after the second quarter of operation to evaluate options to improve air sparge performance. The system was restarted in March 2018 after modifications to the system were made to increase air sparge injection pressure and discharge extracted soil vapor directly to the atmosphere. The system was permanently shut down on March 5, 2019.

Between October 21 and 23, 2019, EA conducted baseline groundwater monitoring at the Moberg's Garage and Texaco Station site. Fluid levels were gauged in 28 site monitoring wells; groundwater samples were collected from 26 wells, the two MDWCA supply wells, and the Dominguez/Maldonado private well. The report was submitted to the NMED PSTB on December 10, 2019.

1.3. Site Geology and Hydrogeology

The site is located on the western edge of the High Plains physiographic province at an elevation of approximately 6,400 feet above mean sea level (feet msl). Watrous is located 20 miles northeast of Las Vegas, New Mexico within the Mora River watershed and lies within a broad alluvial valley near the confluence of the Sapello and Mora Rivers. The Sapello River is located approximately 800 feet west of the site and flows northward to merge with the larger Mora River, approximately 0.5 mile north of the site.

The surficial geology of the adjacent plateaus consists largely of weathered sedimentary rocks of the Cretaceous-age Dakota Group. Subsurface sediments at the site are composed primarily of clayey sand in the vadose zone and poorly sorted sand and gravelly sand below the water table. During additional site investigation, DBS&A (2016) found increasing occurrence of large gravel and cobbles throughout the site around 20 feet below ground surface (bgs), resulting in difficult drilling conditions at depth. Drilling refusal was encountered at approximately 19 to 21 feet bgs in borings installed by DBS&A. Clay and gravel lenses are encountered locally. A cross section showing the lithology of the alluvial sediments beneath the site and the extent of pre-remediation soils above 100 parts per million by volume (ppmv) based on data reported by BAI is presented in Drawing G-2. The thickness of the alluvial sediments under the site has not been determined but is greater than 32 feet based on the total depth of boreholes P-4 and P-1, installed by BAI (BAI 2007). Site geology in longitudinal section is shown in Drawing G-2.

Shallow groundwater at the site occurs within the sands and gravels of the alluvial sediments underlying the site. Groundwater at the site is unconfined, and the water table is typically encountered at depths of approximately 9 to 13 feet bgs. The groundwater gradient at the site is flat and the groundwater elevation varies by approximately one foot across the site. Between 1999 and 2007, the groundwater flow direction in the shallow aquifer varied from northwesterly to northeasterly. In October 2019, the groundwater flow direction was to the north-northeast at a gradient of 0.0025 foot per foot (ft/ft) (EA 2019). Groundwater gauging and water level data are provided in Table 1, and the October 2019 potentiometric surface map is shown on Drawing G-3.

Previously, Golder (2012) reported a groundwater flow direction to the east at a gradient of 0.003 ft/ft. This change in flow direction may have been due to pumping of the Watrous MDWCA North Supply Well, located to the east of the site. An easterly groundwater flow direction has not been observed since then.

Based on most of the historical data and the observed distribution of contaminants in soil and groundwater, the dominant groundwater flow direction at the site is to the north-northeast. This flow direction is consistent with the surface flow in the nearby Sapello River, 2016 through 2018 monitoring events conducted by DBS&A, and the 2019 monitoring event conducted by EA. All showed that the groundwater flow direction at the site was generally to the north at an average gradient of approximately 0.003 ft/ft (Drawing G-3). North of the site, DBS&A (2019) reported that the groundwater flows more northerly and the gradient increases slightly.

2.0 CONTAMINANT DISTRIBUTION

The primary contaminants of concern (COCs) at the site are petroleum hydrocarbons including benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tertiary-butyl ether (MTBE), and total naphthalenes. Multiple investigations conducted at Moberg's Garage and Texaco Station

indicate that contaminated soil and groundwater are present beneath the two sites and extend offsite to the east and northeast.

2.1. Distribution of Contaminants in Soil

Soil contamination was documented during investigations conducted between 1998 and 2007 and refined in 2016 by DBS&A prior to implementing and operating the vent-sparge system. Based on performance assessment data provided in DBS&A's January 2019 Quarterly O&M and Monitoring Report (DBS&A 2019), vadose zone contamination has been, for the most part, cleaned up. The exception is suspected residual NAPL in a thin smear zone at the water table coincident with the solute plume "hot spots." These "hot spots" are defined currently by wells that formerly contained NAPL. These areas of former NAPL are the focus of the cleanup strategy presented in this FRP.

2.2. Nonaqueous-Phase Liquid

Historically, NAPL has been present in 10 site wells at thicknesses up to 1.33 feet. The wells that have historically contained NAPL include BMW-1 through BMW-7, and BMW-22 in the vicinity of Moberg's Garage and wells W-3 and BMW-9 in the vicinity of Texaco Station. The greatest NAPL thickness was measured in well BMW-3 in October 1998 during the initial onsite investigation at the Moberg's Garage Site. However, since 2007, no NAPL has been observed in BMW-3.

Up until 2006, the presence of NAPL in site wells was sporadic, and NAPL was not observed in any wells between 2007 and 2012. During the groundwater monitoring event conducted by Golder in 2012, 0.01 foot of NAPL was observed in well BMW-1 near Moberg's Garage, and in well W-3 near Texaco Station. Measurable NAPL accumulation has not been observed in any wells since 2012, which predates active remediation, and attests to the high natural attenuation capacity of the aquifer.

2.3. Distribution of Contaminants in Water

Cumulative contaminant concentration data are summarized in Tables 2 and 3. Actionable extents of dissolved-phase COCs (including benzene, ethylbenzene, total xylenes, and total naphthalenes) for the most recent monitoring event conducted in October 2019 are shown on Drawings G-4 and G-5. The colored contours shown for each COC represent the two "hot spots" at the site where dissolved-phase contamination remains above the applicable New Mexico Water Quality Control Commission (NMWQCC) standards. The benzene, ethylbenzene, and total xylenes "hot spots" are centered on wells BMW-1, BMW-2, and BMW-3 in the vicinity of Moberg's Garage. An ethylbenzene "hot spot" is also centered on well W-3 at Texaco Station. The total naphthalenes "hot spot" is more laterally extensive and incorporates wells BMW-1,

BMW-2, BMW-3, BMW-5R, and BMW-22 in the vicinity of Moberg's Garage and wells W-1 and W-3 at Texaco Station. It is important to note that although toluene did not exceed the standard in any wells during the November 2018 monitoring event, it did exceed the standard during the previous monitoring event in August 2018 in BMW-2 and BMW-3 at Moberg's Garage and in W-3 at Texaco Station. It is therefore still considered a COC in the two "hot spots" and will be addressed along with the other COCs in the remedial approach as discussed below. The current extent of actionable dissolved contaminants is shown on Drawings G-4 and G-5.

During the 2016 additional site investigation, seven direct-push borings were advanced on private property immediately east of the railroad ROW. Groundwater samples were collected from the Geoprobe borings and field screened using a field-portable gas chromatograph. Only one groundwater sample, collected northeast of DBS-4, indicated elevated dissolved-phase contamination.

The two Watrous MDWCA supply wells and the domestic well associated with the Dominguez and Maldonado residences and a sentinel well DBS-6 located between the residences have been sampled eight times since February 2016. Analytical results have been non-detect for all COCs.

In April 2020, NMED PSTB provided to EA additional BOD and COD data from the September 2018 sampling event. The BOD and COD are attributed to septic systems in the area. In the Moberg's portion of the plume, BOD averaged 268 milligrams per liter (mg/L) and COD averaged 473 mg/L. In the Texaco portion of the plume, BOD averaged 95 mg/L and COD averaged 161 mg/L. These data have been incorporated into this revised design. A summary of the results is provided in Table 4 and laboratory report is provided in Appendix A.

3.0 REMEDIATION GOALS

Remediation goals and cleanup standards include the following:

- Review of SVE data indicate remediation of the source (sorbed-phase) is complete, so no cleanup goals for soil are provided herein; and
- Remediation of groundwater will be to NMWQCC standards, including:

0	Benzene	5 μg/L

o Toluene $1,000 \mu g/L$

o Ethylbenzene 700 μg/L

o Total Xylenes 620 μg/L

o Total Naphthalenes 30 μg/L

The active treatment zone (e.g., injection zone) has been established as $60 \mu g/L$ total naphthalenes. Solute contamination less than twice the cleanup goal will be allowed to attenuate after "hot spot" treatment is complete.

4.0 REMEDIATION APPROACH

4.1. Technical Approach

The current vent-sparge system had reached asymptotic effect on BTEX and total naphthalene concentrations in the "hot spots." Continuing this strategy does not appear viable as a means of achieving cleanup goals. However, the remaining "hot spots" are amenable to injection of aquifer amendment to either chemically oxidize the contamination, or to enhance in situ bioremediation. Based on characteristics of the hot spots, enhanced aerobic bioremediation is the preferred approach.

Chemical oxidation was not selected for the following reasons:

- It is typically applied in fresher source zones with substantially higher concentrations than the remaining plumes at Moberg's Garage and Texaco Station;
- Chemical oxidation usually requires direct contact with the contaminant and may require several injection events;
- With chemical oxidation, each treatment is relatively short-lived;
- Chemical oxidation can desorb contaminants from soil and increase solute concentrations in the short term.

Because the flux of aerobic groundwater is high, natural attenuation by aerobic biodegradation is ongoing and has been highly successful. Therefore, enhancing this process is a practicable approach. Injection of ORC-A® will provide adequate oxygen mass for a period of one year to degrade the remaining BTEX and total naphthalenes. Slow, sustained oxygen release by ORC-A® maintains elevated dissolved oxygen (DO) concentrations that are advected and dispersed into the contaminated aquifer matrix sustaining enhanced biodegradation of contamination. Therefore, ORC-A® injection does not rely on direct contact with contamination, as required during chemical oxidation treatment.

This approach is expected to complete the cleanup within the period of performance of the contract, even if a limited second injection is required at the end of year one. Overall, it is a cost-effective solution relative to drilling additional horizontal sparge wells.

Regenesis ORC-A® will be injected into the "hot spots" defined by two times the total naphthalenes standard (60 μ g/L). In addition, as recommended by Regenesis, Regenox® Part-A will be injected in the Moberg's Garage plume contemporaneously pre-condition aquifer for aerobic degradation. Regenesis has developed dosage for each plume that was adopted in the design (Appendix B).

The ORC-A® will result in aerobic biodegradation of the "hot spots" in a minimally intrusive manner without the need for additional equipment, conveyance lines, and/or O&M. The existing vent-sparge system has completed its task and should be dismantled and plugged and abandoned prior to injection. Once the injections are complete, groundwater monitoring with a few added parameters for performance assessment of the aquifer amendments will be the only remaining action.

4.2. Design

The design was based on the results of groundwater sampling, the extent of total naphthalenes in groundwater, the vertical extent of contamination, and the use of a direct-push rig to advance injection rods and inject remediation fluids. Regenesis calculated the required total ORC-A® mass for each area and recommended application dosage of Regenox® Part A within the Moberg's Garage hot spot area. Provided below are the elements of the design.

- October 2019 baseline groundwater concentrations (EA 2019). The extent of dissolved contamination is shown on Drawings G-4 and G-5. The extent of active remediation was based on dissolved total naphthalene concentrations exceeding 60 μg/L, or twice the NMWQCC standard of 30 μg/L. For this criterion, the target extent for the northern "Moberg's Garage" hot spot was estimated at 8,000 square feet (SF) and the target extent for the southern "Texaco Station" hot spot was estimated at 2,500 SF. The extent of dissolved total naphthalene concentrations is shown on Drawing G-5.
- The baseline average concentrations of TPH, benzene, toluene, ethylbenzene, total xylenes, total naphthalenes (BTEXN) (Appendix C), metals, and BOD and COD concentrations (Table 4) were provided to Regenesis to calculate ORC-A® dosing (Appendix B). In addition, Regenesis recommended injecting 3 pounds (lbs) of Regenox® Part A at Moberg's garage hot spot area to pre-condition the aquifer for aerobic degradation of contaminant. Regenox® Part A will be mixed into the ORC-A® slurry and injected simultaneously.
- Groundwater occurs at approximately 9 to 13 feet bgs at the site. The target injection interval extends from the water table to 6 feet below the water table (Drawing G-2).
- The selected target ORC-A mass dose was set at 15.9 lb/ft at Moberg's Garage and at 15 lb/ft at Texaco Station (Table 5). Quantities vary slightly based on configuration of the injection points within the plume. Based on that, an injection plan was developed and is presented on Drawing C-1. The spacing of injection points may be adjusted after the first day based on field performance.

- A direct-push rig will be used to advance steel injection rods and inject remediation fluids using a sequential top-down approach to minimize short-circuiting between the injection intervals. A process flow diagram for injection is presented on Drawing P-1.
- The 25% solids slurry mix will be used to maximize distribution and influence. The ratio may be adjusted based on field performance. Table 5 presents the dosage.
- Based on manufacturer's data, ORC-A® will remain active for one-year and will result in sustainable and prolonged release of molecular oxygen to support elevated dissolved oxygen (DO) concentrations to degrade contamination using aerobic biodegradation.
- Advection and dispersion of elevated DO will be relied upon to distribute elevated DO throughout the area of active remediation.

Soil contamination has been addressed by the SVE system and no longer requires cleanup; therefore, it is not addressed by this plan.

5.0 REMEDIATION ELEMENTS

5.1. Selected Amendment

ORC-A® is a slow oxygen release compound designed specifically for enhanced, in situ aerobic bioremediation of petroleum hydrocarbons in groundwater. Once injected into groundwater, the ORC-A® becomes hydrated providing a controlled release of 17% by weight molecular oxygen. The ORC-A® is active for periods of up to 12 months. ORC-A® facilitates significantly faster and highly effective degradation of petroleum-contaminated sites. Manufacturer's specification sheets are included in Appendix D.

RegenOx® Part-A is an advanced chemical oxidant that destroys contaminants through controlled chemical oxidation consisting of a sodium percarbonate oxidizer complex. It will be used to pre-condition the aquifer at Moberg's Garage hot spot. Manufacturer's specification sheets are included in Appendix D.

5.2. Injection Plan

The following are the elements of the injection plan:

- In the Moberg's Garage hot spot area, Regenox® Part-A will be mixed into the ORC-A® slurry. The design demand of ORC-A® in the northern "Moberg's Garage" hot spot is 10,120 pounds (lbs) (Appendix B) and 318 lbs of Regenox® Part-A (Table 5).
- The design demand of ORC-A® in the southern "Texaco Station" hot spot is 1,840 lbs (Appendix B).
- The mixing will be 25% solids as per Regenesis specification (Appendix D). The 25% solids slurry is selected to maximize zone of injection influence and may be adjusted, if needed. Materials will be carefully measured, batched, and thoroughly mixed prior to injection. Because ORC-A® is a slurry, and can separate and/or settle, mixing will be in relatively small batches to facilitate rapid injection. Drawing P-1 provides the mixing diagram. Tables 5 provides mix details.
- Injection will be conducted using the top-down method to minimize short-circuiting between injection intervals. Injection will be initiated at the water table and injections will be performed sequentially, as rods are advanced to the bottom of the impacted zone at each point.
- Injection will be facilitated with a high-pressure pump capable of pumping the high solids slurry.

- Injection pressure and volume will be monitored and adjusted to optimize injection and subsurface distribution of fluids.
- Detailed logs of each batch and each injection will be maintained. A field form is provided in the Appendix E.
- Activities will be performed in accordance with the Health and Safety Plan (Appendix F).

5.3. Permits

For system construction, the following permits will be required:

- Right of Entry permit from New Mexico Department of Transportation (NMDOT);
- New Mexico Office of State Engineer (NMOSE) permit for direct-push injection soil borings;
- A Class V Underground Injection Control plan from the NMED Ground Water Quality Bureau (GWQB) (Appendix G). On February 13, 2020, this permit was filed with the NMED GWQB. Since then, EA has completed requirements for Public Notice and on May 19, 2020 submitted an affidavit of completion of Public Notice to the NMED GWQB. NMED PSTB had been copied on both submittals.

The NMDOT and NMOSE permits will be filed under the Phase 4 Implementation Work Plan.

5.4. Public Notice

As part of this FRP preparation, EA has submitted a public notice in accordance with 20.5.119.1923.D.10 NMAC. The public notice in both English and Spanish was published twice in the Las Vegas Optic, a publication of general circulation in Mora County, and published onsite and at the post office, and mailed a certified copy of the notice to the adjacent property. EA has provided affidavits of publishing to the NMED PSTB. A copy of the notice is provided in the Appendix H.

6.0 OPERATION, MAINTENANCE, AND MONITORING

Operation and maintenance (O&M) for in situ bioremediation is minimal, consisting of groundwater monitoring for solute concentrations and geochemical parameters and evaluation of Bio-Trap® samplers to verify microbial species and populations for performance assessment. The proposed groundwater monitoring and performance assessment regimen is provided in Table 6.

Data will be collected during O&M to evaluate the following factors:

- Chemical concentration trends;
- Geochemical parameters;
- Microbiological indicators;
- Progress towards achieving final site cleanup goals.

Groundwater monitoring will focus on analyte concentrations by analytical chemistry, geochemical parameters, and microbiological indicators. Groundwater monitoring will consist of the collection of contaminant concentration trend data and measurement of geochemical parameters via down-hole probe for DO, ORP, temperature, pH and specific conductance. In addition, following injection, three passive Bio-Trap® samplers will be installed in BMW-1, BMW-3, and W-3 to evaluate microbiological indicators. Bio-Trap® samplers will be analyzed at 6-months and 12-months post injection. Bio-Trap® specifications are provided in Appendix D.

Contaminant concentrations, geochemical parameters, and Bio-Trap[®] data will used in performance assessment. Performance assessment will be reported on a quarterly basis and will include the following:

- Groundwater quality data and analysis;
- Evaluation of contaminant concentration trends;
- A summary of O&M activities; and
- Recommendations.

Based on performance assessment, additional treatment of recalcitrant areas may be considered.

Sampling media, sample locations, analyses, analytical methods, and sampling frequency are provided in Table 6.

7.0 SCHEDULE FOR IMPLEMENTATION

The implementation schedule for the FRP is provided in Appendix I.

7.1. Implementation

The implementation of the FRP will include injection of ORC-A® and Regenox Part-A® in the locations shown on Drawing C-1, into the target injection interval shown on Drawing G-2, and batch mixed and injected following the Process Flow Diagram shown on Drawing P-1. Numerous injections are located in NMDOT right of way and a right of entry permit will be required and a traffic plan that facilitates single lane closures will be implemented. If NMDOT does not grant access, injection locations will be adjusted. Mixing and injection of ORC-A® will be in accordance with manufacturer specifications provided in Appendix D.

7.2. Final Site Inspection

Upon completion of the injections, a final site inspection will be performed by all involved parties, including the NMED PSTB project manager to ensure the site has been adequately restored. Any deficiencies observed during the site inspection will be noted and corrected.

7.3. As-Built Report

After the injections are complete, EA will prepare an As-Built report to document the implementation of the FRP. The report will be prepared by or under the direct supervision of and sealed by Vener Mustafin, PE. The report will provide details of the injections and the mass and volume injected. The As-Built report will meet the applicable requirements of 20.5.12.119.1925.D NMAC.

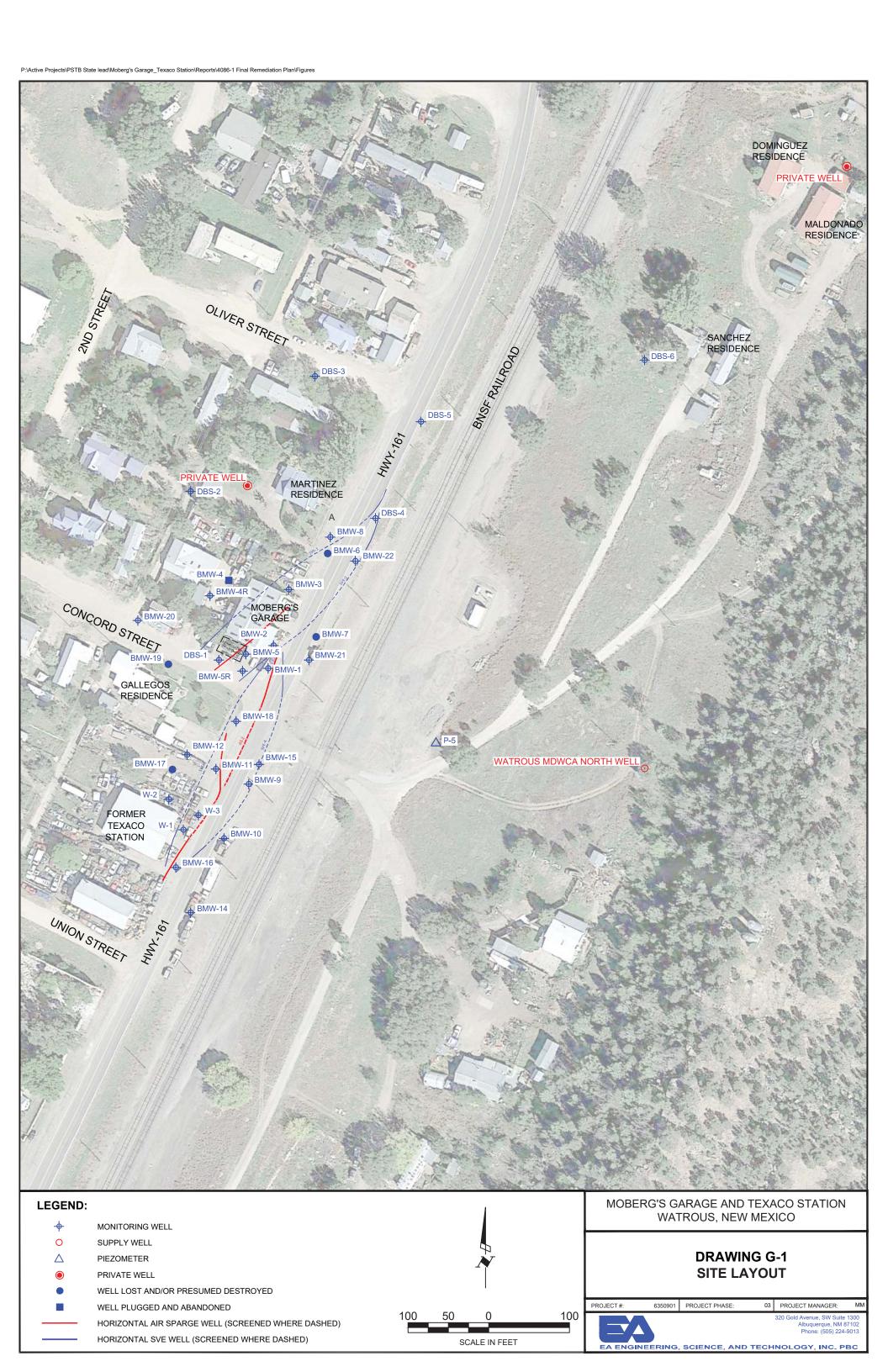
8.0 ANNUAL EVALUATION OF REMEDIATION

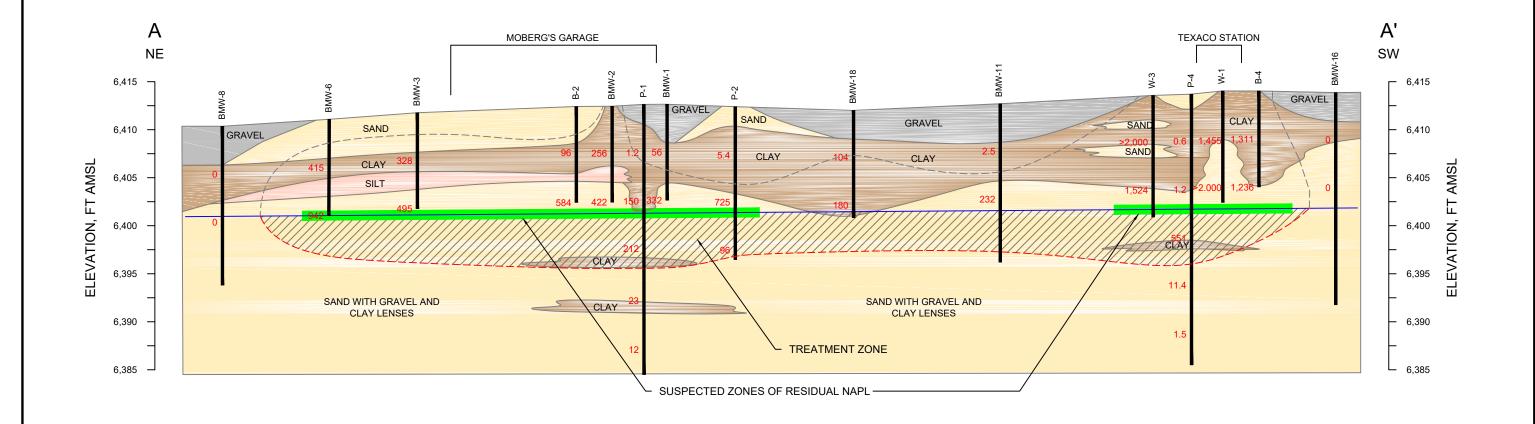
In accordance with 20.5.12.119.1927 NMAC, the effectiveness of the injection will be evaluated at the end of the first year of O&M. The evaluation will contain analysis of the trend of contaminant concentrations in groundwater, project trends for contaminant concentration decline, evaluate the effectiveness of the remediation based on system performance, provide an estimated time to achieve remediation goals, and provide recommendations for remediation enhancements. Optimization of remediation and contingency measures that may be triggered by the annual evaluation of remediation are provided in Table 7.

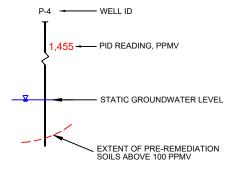
9.0 REFERENCES

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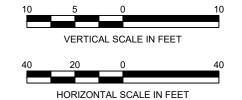








PID = PHOTOIONIZATION DETECTOR PPMV = PARTS PER MILLION BY VOLUME FT AMSL = FEET ABOVE MEAN SEA LEVEL NAPL = NON-AQUEOUS PHASE LIQUID



SOURCE: DBS&A

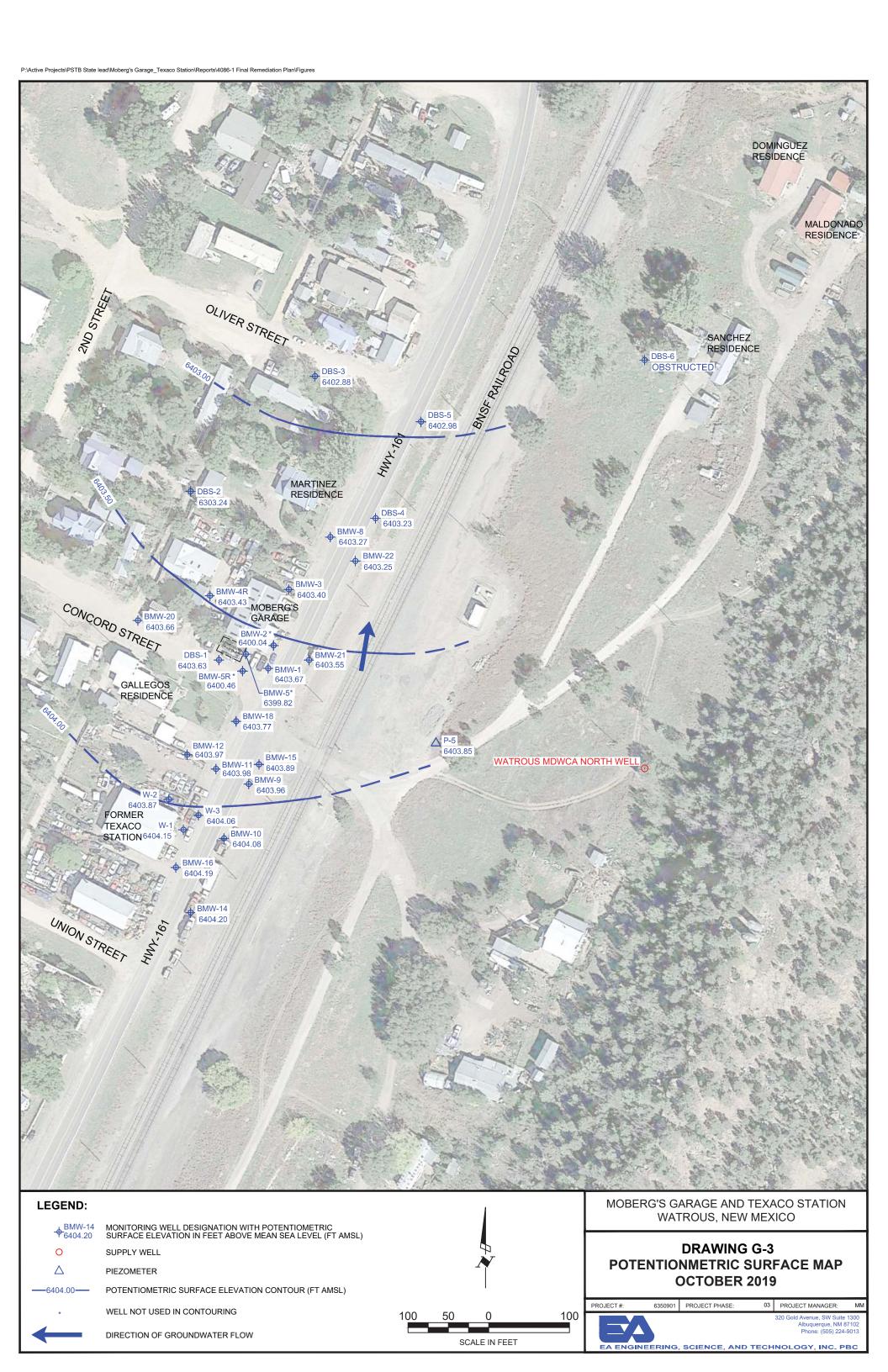
MOBERG'S GARAGE AND TEXACO STATION WATROUS, NEW MEXICO

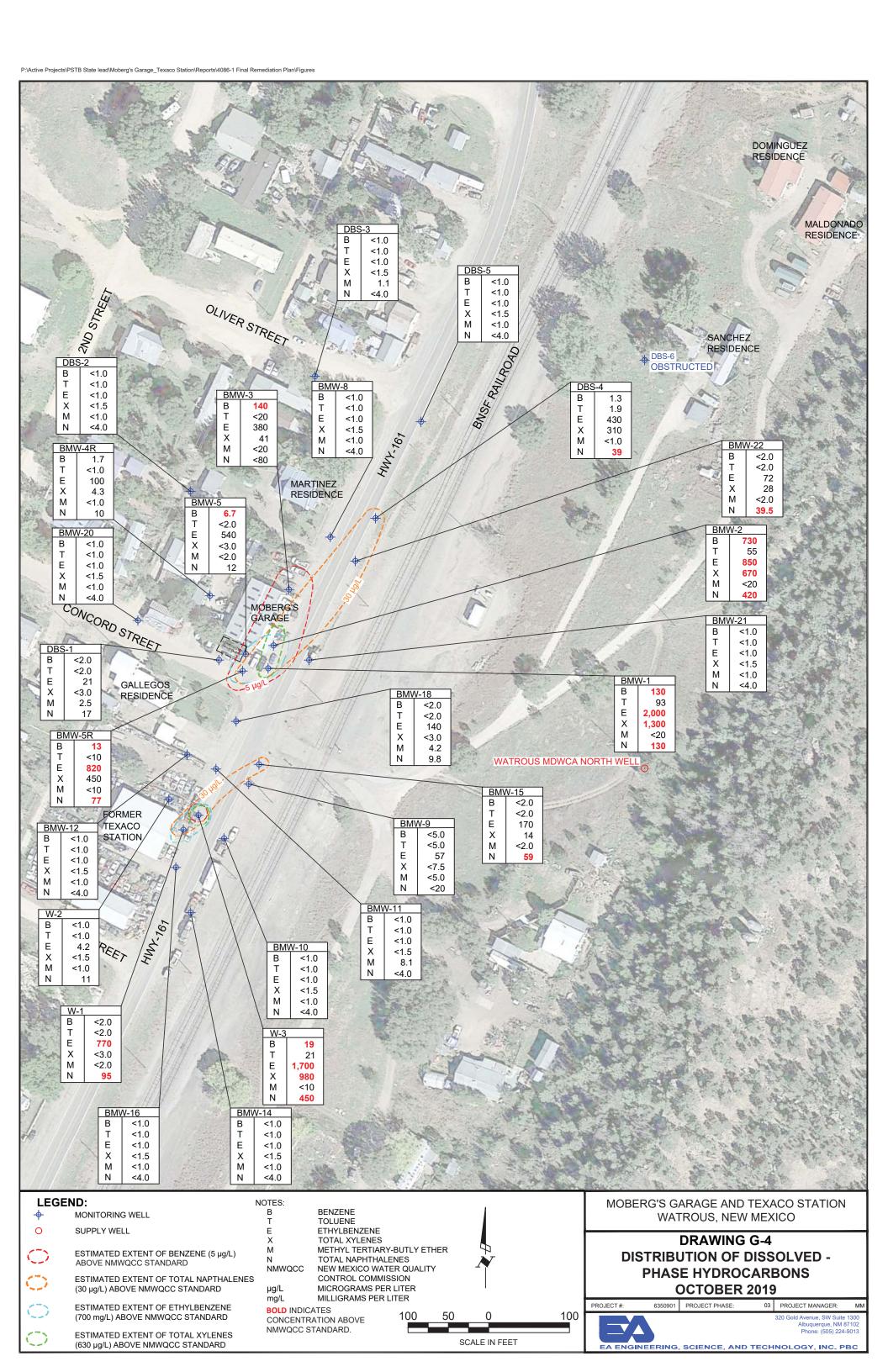
DRAWING G-2 LONGITUDINAL SECTION SHOWING INJECTION ZONE

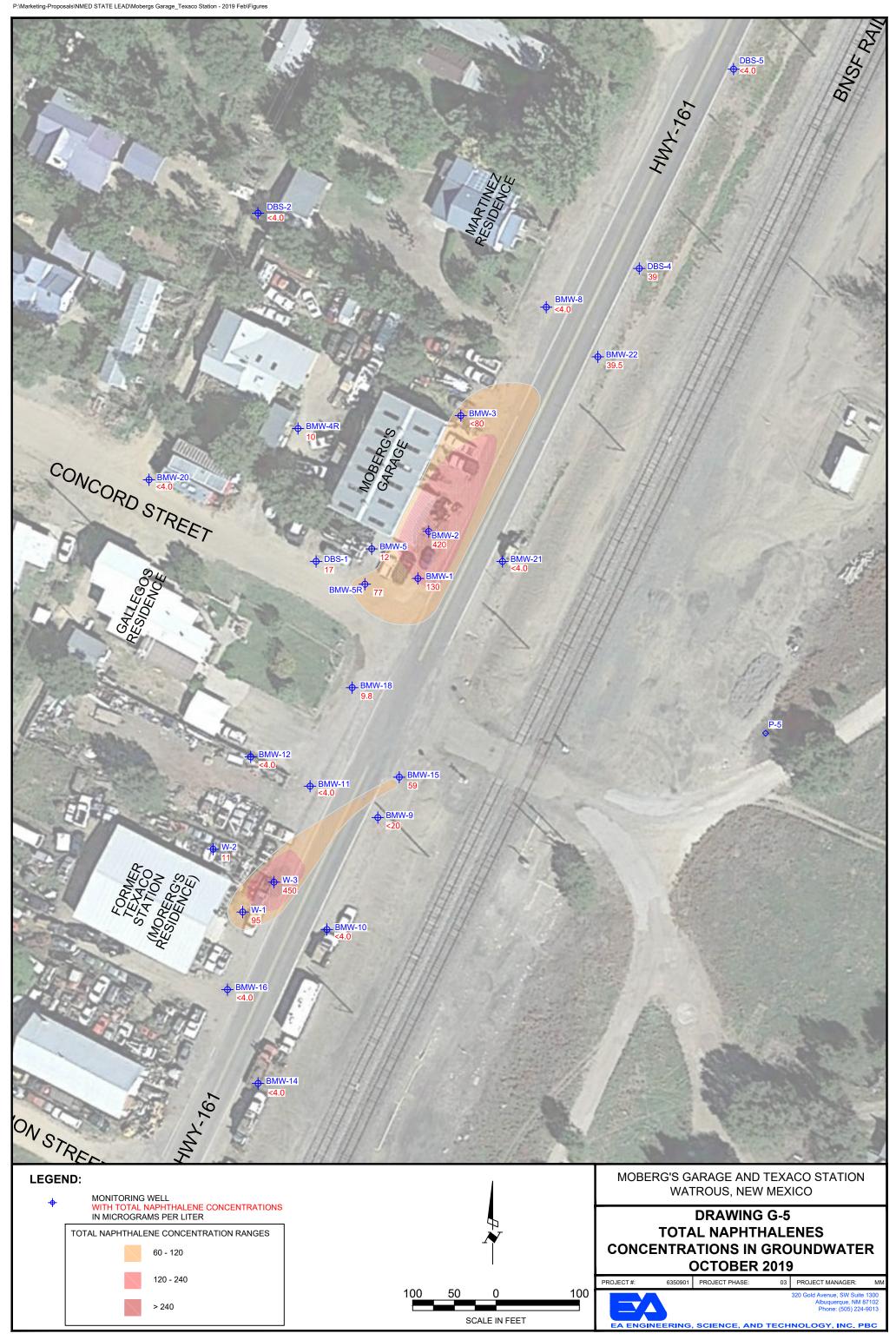
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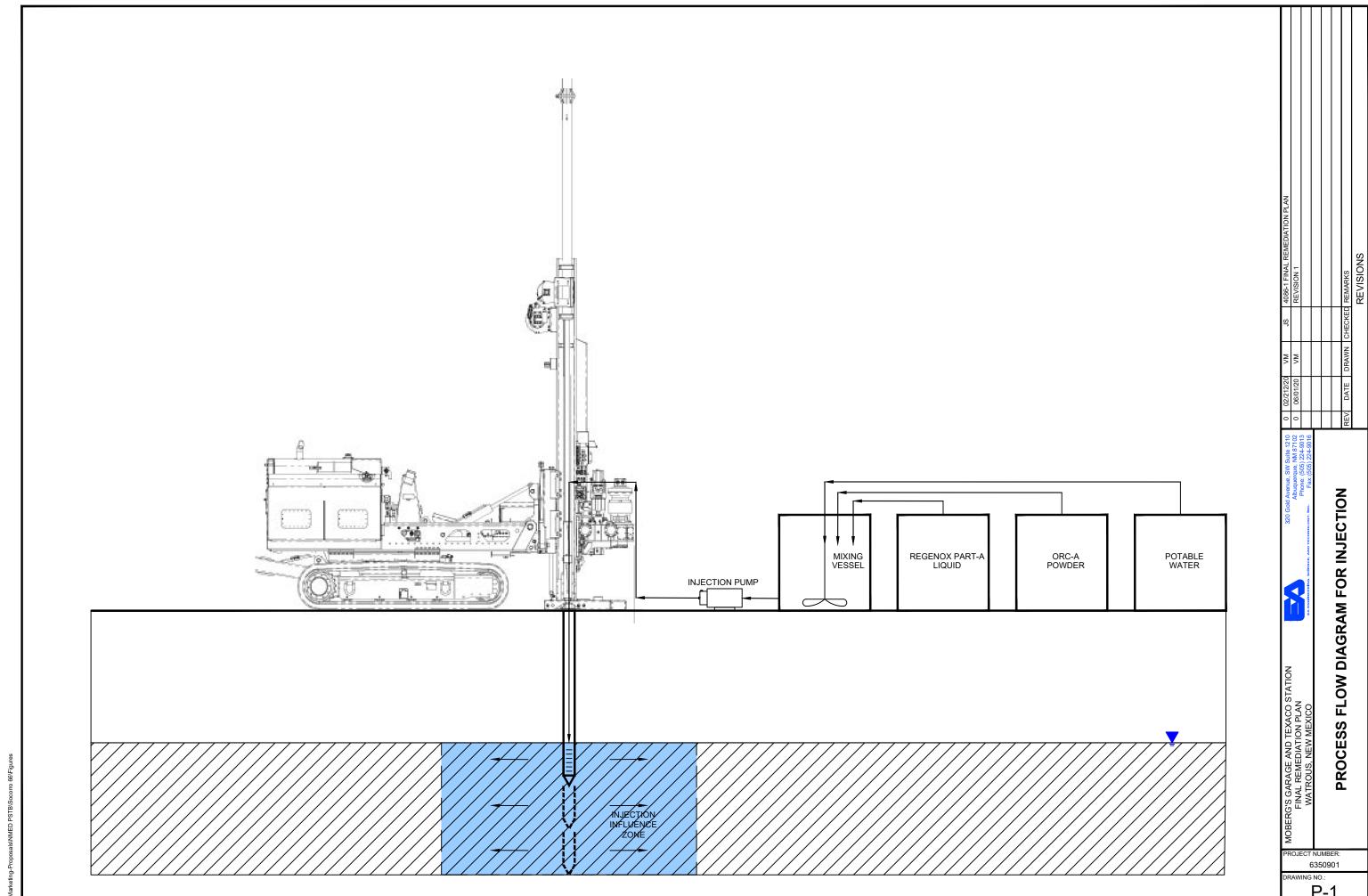
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P:\Active Projects\PSTB State lead\Moberg's Garage_Texaco Station\Reports\4086-1 Final Remediation Plan\Figur

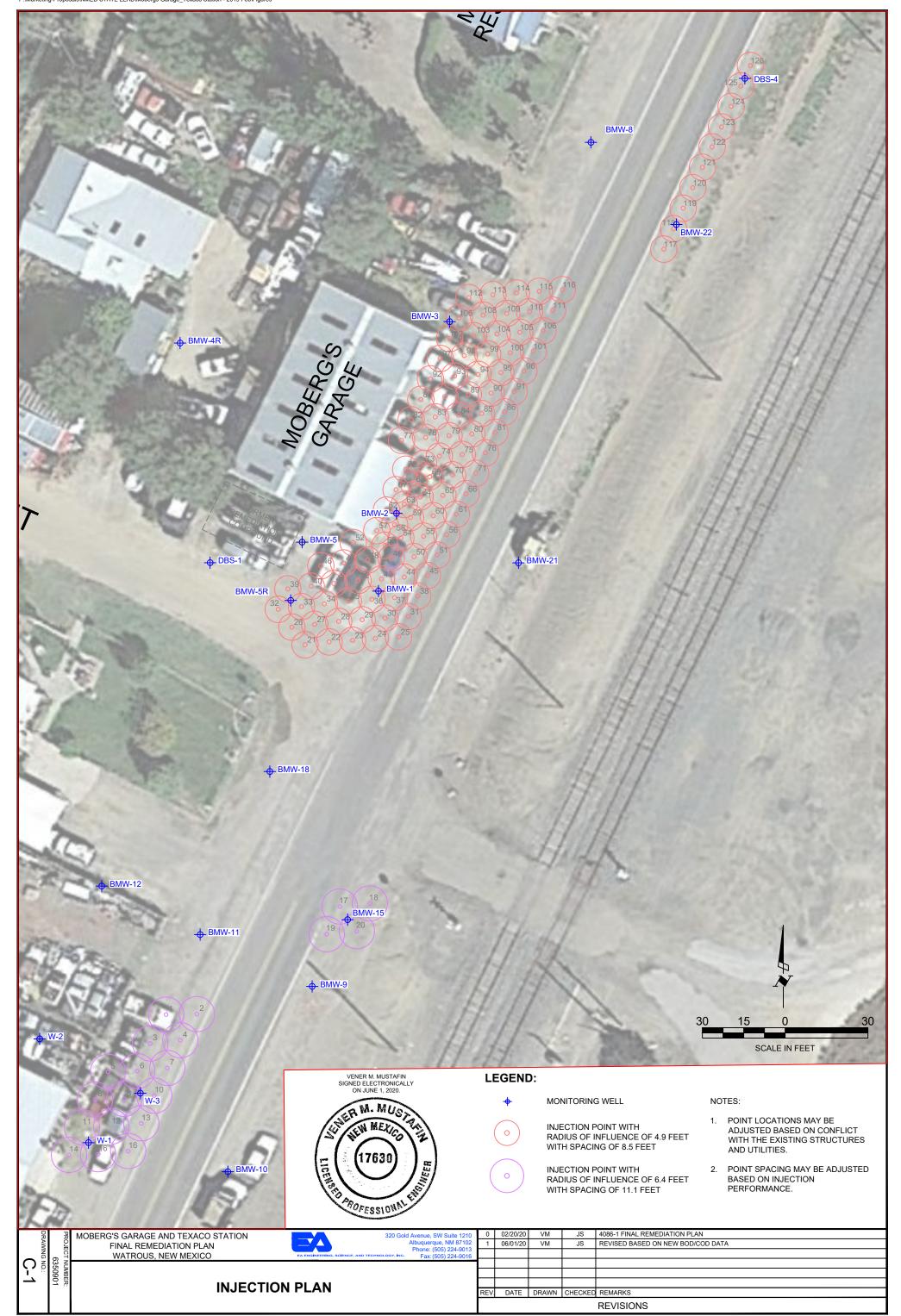








P-1



TABLES

		Top of Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring	Date	Elevation (ft	NAPL	Thickness	Water	Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-1	10/21/2019	6416.13		0.00	12.46	6403.67
	2/11/2019	1		0.00	10.66	6405.47
	11/13/2018] [0.00	11.90	6404.23
	9/12/2018] [0.00	12.23	6403.90
	8/9/2018] [0.00	11.93	6404.20
	4/30/2018] [0.00	9.95	6406.18
	1/3/2018] [0.00	9.64	6406.49
	7/25/2017			0.00	11.72	6404.41
	4/17/2017			0.00	10.31	6405.82
	11/9/2016			0.00	11.43	6404.70
	2/15/2016			0.00	10.70	6405.43
	12/1/2015			0.00	11.47	6404.66
	3/29/2012		11.02	0.01	11.03	6405.11
	10/4/2009			0.00	9.97	6406.16
	12/4/2008			0.00	8.84	6407.29
	7/29/2008			0.00	10.34	6405.79
	4/1/2008			0.00	10.45	6405.68
	10/17/2007			0.00	12.23	6403.90
	7/25/2007			0.00	11.07	6405.06
	3/14/2007			0.00	10.66	6405.47
	12/13/2006		11.25	0.03	11.28	6404.87
	9/11/2006			0.00	11.96	6404.17
	6/7/2006			0.00	11.32	6404.81
	1/11/2006			0.00	10.62	6405.51
	10/11/2005			0.00	11.42	6404.71
	8/4/2005			0.00	11.81	6404.32
	5/5/2005			0.00	10.09	6406.04
	1/10/2005]		0.00	11.00	6405.13
	10/13/2004]		0.00	12.40	6403.73
	7/8/2004]		0.00	12.40	6403.73
	10/12/2003]	13.53	0.02	13.55	6402.60
	6/21/2003]		0.00	12.12	6404.01
	3/12/2003] [11.49	0.13	11.62	6404.61
	12/13/2002] [12.30	0.08	12.38	6403.81
	1/24/2002] [0.00	11.42	6404.71
	11/20/2001] [11.97	0.04	12.01	6404.15
	8/25/2001	j l	12.40	0.02	12.42	6403.73
	3/24/2001			0.00	10.70	6405.43
BMW-2	10/21/2019	6412.43		0.00	12.39	6400.04
	2/11/2019] [0.00	10.64	6401.79
	11/13/2018			0.00	11.86	6400.57

Monitoring	Date	Top of Casing Elevation (ft	Depth to NAPL	NAPL Thickness	Depth to Water	Groundwater Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-2 (cont.)	9/12/2018			0.00	12.23	6400.2
	8/9/2018]		0.00	11.94	6400.49
	5/2/2018]		0.00	9.79	6402.64
	12/1/2015]	W	ell not located	- presumed de	estroyed
	3/29/2012]		0.00	10.81	6401.62
	10/4/2009			0.00	11.52	6400.91
	12/4/2008			0.00	10.31	6402.12
	7/29/2008			0.00	10.28	6402.15
	4/1/2008			0.00	10.34	6402.09
	10/17/2007			0.00	12.15	6400.28
	7/25/2007			0.00	10.99	6401.44
	3/14/2007			0.00	10.55	6401.88
	12/13/2006			0.00	11.19	6401.24
	9/11/2006		11.88	0.03	11.91	6400.55
	6/7/2006			0.00	11.24	6401.19
	1/11/2006			0.00	10.50	6401.93
	10/11/2005] [0.00	11.30	6401.13
	8/4/2005] [0.00	11.78	6400.65
	5/5/2005			0.00	9.96	6402.47
	1/11/2005] [0.00	10.84	6401.59
	10/15/2004] [0.00	12.24	6400.19
	7/8/2004] [12.26	0.19	12.45	6400.14
	4/11/2004] [11.33	0.10	11.43	6401.08
	10/12/2003] [13.34	0.13	13.47	6399.06
	6/21/2003		11.89	0.08	11.97	6400.52
	3/12/2003] [11.32	0.08	11.40	6401.09
	12/12/2002		12.08	0.08	12.16	6400.33
	1/24/2002		11.47	0.04	11.51	6400.95
	11/20/2001		12.14	0.08	12.22	6400.27
	8/25/2001			0.00	12.44	6399.99
	3/24/2001		NA	0.04	NA	NA
BMW-3	10/21/2019	6415.41		0.00	12.01	6403.40
	2/11/2019]		0.00	10.48	6404.93
	11/13/2018] [0.00	11.58	6403.83
	9/12/2018] [0.00	11.86	6403.55
	8/9/2018] [0.00	11.61	6403.80
	4/30/2018]		0.00	9.55	6405.86
	1/3/2018]		0.00	9.15	6406.26
	7/25/2017]		0.00	11.40	6404.01
	4/17/2017			0.00	9.70	6405.71
	11/9/2016			0.00	10.97	6404.44

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
BMW-3 (cont.)	2/15/2016			0.00	10.29	6405.12
	12/1/2015	1		0.00	10.80	6404.61
	12/2/2012	1	11.74	0.13	11.87	6403.64
	3/30/2012	1		0.00	10.33	6405.08
	10/4/2009	1		0.00	9.63	6405.78
	12/4/2008	1		0.00	8.72	6406.69
	7/29/2008	1		Well	not located	
	4/1/2008] [0.00	9.96	6405.45
	10/17/2007] [0.00	11.76	6403.65
	7/25/2007] [0.00	10.60	6404.81
	3/14/2007] [0.00	10.20	6405.21
	12/12/2006] [10.79	0.04	10.83	6404.61
	9/11/2006			0.00	11.55	6403.86
	6/7/2006			0.00	10.86	6404.55
	1/11/2006			0.00	10.17	6405.24
	10/11/2005			0.00	11.01	6404.40
	8/4/2005			0.00	11.33	6404.08
	5/5/2005			0.00	9.61	6405.80
	7/9/2004		13.04	0.04	13.08	6402.36
	4/12/2004			0.00	10.97	6404.44
	10/12/2003]	13.28	0.04	13.32	6402.12
	6/21/2003] [11.54	0.08	11.62	6403.85
	3/12/2003] [11.48	0.08	11.56	6403.91
	3/24/2001			0.00	10.26	6405.15
BMW-4	5/4/2005	6412.38			ed and abandor	
	4/12/2004] [0.00	11.28	6401.10
	10/12/2003]	13.02	0.04	13.06	6399.35
	6/21/2003	<u> </u>	12.03	0.04	12.07	6400.34
	3/12/2003	<u> </u>		0.00	11.44	6400.94
	12/13/2002		12.10	0.06	12.16	6400.27
	1/24/2002		11.39	0.04	11.43	6400.98
	11/20/2001	<u> </u>	11.97	0.04	12.01	6400.40
	8/25/2001		12.23	0.02	12.25	6400.15
	3/24/2001	<u> </u>		0.00	10.53	6401.85
	4/7/1999			0.00	10.87	6401.51
BMW-4R	10/21/2019	6415.96		0.00	12.53	6403.43
	2/11/2019			0.00	10.72	6405.24
	11/13/2018	. I		0.00	11.92	6404.04
	8/8/2018			0.00	12.01	6403.95
	4/30/2018			0.00	10.06	6405.90
	1/3/2018			0.00	9.78	6406.18

Monitoring	Date	Top of Casing Elevation (ft	Depth to NAPL	NAPL Thickness	Depth to Water	Groundwater Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-4R (cont.)	7/25/2017			0.00	11.97	6403.99
	4/17/2017	1		0.00	10.34	6405.62
	11/9/2016			0.00	11.48	6404.48
	2/15/2016			0.00	10.68	6405.28
	12/1/2015			0.00	11.25	6404.71
	3/29/2012			0.00	10.42	6405.54
	10/4/2009			0.00	11.38	6404.58
	12/4/2008			0.00	10.27	6405.69
	7/29/2008			0.00	10.26	6405.70
	4/1/2008			0.00	10.33	6405.63
	10/17/2007			Well	not located	
	7/25/2007			0.00	11.19	6404.77
	3/14/2007			Well	not located	
	12/13/2006			0.00	11.20	6404.76
	9/11/2006			0.00	11.94	6404.02
	6/7/2006			0.00	11.26	6404.70
	1/11/2006			0.00	10.67	6405.29
	10/11/2005			0.00	11.49	6404.47
	8/4/2005			0.00	11.85	6404.11
	5/5/2005			0.00	10.09	6405.87
BMW-5	10/21/2019	6412.62		0.00	12.80	6399.82
	2/11/2019]		0.00	11.03	6401.59
	11/13/2018]		0.00	12.29	6400.33
	8/9/2018] [0.00	12.35	6400.27
	4/30/2018			0.00	10.30	6402.32
	1/3/2018			0.00	9.96	6402.66
	7/25/2017			0.00	12.10	6400.52
	4/17/2017			0.00	10.63	6401.99
	1/20/2017			0.00	10.97	6401.65
	5/4/2005		W	ell not located	l - presumed de	estroyed
	12/13/2002		12.30	0.08	12.38	6400.30
	1/24/2002		11.41	0.03	11.44	6401.20
	11/20/2001		12.12	0.06	12.18	6400.49
	8/25/2001		12.37	0.02	12.39	6400.25
	3/24/2001] [0.00	10.74	6401.88
	4/7/1999	<u> </u>		0.00	11.17	6401.45
BMW-5R	10/21/2019	6412.65		0.00	12.19	6400.46
	2/11/2019] [0.00	10.42	6402.23
	11/13/2018] [0.00	11.65	6401.00
	9/12/2018]		0.00	11.96	6400.69
	8/9/2018			0.00	11.70	6400.95

		Top of Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring	Date	Elevation (ft	NAPL	Thickness	Water	Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-5R (cont.)	4/30/2018			0.00	9.70	6402.95
	1/3/2018]		0.00	9.38	6403.27
	7/25/2017			0.00	11.46	6401.19
	4/17/2017			0.00	10.04	6402.61
	1/20/2017			0.00	10.36	6402.29
	12/1/2015		W	ell not located	l - presumed de	estroyed
	3/29/2012			Well	not located	
	10/4/2009			0.00	11.43	6401.22
	12/4/2008			0.00	10.31	6402.34
	7/29/2008			0.00	10.26	6402.39
	4/1/2008			0.00	10.37	6402.28
	10/17/2007			0.00	12.20	6400.45
	7/25/2007			0.00	11.06	6401.59
	3/14/2007			0.00	10.61	6402.04
	12/13/2006]		0.00	11.27	6401.38
	9/11/2006]		0.00	11.95	6400.70
	6/7/2006			0.00	11.33	6401.32
	10/11/2005]		0.00	11.43	6401.22
	8/4/2005]		0.00	11.79	6400.86
	5/5/2005			0.00	10.04	6402.61
BMW-6	12/1/2015	6411.04	W		l - presumed de	estroyed
	5/4/2005				not located	
	3/12/2003		10.25	0.13	10.38	6400.76
	12/13/2002		10.95	0.08	11.03	6400.07
	1/24/2002		10.06	0.06	10.12	6400.97
	11/20/2001		10.37	0.25	10.62	6400.61
	8/25/2001		NA	0.04	NA	NA
	3/24/2001			0.00	9.48	6401.56
	4/7/1999			0.00	10.03	6401.01
BMW-7	12/1/2015	6411.81	W		l - presumed de	estroyed
	3/29/2012			1	not located	
	10/4/2009			0.00	11.82	6399.99
	12/4/2008			0.00	10.13	6401.68
	7/29/2008			0.00	10.10	6401.71
	4/1/2008			0.00	9.91	6401.90
	10/17/2007			0.00	11.95	6399.86
	7/25/2007			0.00	10.53	6401.28
	3/14/2007	Į ,		0.00	10.09	6401.72
	12/13/2006			0.00	10.74	6401.07
	9/11/2006			0.00	11.38	6400.43
	6/7/2006			0.00	10.79	6401.02

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
		umsi)	(11 0100)	` '		` /
BMW-7 (cont.)	1/11/2006	-		0.00	10.07	6401.74
	10/11/2005			0.00	10.83 11.21	6400.98 6400.60
	8/4/2005			0.00		
	5/5/2005 1/11/2005			0.00	9.50	6402.31 6401.40
	10/15/2004			0.00	10.41 11.72	6401.40
	7/8/2004	-		0.00	11.72	6400.09
	10/12/2003		12.98	0.00	13.00	6398.83
	6/21/2003	-	12.98	0.02	11.50	6400.31
	3/12/2003		10.45	0.00		6400.31
	12/13/2002		11.65	0.13	10.58 11.73	6400.14
	1/24/2002			0.08	10.88	6400.14
	11/20/2001		11.47	0.00	11.68	6400.29
				0.21		
	8/25/2001 3/24/2001		11.52	0.04	11.56 10.16	6400.28
						6401.65
DMW 0	4/7/1999	(412.00		0.00	10.68	6401.13
BMW-8	10/21/2019	6413.80		0.00	10.53	6403.27
	2/11/2019	-		0.00	8.78	6405.02
	11/13/2018	-		0.00	9.99	6403.81
	8/9/2018	-		0.00	10.11	6403.69
	4/30/2018	-		0.00	8.11	6405.69
	1/3/2018	-		0.00	7.75	6406.05
	7/25/2017	-		0.00	9.98	6403.82
	4/17/2017	-			8.44	6405.36
	11/9/2016	-		0.00	9.52	6404.28
	2/15/2016	-		0.00	8.80	6405.00
	12/1/2015	-		0.00	9.40	6404.40
	3/29/2012	-		1	not located	(404.04
	10/4/2009	-		0.00	9.76	6404.04
	12/4/2008			0.00	8.74	6405.06
	7/29/2008	 		0.00	8.73	6405.07
	4/1/2008	 		0.00	8.53	6405.27
	10/17/2007	 		0.00	10.31	6403.49
	7/25/2007	 		0.00	9.23	6404.57
	3/14/2007 12/13/2006	 		0.00	8.73 9.33	6405.07 6404.47
	9/11/2006	 		0.00		
		 		0.00	10.04	6403.76
	6/7/2006	 			9.44	6404.36
	1/11/2006	 		0.00	8.72	6405.08
	10/11/2005	 		0.00	9.52	6404.28
	8/4/2005			0.00	9.91	6403.89

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
BMW-8 (cont.)	5/5/2005	,		0.00	8.14	6405.66
Bivi w-6 (cont.)	1/11/2005	1		0.00	9.02	6404.78
	10/15/2004	1		0.00	10.38	6403.42
	7/8/2004			0.00	10.45	6403.35
	4/11/2004			0.00	9.44	6404.36
	10/12/2003	1		0.00	11.62	6402.18
	6/21/2003	1		0.00	10.29	6403.51
	3/12/2003	1		0.00	9.66	6404.14
	12/13/2002	1		0.00	10.49	6403.31
	1/24/2002	1		0.00	9.57	6404.23
	11/20/2001	1		0.00	10.35	6403.45
	8/25/2001	1		0.00	10.33	6403.47
	3/24/2001	1		0.00	8.18	6405.62
BMW-9	10/21/2019	6416.82		0.00	12.86	6403.96
	2/11/2019	1		0.00	11.06	6405.76
	11/13/2018	1		0.00	12.31	6404.51
	8/9/2018	1		0.00	12.45	6404.37
	4/30/2018	1		0.00	10.39	6406.43
	1/3/2018	1		0.00	10.07	6406.75
	7/25/2017	1		0.00	12.15	6404.67
	4/17/2017	1		0.00	10.79	6406.03
	11/9/2016] [0.00	11.86	6404.96
	2/15/2016] [0.00	11.15	6405.67
	12/1/2015] [0.00	11.77	6405.05
	3/29/2012			0.00	11.56	6405.26
	10/4/2009			0.00	11.90	6404.92
	12/4/2008] [0.00	10.87	6405.95
	7/29/2008]		0.00	10.85	6405.97
	4/1/2008]		0.00	10.85	6405.97
	10/16/2007] [0.00	12.59	6404.23
	7/25/2007] [0.00	11.41	6405.41
	3/13/2007] [0.00	11.04	6405.78
	12/12/2006			0.00	11.72	6405.10
	9/11/2006	<u> </u>		0.00	12.33	6404.49
	6/6/2006	<u> </u>		0.00	11.71	6405.11
	1/10/2006	<u> </u>		0.00	10.99	6405.83
	10/11/2005			0.00	11.77	6405.05
	8/3/2005	<u> </u>		0.00	12.16	6404.66
	5/4/2005	<u> </u>		0.00	10.50	6406.32
	1/10/2005			0.00	11.41	6405.41
	10/14/2004			0.00	12.71	6404.11

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
BMW-9 (cont.)	7/8/2004			0.00	12.79	6404.03
	4/11/2004	1		0.00	11.91	6404.91
	10/12/2003	1		0.00	14.01	6402.81
	6/21/2003	1		0.00	12.54	6404.28
	3/11/2003	1		0.00	11.89	6404.93
	12/13/2002	1		0.00	12.62	6404.20
	1/24/2002	1		0.00	11.93	6404.89
	11/20/2001	1		0.00	12.63	6404.19
	8/25/2001	1		0.00	12.63	6404.19
	3/25/2001	1		0.00	11.14	6405.68
BMW-10	10/21/2019	6417.02		0.00	12.94	6404.08
	2/11/2019	1		0.00	11.12	6405.90
	11/13/2018] [0.00	12.38	6404.64
	8/8/2018] [0.00	12.42	6404.60
	4/30/2018] [0.00	10.43	6406.59
	1/3/2018			0.00	10.17	6406.85
	7/25/2017			0.00	12.22	6404.80
	4/17/2017] [0.00	10.91	6406.11
	11/9/2016			0.00	11.94	6405.08
	2/15/2016] [0.00	11.25	6405.77
	12/1/2015] [0.00	11.85	6405.17
	3/29/2012			0.00	11.68	6405.34
	10/4/2009			0.00	12.88	6404.14
	12/4/2008			0.00	10.96	6406.06
	7/29/2008			0.00	10.91	6406.11
	4/1/2008			0.00	10.94	6406.08
	10/16/2007]		0.00	12.66	6404.36
	7/25/2007			0.00	11.46	6405.56
	3/13/2007]		0.00	11.12	6405.90
	12/12/2006] [0.00	11.75	6405.27
	9/11/2006] [0.00	12.38	6404.64
	6/6/2006] [0.00	11.78	6405.24
	1/10/2006] [0.00	11.05	6405.97
	10/11/2005] [0.00	11.83	6405.19
	8/3/2005] [0.00	12.21	6404.81
	5/4/2005	<u> </u>		0.00	10.56	6406.46
	1/10/2005	<u> </u>		0.00	11.44	6405.58
	10/14/2004] [0.00	12.76	6404.26
	7/8/2004	<u> </u>		0.00	12.86	6404.16
	4/11/2004			0.00	11.98	6405.04
	10/12/2003			0.00	14.08	6402.94

		Top of				G 1
		Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring	Date	Elevation (ft	NAPL	Thickness	Water	Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-10 (cont.)	6/21/2003			0.00	12.55	6404.47
	3/11/2003			0.00	11.98	6405.04
	12/13/2002			0.00	12.64	6404.38
	1/24/2002			0.00	11.98	6405.04
	11/20/2001			0.00	12.71	6404.31
	8/25/2001			0.00	12.72	6404.30
	3/25/2001			0.00	11.12	6405.90
BMW-11	10/21/2019	6416.38		0.00	12.40	6403.98
	2/11/2019			0.00	10.68	6405.70
	11/13/2018]		0.00	11.87	6404.51
	9/12/2018] [0.00	12.19	6404.19
	8/9/2018] [0.00	11.96	6404.42
	4/30/2018] [0.00	10.00	6406.38
	1/3/2018]		0.00	9.66	6406.72
	7/25/2017]		0.00	11.64	6404.74
	4/17/2017]		0.00	10.33	6406.05
	11/9/2016			0.00	11.46	6404.92
	2/15/2016			0.00	10.72	6405.66
	12/1/2015			0.00	11.32	6405.06
	3/29/2012			0.00	10.99	6405.39
	10/4/2009] [0.00	11.56	6404.82
	12/4/2008			0.00	10.42	6405.96
	7/29/2008			0.00	10.34	6406.04
	4/1/2008			0.00	10.37	6406.01
	10/16/2007			0.00	12.13	6404.25
	7/26/2007			0.00	11.01	6405.37
	3/13/2007			0.00	10.64	6405.74
	12/12/2006			0.00	11.89	6404.49
	9/11/2006			0.00	11.89	6404.49
	6/6/2006] [0.00	11.24	6405.14
	1/10/2006	1		0.00	10.58	6405.80
	10/11/2005	1		0.00	11.39	6404.99
	8/3/2005] [0.00	11.70	6404.68
	5/4/2005	j		0.00	10.08	6406.30
	1/10/2005]		0.00	10.95	6405.43
	10/14/2004] [0.00	12.29	6404.09
	7/8/2004]		0.00	12.26	6404.12
	4/11/2004]		0.00	11.51	6404.87
	10/12/2003]		0.00	13.45	6402.93
	6/21/2003]		0.00	12.04	6404.34
	3/11/2003			0.00	11.73	6404.65

Monitoring	Date	Top of Casing Elevation (ft	Depth to NAPL	NAPL Thickness	Depth to Water	Groundwater Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-11 (cont.)	12/13/2002			0.00	12.64	6403.74
	1/24/2002] [0.00	11.52	6404.86
	11/20/2001] [0.00	12.17	6404.21
	8/25/2001] [0.00	12.15	6404.23
	3/24/2001			0.00	11.74	6404.64
BMW-12	10/21/2019	6416.47		0.00	12.50	6403.97
	2/11/2019			0.00	10.77	6405.70
	11/13/2018			0.00	11.96	6404.51
	4/30/2018			0.00	10.10	6406.37
	1/3/2018			0.00	9.79	6406.68
	7/25/2017			0.00	11.79	6404.68
	4/17/2017			0.00	10.38	6406.09
	11/9/2016			0.00	11.51	6404.96
	2/15/2016			0.00	10.76	6405.71
	12/1/2015]		0.00	11.33	6405.14
	3/29/2012]		0.00	10.90	6405.57
	10/4/2009			0.00	12.93	6403.54
	12/4/2008]		Well	not located	
	8/18/2008]		0.00	12.02	6404.45
	7/29/2008]		0.00	10.36	6406.11
	4/1/2008]		0.00	10.39	6406.08
	10/16/2007]		0.00	12.22	6404.25
	7/26/2007]		0.00	11.12	6405.35
	3/13/2007]		0.00	10.71	6405.76
	12/12/2006]		0.00	11.28	6405.19
	9/11/2006]		0.00	11.97	6404.50
	6/6/2006			0.00	11.28	6405.19
	1/10/2006			0.00	10.68	6405.79
	10/11/2005			0.00	11.48	6404.99
	8/3/2005			0.00	11.76	6404.71
	5/4/2005			0.00	10.14	6406.33
	1/10/2005			0.00	11.00	6405.47
	10/14/2004			0.00	12.33	6404.14
	7/7/2004			0.00	12.33	6404.14
	4/11/2004			0.00	11.55	6404.92
	10/12/2003			0.00	13.44	6403.03
	6/21/2003			0.00	12.11	6404.36
	3/11/2003			0.00	11.51	6404.96
	12/13/2002			0.00	12.14	6404.33
	1/24/2002			0.00	11.50	6404.97
	11/20/2001			0.00	12.25	6404.22

		Top of Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring	Date	Elevation (ft	NAPL	Thickness	Water	Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-12 (cont.)	8/25/2001	,		0.00	12.23	6404.24
,	3/24/2001			0.00	11.82	6404.65
BMW-14	10/21/2019	6417.14		0.00	12.94	6404.20
	2/11/2019			0.00	11.22	6405.92
	11/13/2018			0.00	12.49	6404.65
	9/12/2018			0.00	12.86	6404.28
	8/8/2018			0.00	12.61	6404.53
	4/30/2018			0.00	10.55	6406.59
	1/3/2018			0.00	10.19	6406.95
	7/25/2017			0.00	12.30	6404.84
	4/17/2017			0.00	10.94	6406.20
	11/9/2016			0.00	11.96	6405.18
	2/15/2016			0.00	11.24	6405.90
	1/10/2016			0.00	11.09	6406.05
	12/1/2015			0.00	11.85	6405.29
	3/29/2012] [0.00	11.71	6405.43
	7/29/2008] [0.00	10.88	6406.26
	4/1/2008			0.00	10.93	6406.21
	10/16/2007] [0.00	12.56	6404.58
	7/25/2007] [0.00	11.51	6405.63
	3/13/2007] [0.00	11.13	6406.01
	12/12/2006] [0.00	11.78	6405.36
	9/11/2006] [0.00	12.40	6404.74
	6/6/2006] [0.00	11.79	6405.35
	10/11/2005			0.00	11.89	6405.25
	8/3/2005			0.00	12.24	6404.90
	5/4/2005			0.00	10.59	6406.55
	1/10/2005			0.00	11.46	6405.68
	10/14/2004			0.00	12.74	6404.40
	7/8/2004			0.00	12.83	6404.31
	4/11/2004			0.00	12.03	6405.11
	10/12/2003			0.00	14.01	6403.13
	6/21/2003	[0.00	12.64	6404.50
	12/13/2002			0.00	12.68	6404.46
BMW-15	10/21/2019	6416.65		0.00	12.76	6403.89
	2/11/2019] [0.00	11.61	6405.04
	11/13/2018] [0.00	12.20	6404.45
	8/9/2018] [0.00	12.12	6404.53
	4/30/2018] [0.00	10.26	6406.39
	1/3/2018] [0.00	9.95	6406.70
	7/25/2017			0.00	11.89	6404.76

Monitoring	Date	Top of Casing Elevation (ft	Depth to NAPL	NAPL Thickness	Depth to Water	Groundwater Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-15 (cont.)	4/17/2017	,		0.00	10.65	6406.00
	11/9/2016	1		0.00	11.74	6404.91
	2/15/2016			0.00	11.03	6405.62
	12/1/2015	1		0.00	11.64	6405.01
	3/29/2012	1		0.00	11.39	6405.26
	10/4/2009	1		0.00	11.77	6404.88
	12/4/2008	1		0.00	10.74	6405.91
	7/29/2008	1		0.00	10.69	6405.96
	4/1/2008	1		0.00	10.73	6405.92
	10/16/2007	1		0.00	12.49	6404.16
	7/25/2007	1		0.00	11.30	6405.35
	3/13/2007	1		0.00	10.92	6405.73
	12/12/2006	1		0.00	11.59	6405.06
	9/11/2006	1		0.00	12.24	6404.41
	6/6/2006	1		0.00	11.59	6405.06
	1/10/2006	1		0.00	10.91	6405.74
	10/11/2005	1		0.00	11.67	6404.98
	8/3/2005	1		0.00	12.07	6404.58
	5/4/2005] [0.00	10.37	6406.28
	1/10/2005	1		0.00	11.28	6405.37
	10/14/2004	1		0.00	12.62	6404.03
	7/8/2004] [0.00	12.67	6403.98
	4/11/2004] [0.00	11.82	6404.83
	10/12/2003] [0.00	13.88	6402.77
	6/21/2003			0.00	12.44	6404.21
	3/11/2003] [0.00	11.84	6404.81
	12/13/2002			0.00	12.52	6404.13
BMW-16	10/21/2019	6417.59		0.00	13.40	6404.19
	2/11/2019			0.00	11.71	6405.88
	11/13/2018			0.00	12.94	6404.65
	4/30/2018			0.00	11.03	6406.56
	1/3/2018			0.00	10.69	6406.90
	7/25/2017			0.00	12.78	6404.81
	4/17/2017			0.00	11.40	6406.19
	11/9/2016] [0.00	12.45	6405.14
	2/15/2016] [0.00	11.72	6405.87
	12/1/2015] [0.00	12.30	6405.29
	3/29/2012] [0.00	12.10	6405.49
	8/18/2008] [0.00	13.08	6404.51
	7/29/2008] [0.00	11.32	6406.27
	4/1/2008			0.00	11.38	6406.21

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
BMW-16 (cont.)	10/16/2007			0.00	13.13	6404.46
	7/25/2007	1		0.00	12.00	6405.59
	3/13/2007	1		0.00	11.61	6405.98
	12/12/2006	1		0.00	12.24	6405.35
	9/11/2006	1		0.00	12.87	6404.72
	6/6/2006	1		0.00	12.25	6405.34
	1/10/2006	1		0.00	11.69	6405.90
	8/3/2005	1		0.00	12.72	6404.87
	5/4/2005	1		0.00	11.08	6406.51
	1/10/2005	1		0.00	11.95	6405.64
	10/14/2004	1		0.00	13.21	6404.38
	7/7/2004	1		0.00	13.29	6404.30
	4/11/2004	1		0.00	12.48	6405.11
	10/12/2003	1		0.00	14.47	6403.12
	6/21/2003	1		0.00	13.08	6404.51
	3/11/2003	1		0.00	12.52	6405.07
	12/13/2002	1		0.00	13.11	6404.48
BMW-17	12/1/2015	6413.55	W	ell not located	- presumed de	estroyed
	3/29/2012] [0.00	11.51	6402.04
	7/29/2008	1		0.00	10.99	6402.56
	4/1/2008	1		0.00	10.98	6402.57
	10/16/2007] [0.00	12.82	6400.73
	3/13/2007] [0.00	11.25	6402.30
	12/12/2006] [0.00	11.89	6401.66
	9/11/2006			0.00	12.56	6400.99
	6/6/2006			0.00	11.89	6401.66
	1/10/2006			0.00	11.27	6402.28
	10/11/2005			0.00	12.09	6401.46
	8/3/2005			0.00	12.34	6401.21
	5/4/2005] [0.00	10.74	6402.81
	1/10/2005			0.00	11.61	6401.94
	10/14/2004			0.00	12.87	6400.68
	7/8/2004] [0.00	12.93	6400.62
	4/11/2004] [0.00	12.11	6401.44
	10/12/2003] [0.00	14.14	6399.41
	6/21/2003] [0.00	12.73	6400.82
	3/11/2003] [0.00	12.14	6401.41
	12/13/2002			0.00	12.79	6400.76
BMW-18	10/21/2019	6415.57		0.00	11.80	6403.77
	2/11/2019] [0.00	9.82	6405.75
	11/13/2018			0.00	11.19	6404.38

Monitoring Well	Date Magazina d	Top of Casing Elevation (ft amsl)	Depth to NAPL	NAPL Thickness	Depth to Water	Groundwater Elevation ^a
	Measured	amsi)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-18 (cont.)	9/12/2018			0.00	11.69	6403.88
	8/9/2018			0.00	11.25	6404.32
	4/30/2018			0.00	9.29	6406.28
	1/3/2018			0.00	8.98	6406.59
	7/25/2017			0.00	10.87	6404.70
	4/17/2017			0.00	9.50	6406.07
	11/9/2016			0.00	10.77	6404.80
	2/15/2016			0.00	10.04	6405.53
	12/1/2015]		0.00	10.62	6404.95
	3/29/2012			0.00	10.25	6405.32
	7/29/2008			0.00	9.68	6405.89
	4/1/2008			0.00	9.71	6405.86
	10/16/2007			0.00	11.50	6404.07
	7/25/2007			0.00	10.34	6405.23
	3/13/2007] [0.00	9.94	6405.63
	12/12/2006] [0.00	10.56	6405.01
	9/11/2006] [0.00	11.22	6404.35
	6/6/2006] [0.00	10.60	6404.97
	1/10/2006] [0.00	11.56	6404.01
	10/11/2005] [0.00	10.72	6404.85
	8/3/2005			0.00	11.05	6404.52
	5/4/2005			0.00	9.38	6406.19
	1/10/2005] [0.00	10.27	6405.30
	10/14/2004	1		0.00	11.59	6403.98
	7/8/2004			0.00	11.65	6403.92
	4/11/2004	1		0.00	10.77	6404.80
	10/12/2003	1		0.00	12.85	6402.72
	6/21/2003			0.00	11.44	6404.13
	3/11/2003	1		0.00	10.83	6404.74
	12/13/2002	1		0.00	11.54	6404.03
BMW-19	12/1/2015	6412.29	W	ell not located	- presumed de	estroyed
	3/29/2012	1		0.00	10.26	6402.03
	7/29/2008	1		0.00	9.84	6402.45
	4/1/2008	1		0.00	9.89	6402.40
	10/16/2007	1		0.00	11.77	6400.52
	7/25/2007	1		0.00	10.73	6401.56
	3/13/2007	1		0.00	10.23	6402.06
	12/12/2006	1		0.00	10.80	6401.49
	9/11/2006	1		0.00	11.53	6400.76
	6/6/2006	1		0.00	10.82	6401.47
	1/10/2006	1		0.00	10.25	6402.04

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
BMW-19 (cont.)	10/11/2005			0.00	11.03	6401.26
	8/3/2005			0.00	11.34	6400.95
	5/4/2005] [0.00	9.71	6402.58
	1/10/2005] [0.00	10.54	6401.75
	10/14/2004] [0.00	11.85	6400.44
	7/8/2004			0.00	11.89	6400.40
	4/11/2004] [0.00	11.03	6401.26
	10/12/2003] [0.00	13.01	6399.28
	6/21/2003			0.00	11.69	6400.60
	3/11/2003			0.00	11.08	6401.21
	12/13/2002			0.00	11.73	6400.56
BMW-20	10/21/2019	6416.53		0.00	12.87	6403.66
	2/11/2019			0.00	11.09	6405.44
	11/13/2018			0.00	12.28	6404.25
	8/8/2018			0.00	12.32	6404.21
	4/30/2018			0.00	10.42	6406.11
	1/3/2018			0.00	10.19	6406.34
	7/25/2017			0.00	12.33	6404.20
	4/17/2017			0.00	10.71	6405.82
	11/9/2016			0.00	11.85	6404.68
	2/15/2016			0.00	11.05	6405.48
	12/1/2015			0.00	11.57	6404.96
	3/29/2012				not located	
	7/29/2008]		0.00	10.46	6406.07
	4/1/2008]		0.00	10.58	6405.95
	10/16/2007]		0.00	12.55	6403.98
	7/25/2007]		0.00	11.54	6404.99
	3/13/2007]		0.00	10.93	6405.60
	12/12/2006			0.00	11.48	6405.05
	9/11/2006			0.00	12.27	6404.26
	6/6/2006			0.00	11.56	6404.97
	1/10/2006] [0.00	10.89	6405.64
	10/11/2005			0.00	11.83	6404.70
	8/3/2005] [0.00	12.13	6404.40
	5/4/2005			0.00	10.43	6406.10
	1/10/2005] [0.00	11.26	6405.27
	10/14/2004			0.00	12.59	6403.94
	7/8/2004			0.00	12.64	6403.89
	4/11/2004] [0.00	11.76	6404.77
	10/12/2003			0.00	13.83	6402.70
	6/21/2003			0.00	12.49	6404.04

M. i.i.	D .	Top of Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring Well	Date Measured	Elevation (ft amsl)	NAPL (ft btoc)	Thickness (feet)	Water (ft btoc)	Elevation ^a (ft amsl)
BMW-20 (cont.)	3/11/2003			0.00	11.78	6404.75
	12/13/2002] [0.00	12.46	6404.07
BMW-21	10/21/2019	6415.43		0.00	11.88	6403.55
	2/11/2019] [0.00	10.12	6405.31
	11/13/2018] [0.00	11.35	6404.08
	8/9/2018] [0.00	11.44	6403.99
	4/30/2018] [0.00	9.40	6406.03
	1/3/2018] [0.00	9.08	6406.35
	7/25/2017] [0.00	11.21	6404.22
	4/17/2017] [0.00	9.77	6405.66
	11/9/2016] [0.00	10.86	6404.57
	2/15/2016] [0.00	10.13	6405.30
	12/1/2015] [0.00	10.76	6404.67
	3/29/2012] [0.00	10.37	6405.06
	10/4/2009			0.00	11.79	6403.64
	12/4/2008] [0.00	10.07	6405.36
	7/29/2008			0.00	10.05	6405.38
	4/1/2008			0.00	9.87	6405.56
	10/17/2007			0.00	11.63	6403.80
	7/25/2007			0.00	10.48	6404.95
	3/14/2007			0.00	10.07	6405.36
	12/13/2006] [0.00	10.72	6404.71
	9/11/2006			0.00	11.35	6404.08
	6/7/2006			0.00	10.76	6404.67
	1/11/2006			0.00	10.01	6405.42
	10/11/2005			0.00	10.80	6404.63
	8/4/2005			0.00	11.22	6404.21
	5/5/2005			0.00	9.46	6405.97
	1/11/2005			0.00	10.43	6405.00
	10/15/2004			0.00	11.72	6403.71
	7/8/2004			0.00	11.80	6403.63
	4/11/2004			0.00	10.84	6404.59
	10/12/2003			0.00	12.92	6402.51
	3/12/2003			0.00	10.96	6404.47
	12/13/2002			0.00	11.65	6403.78
BMW-22	10/21/2019	6414.09		0.00	10.84	6403.25
	2/11/2019			0.00	9.01	6405.08
	11/13/2018			0.00	10.23	6403.86
	8/9/2018			0.00	10.38	6403.71
	4/30/2018			0.00	8.35	6405.74
	1/3/2018	<u> </u>		0.00	8.02	6406.07

		Top of	Dandh da	NADI	Dougth to	Groundwater
Monitoring	Date	Casing Elevation (ft	Depth to NAPL	NAPL Thickness	Depth to Water	Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BMW-22 (cont.)	7/25/2017	amsi)	(It otoc)	0.00	10.19	6403.90
BW W - 22 (Cont.)	4/17/2017	1		0.00	8.70	6405.39
	11/9/2016	-		0.00	9.80	6404.29
	2/15/2016	1		0.00	9.06	6405.03
	12/1/2015	1		0.00	9.68	6404.41
	3/29/2012	1		l .	not located	0101.11
	10/4/2009	1		0.00	10.75	6403.34
	12/4/2008	1		0.00	9.00	6405.09
	7/29/2008	1		0.00	9.02	6405.07
	4/1/2008	1		0.00	8.83	6405.26
	10/17/2007	1		0.00	10.59	6403.50
	7/25/2007	1		0.00	9.49	6404.60
	3/14/2007	1		0.00	8.99	6405.10
	12/13/2006	1		0.00	9.62	6404.47
	9/11/2006	1		0.00	10.33	6403.76
	6/7/2006	1		0.00	9.72	6404.37
	1/11/2006	1		0.00	8.98	6405.11
	10/11/2005	1		0.00	9.80	6404.29
	8/4/2005	1		0.00	10.18	6403.91
	5/5/2005	1		0.00	8.42	6405.67
	7/8/2004	1	10.74	0.05	10.79	6403.34
	10/12/2003] [11.79	0.02	11.81	6402.30
	6/21/2003] [10.48	0.04	10.52	6403.60
	3/12/2003] [9.91	0.13	10.04	6404.15
	12/13/2002			0.00	10.63	6403.46
DBS-1	10/21/2019	6416.18		0.00	12.55	6403.63
	2/11/2019] [0.00	10.80	6405.38
	11/13/2018]		0.00	12.00	6404.18
	8/9/2018]		0.00	12.04	6404.14
	4/30/2018] [0.00	10.09	6406.09
	1/3/2018] [0.00	9.81	6406.37
	7/25/2017] [0.00	11.90	6404.28
	4/17/2017			0.00	10.40	6405.78
	11/9/2016			0.00	11.54	6404.64
	2/15/2016			0.00	10.76	6405.42
DBS-2	10/21/2019	6416.40		0.00	13.16	6403.24
	2/11/2019			0.00	11.36	6405.04
	11/13/2018			0.00	12.56	6403.84
	8/8/2018			0.00	12.65	6403.75
	4/30/2018			0.00	10.72	6405.68
	1/3/2018			0.00	10.45	6405.95

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
DBS-2 (cont.)	7/25/2017			0.00	12.68	6403.72
	4/17/2017			0.00	11.01	6405.39
	11/9/2016			0.00	12.15	6404.25
	2/15/2016			0.00	11.34	6405.06
DBS-3	10/21/2019	6413.48		0.00	10.60	6402.88
	2/11/2019			0.00	8.78	6404.70
	11/13/2018			0.00	9.97	6403.51
	8/8/2018			0.00	10.16	6403.32
	4/30/2018			0.00	8.15	6405.33
	1/3/2018			0.00	7.85	6405.63
	7/25/2017			0.00	10.10	6403.38
	4/17/2017]		0.00	8.43	6405.05
	11/9/2016			0.00	9.56	6403.92
	2/15/2016			0.00	8.81	6404.67
DBS-4	10/21/2019	6414.26		0.00	11.03	6403.23
	2/11/2019			0.00	9.29	6404.97
	11/13/2018			0.00	10.49	6403.77
	8/8/2018			0.00	10.61	6403.65
	4/30/2018			0.00	8.59	6405.67
	1/3/2018			0.00	8.24	6406.02
	7/25/2017			0.00	10.45	6403.81
	4/17/2017			0.00	8.93	6405.33
	11/9/2016			0.00	10.03	6404.23
	2/15/2016			0.00	9.33	6404.93
DBS-5	10/21/2019	6413.73		0.00	10.75	6402.98
	2/11/2019			0.00	8.99	6404.74
	11/13/2018]		0.00	10.19	6403.54
	9/12/2018]		0.00	10.62	6403.11
	8/8/2018]		0.00	10.34	6403.39
	4/30/2018]		0.00	8.33	6405.40
	1/3/2018]		0.00	7.99	6405.74
	7/25/2017]		0.00	10.21	6403.52
	4/17/2017] [0.00	8.65	6405.08
	11/9/2016] [0.00	9.73	6404.00
	2/15/2016			0.00	9.02	6404.71
DBS-6	10/21/2019	6413.99		Well	obstructed	
	2/11/2019] [0.00	9.73	6404.26
	11/13/2018] [0.00	10.93	6403.06
	8/9/2018] [0.00	11.24	6402.75
	4/30/2018] [0.00	9.12	6404.87
	1/3/2018			0.00	8.70	6405.29

		Top of				
	_	Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring	Date	Elevation (ft	NAPL	Thickness	Water	Elevation
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
DBS-6 (cont.)	7/25/2017			0.00	11.05	6402.94
	4/17/2017			0.00	9.35	6404.64
	11/9/2016			0.00	10.41	6403.58
	2/15/2016			0.00	9.78	6404.21
P-5	10/21/2019	6417.55		0.00	13.70	6403.85
	2/11/2019			0.00	11.98	6405.57
	11/13/2018			0.00	13.25	6404.30
	8/8/2018]		0.00	13.35	6404.20
	4/30/2018]		0.00	11.29	6406.26
	1/3/2018			0.00	10.89	6406.66
	7/25/2017]		0.00	13.05	6404.50
	4/17/2017]		0.00	11.68	6405.87
	11/9/2016			0.00	12.70	6404.85
	2/15/2016			0.00	12.03	6405.52
	12/1/2015			0.00	13.02	6404.53
	3/30/2012			Not	measured	-
	10/4/2009			0.00	13.61	6403.94
	12/4/2008			0.00	12.05	6405.50
	7/29/2008			0.00	12.03	6405.52
	4/1/2008]		0.00	12.15	6405.40
	10/17/2007]		0.00	13.83	6403.72
	7/25/2007]		0.00	12.66	6404.89
W-1	10/21/2019	6417.66		0.00	13.51	6404.15
	2/11/2019]		0.00	11.80	6405.86
	11/13/2018]		0.00	13.00	6404.66
	9/12/2018]		0.00	13.35	6404.31
	8/8/2018]		0.00	13.11	6404.55
	4/30/2018]		0.00	11.10	6406.56
	1/3/2018]		0.00	10.82	6406.84
	7/25/2017]		0.00	12.84	6404.82
	4/17/2017] [0.00	11.46	6406.20
	11/9/2016]		0.00	12.56	6405.10
	2/15/2016	1		0.00	11.84	6405.82
	12/1/2015]		0.00	12.43	6405.23
	3/29/2012] [Well	not located	
	10/4/2009]		0.00	12.31	6405.35
	3/13/2007	1		0.00	11.70	6405.96
	12/12/2006	1		0.00	12.34	6405.32
	9/11/2006	1		0.00	12.97	6404.69
	6/6/2006	1		0.00	12.34	6405.32
	1/10/2006	1		0.00	11.69	6405.97

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
W-1 (cont.)	10/11/2005	,		0.00	12.48	6405.18
W-1 (cont.)	8/3/2005	1		0.00	12.84	6404.82
	5/4/2005	1		0.00	11.23	6406.43
	1/10/2005	1		0.00	12.07	6405.59
	10/14/2004			0.00	13.35	6404.31
	7/8/2004	1		0.00	13.41	6404.25
	4/11/2004	1		0.00	12.62	6405.04
	10/12/2003	1		0.00	14.51	6403.15
	6/21/2003	1		0.00	13.10	6404.56
	3/11/2003	1		0.00	12.59	6405.07
	12/13/2002	1		0.00	13.22	6404.44
	1/24/2002	1		0.00	12.63	6405.03
	11/20/2001	1		0.00	13.29	6404.37
	8/25/2001	1		0.00	13.29	6404.37
	3/24/2001	1		0.00	11.80	6405.86
	6/29/1999] [0.00	11.51	6406.15
W-2	10/21/2019	6418.36		0.00	14.49	6403.87
	2/11/2019] [0.00	12.60	6405.76
	11/13/2018			0.00	13.81	6404.55
	8/8/2018			0.00	13.87	6404.49
	4/30/2018			0.00	11.93	6406.43
	1/3/2018			0.00	11.81	6406.55
	7/25/2017			0.00	13.65	6404.71
	4/17/2017] [0.00	12.21	6406.15
	11/9/2016] [0.00	13.31	6405.05
	2/15/2016] [0.00	12.56	6405.80
	12/1/2015]		0.00	13.13	6405.23
	3/29/2012			0.00	12.75	6405.61
	3/13/2007			0.00	12.45	6405.91
	12/12/2006			0.00	13.07	6405.29
	9/11/2006			0.00	13.74	6404.62
	6/6/2006			0.00	13.07	6405.29
	5/4/2005			0.00	11.94	6406.42
	1/10/2005			0.00	12.79	6405.57
	10/14/2004			0.00	14.04	6404.32
	7/8/2004			0.00	14.12	6404.24
	4/11/2004			0.00	13.34	6405.02
	10/12/2003			0.00	15.24	6403.12
	6/21/2003			0.00	12.21	6406.15
	3/11/2003			0.00	13.30	6405.06
	12/13/2002			0.00	13.96	6404.40

Monitoring Well	Date Measured	Top of Casing Elevation (ft amsl)	Depth to NAPL (ft btoc)	NAPL Thickness (feet)	Depth to Water (ft btoc)	Groundwater Elevation ^a (ft amsl)
W-3	10/21/2019	6417.25		0.00	13.19	6404.06
	2/11/2019	1		0.00	11.45	6405.80
	11/13/2018	1		0.00	12.68	6404.57
	9/12/2018	1		0.00	13.01	6404.24
	8/9/2018	1		0.00	12.74	6404.51
	4/30/2018			0.00	10.79	6406.46
	1/3/2018] [0.00	10.45	6406.80
	7/25/2017] [0.00	12.49	6404.76
	4/17/2017			0.00	11.10	6406.15
	11/9/2016			0.00	12.18	6405.07
	2/15/2016			0.00	11.48	6405.77
	12/1/2015] [0.00	12.04	6405.21
	3/29/2012			0.00	11.81	6405.44
	10/4/2009			0.00	12.20	6405.05
	12/4/2008] [0.00	11.10	6406.15
	7/29/2008			0.00	11.09	6406.16
	4/1/2008] [0.00	11.12	6406.13
	10/16/2007] [0.00	12.86	6404.39
	7/25/2007	1		0.00	11.74	6405.51
	3/13/2007] [0.00	11.34	6405.91
	12/12/2006	1		0.00	11.96	6405.29
	9/11/2006] [0.00	12.61	6404.64
	6/6/2006] [0.00	11.98	6405.27
	1/10/2006] [0.00	11.33	6405.92
	10/11/2005			0.00	12.06	6405.19
	8/3/2005] [0.00	12.43	6404.82
	5/4/2005] [0.00	10.82	6406.43
	1/10/2005			0.00	11.69	6405.56
	10/14/2004			0.00	12.97	6404.28
	7/8/2004] [13.04	0.04	13.08	6404.20
	4/11/2004		12.19	0.25	12.44	6405.00
	10/12/2003	1	14.06	0.29	14.35	6403.12
	6/21/2003]	12.78	0.25	13.03	6404.41
	3/11/2003] [12.09	0.13	12.22	6405.13
	12/13/2002] [12.70	0.33	13.03	6404.47
	1/24/2002] [0.00	12.25	6405.00
	11/20/2001]		0.00	12.92	6404.33
	8/25/2001] [0.00	12.93	6404.32
	3/24/2001]		0.00	11.56	6405.69
BTMW-1	2/11/2019	6411.24		0.00	8.72	6402.52
	11/13/2018			0.00	9.78	6401.46

		Top of				
		Casing	Depth to	NAPL	Depth to	Groundwater
Monitoring	Date	Elevation (ft	NAPL	Thickness	Water	Elevation ^a
Well	Measured	amsl)	(ft btoc)	(feet)	(ft btoc)	(ft amsl)
BTMW-1 (cont.)	8/8/2018			0.00	10.43	6400.81
	4/30/2018			0.00	8.30	6402.94
	1/3/2018			0.00	7.96	6403.28
	7/25/2017			0.00	10.38	6400.86
	4/17/2017			0.00	8.41	6402.83
	11/9/2016			0.00	9.43	6401.81
BTMW-2	2/11/2019	6410.51		0.00	7.30	6403.21
	11/13/2018			0.00	8.40	6402.11
	8/8/2018			0.00	8.91	6401.60
	4/30/2018			0.00	6.78	6403.73
	1/3/2018			0.00	6.44	6404.07
	7/25/2017			0.00	8.87	6401.64
	4/17/2017			0.00	6.85	6403.66
	11/9/2016			0.00	7.98	6402.53
BTMW-3	2/11/2019	6408.54		0.00	6.81	6401.73
	11/13/2018			0.00	7.97	6400.57
	8/8/2018			0.00	8.58	6399.96
	4/30/2018			0.00	6.53	6402.01
	1/3/2018			0.00	6.26	6402.28
	7/25/2017			0.00	8.57	6399.97
	4/17/2017			0.00	6.70	6401.84
	11/9/2016			0.00	7.74	6400.80
BTMW-5	2/11/2019	6409.01		0.00	7.23	6401.78
	11/13/2018			0.00	8.32	6400.69
	8/8/2018			0.00	9.02	6399.99
	4/30/2018]		0.00	6.96	6402.05
	1/3/2018]		0.00	6.72	6402.29
	7/25/2017]		0.00	9.00	6400.01
	4/17/2017			0.00	7.13	6401.88
	11/9/2016			0.00	8.18	6400.83

Notes:

Pre-October 2019 data reported by Daniel B. Stephens & Associates, Inc. (DBS&A, 2019).

^aGroundwater elevation (GWE) corrected for LNAPL thickness using the following equation:

GWE = TOC Elevation - [DTW - (LNAPL thickness x 0.75)]

ft bgs = Feet below ground surface

ft msl = Feet above mean sea level

ft btoc = Feet below top of casing

NAPL = Nonaqueous-phase liquid

DTW = Depth to water

NA = Not available

							Concent	tration (µ	ιg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
Monitoring Well									<u> </u>	-	-	_
BMW-1	10/22/19	130	93	2,000	1,300	<20	<20	<20	130	<80	<80	130
	02/13/19	28	120	810	1,700	<10	<10	<10	-	-	-	449
	11/15/18	110	540	2,200	6,000	<10	<10	<10	-	-	-	1,190
	09/12/18	80	210	1,300	4,200	<20	<20	<20	-	-	-	1,230
	08/09/18	89	150	2,000	3,100	<20	<20	<20	-	-	-	1,010
	05/02/18	23	44	1,400	3,000	<20	<20	<20	-	-	-	1,150
	01/05/18	14	<10	<10	1,900	<10	<10	<10	-	-	-	700
	07/26/17	74	670	2,400	13,000	<20	<20	<20	-	-	-	1,980
	04/20/17	22	160	1,800	12,000	22	<10	<10	-	-	-	1,040
	02/18/16	77	1,000	2,500	15,000	< 50	<0.10 °	< 50	-	-	-	1,270
	03/29/12	330	2,200	4,500	19,000	82	<20	<20	-	-	-	1,039
	11/16/11	150	1,700	3,300	15,000	77	< 50	< 50	-	-	-	920
	10/04/09	1,700	9,600	6,300	21,000	130	NA	<20	-	-	-	1,083
	12/04/08	800	2,900	4,700	20,000	160	NA	<20	-	-	-	1,300
	07/29/08	1,300	5,100	5,900	25,000	140	NA	<100	-	-	-	1,100
	04/01/08	1,700	3,800	5,400	24,000	360	NA	< 50	-	-	-	1,650
	10/18/07	3,200	14,000	5,300	24,000	380	NA	<10	-	-	-	1,210
	07/25/07	2,100	9,700	6,000	29,000	340	NA	NA	-	-	-	1,350
	03/14/07	1,800	6,500	5,000	24,000	<200	NA	< 200	-	-	-	880
	12/12/06					Well no	ot sampled		esence of NAPI			
	09/11/06	6,400	25,000	7,600	38,000	1,000	NA	< 500	-	-	-	2,400
	06/07/06	7,200	32,000	11,000	52,000	1,500	NA	< 500	-	-	-	2,700
	01/11/06	5,600	21,000	7,400	33,000	1,900	NA	< 500	-	-	-	2,300
	10/11/05	9,300	33,000	10,000	47,000	1,900	NA	< 500	-	-	-	2,700
	08/04/05	5,900	25,000	6,100	31,000	1,100	NA	< 500	-	-	-	1,500
	05/04/05	6,000	29,000	7,100	33,000	1,300	NA	< 500	-	-	-	2,100

							Concen	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-1	01/11/05	6,700	26,000	5,600	26,000	900	NA	< 500	-	-	-	1,300
(cont.)	10/15/04	12,000	39,000	7,200	38,000	1,000	NA	<100	-	1	-	<1,000
	10/12/03					Well no	ot sampled	due to pr	esence of NAPI	J		
	06/21/03	9,700	31,000	5,700	29,000	810	0.026 ^c	< 50	-	-	-	1,010
	03/12/03								esence of NAPI			
	12/12/02								esence of NAPI	_		
	01/24/02	12,000	30,000	5,300	24,000	880	<20	39	-	-	-	1,010
	11/20/01								esence of NAPI			
	08/25/01		,						esence of NAPI	_		
	03/24/01	9,100	28,000	3,500	16,000	850	0.53 °	< 500	-	-	-	<3,000
BMW-2	10/22/19	730	55	850	670	<20	<20	<20	200	110	110	420
	02/13/19	7.4	6.1	110	260	< 5.0	< 5.0	< 5.0	-	-	-	400
	11/15/18	420	190	1,400	1,600	<10	<10	<10	-	-	-	590
	09/12/18	330	150	1,000	980	<20	<20	<20	-	-	-	419
	08/09/18	470	940	2,200	4,100	<20	<20	<20	-	-	-	860
	05/02/18	50	24	1,300	2,000	<20	<20	<20	-	-	-	1,460
	02/18/16							_	med destroyed		Г	Γ
	03/30/12	990	5,500	5,500	23,000	33	<20	<20	-	-	-	1,260
	10/04/09	3,100	11,000	4,700	19,000	110	NA	<50	-	-	-	1,130
	12/04/08	1,000	9,000	4,900	2,100	<50	NA	<50	-	-	-	750
	07/29/08	1,900	12,000	4,700	20,000	<100	NA	<100	-	-	-	780
	04/01/08	5,700	24,000	8,100	25,000	190	NA	<100	-	-	-	1,100
	10/17/07	2.400	•• •••	4.000	••••				esence of NAPL		T	37.
	07/25/07	3,100	22,000	4,900	23,000	140	NA	NA	-	-	-	NA
	03/14/07	4,200	27,000	4,700	23,000	<400	NA	<400	-	-	-	<4,000
	12/12/06	8,500	2,900	6,000	32,000	620	NA	<250	- CNIADI	-	-	NA
	09/11/06					well no	ot sampled of	aue to pr	esence of NAPL	,		

							Concen	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
BMW-2	06/07/06	2,300	11,000	1,000	5,500	<750	NA	<500	-	-	-	<5,000
(cont.)	01/11/06	7,500	34,000	4,800	24,000	1,300	NA	<1,000	-	-	-	<10,000
	10/11/05	12,000	43,000	6,700	33,000	1,200	NA	< 500	-	-	-	1,900
	08/04/05	11,000	40,000	5,800	29,000	1,000	NA	< 500	-	-	-	1,400
	05/04/05	12,000	38,000	6,500	32,000	920	NA	< 500	-	-	-	2,000
	10/15/04	22,000	24,000	5,700	28,000	850	NA	<100	-	-	-	700
	11/20/01 through 07/08/04						•		esence of NAPI	J		
	08/25/01	13,000	32,000	4,700	23,000	660	<100	<100	-	-	-	500
	10/09/98	22,000	36,000	3,500	18,000	560	0.09 ^c	NA	-	-	-	NA
BMW-3	10/22/19	140	<20	380	41	<20	<20	<20	<40	<80	<80	<80
	02/13/19	240	76	620	1,100	<10	<10	<10	-	-	-	279
	11/15/18	430	140	880	2,400	<10	<10	<10	-	-	-	424
	09/12/18	450	300	920	2,400	<20	<20	<20	-	-	-	320
	08/09/18	450	920	50	2,500	< 50	< 50	< 50	-	-	-	< 500
	05/02/18	530	73	690	680	<10	<10	<10	-	-	-	211
	01/05/18	230	34	580	1,700	<10	<10	<10	-	-	-	319
	07/26/17	1,200	2,700	680	13,000	<100	<100	<100	-	-	-	650
	04/20/17	1,800	12,000	3,600	19,000	<50	< 50	< 50	-	-	-	740
	11/11/16	3,000	14,000	3,400	17,000	<20	<20	<20	-	-	-	670
	02/18/16	3,400	17,000	3,400	18,000	<20	<0.10 °	<20		-	-	814
	03/30/12								parked over wel		T	
	10/04/09	8,100	24,000	4,700	25,000	130	NA	<50	-	-	-	2,820
	12/04/08	8,800	25,000	4,500	21,000	160	NA W 11	<100	-	-	-	870
	07/29/08	21.000	24.000	4.000	25.000	500		not samp	I		ı	1 200
	04/05/08	21,000	34,000	4,900	25,000	780	NA	< 500	-	-	-	1,200

							Concen	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-3	04/01/08	13,000	34,000	6,500	22,000	420	NA	<100	-	-	-	810
(cont.)	10/17/07	12,000	38,000	3,800	18,000	230	NA	< 50	-	-	-	500
	07/25/07	11,000	33,000	4,700	27,000	200	NA	NA	-	1	-	830
	03/14/07	12,000	31,000	4,100	20,000	< 550	NA	< 550	-	-	-	5,500
	12/12/06					Well no	ot sampled	due to pro	esence of NAPI	_		
	09/11/06	21,000	46,000	5,300	27,000	< 750	NA	< 500	-	-	-	1,400
	06/07/06	26,000	30,000	7,900	38,000	940	NA	< 500	-	-	-	<10,000
	01/11/06	15,000	34,000	3,900	20,000	1200	NA	<1,000	-	-	-	<10,000
	10/11/05	24,000	46,000	5,900	30,000	900	NA	< 500	-	-	-	1,800
	05/04/05	990	5,500	5,500	23,000	930	NA	< 500	-	-	-	2,700
	07/07/04							l not four	nd		Ī	
	04/12/04	21,000	34,000	3,900	19,000	350	NA	<100	-	-	-	690
	12/12/02											
	through					Well no	ot sampled	due to pro	esence of NAPI	_		
	10/12/03											
	08/25/01											
	through						Well not s	sampled -	- buried			
	01/24/02							T	T		Ī	
	03/24/01	19,000	32,000	2,900	14,000	620	0.19 °		-	-	-	<3,000
BMW-4	05/04/05						Well plugge					
	01/11/05						Well not s					
	07/08/04							l not four	nd		Г	
	04/12/04	290	2,600	4,300	15,000	<100	NA	<100		-	-	1,300
	10/12/03								esence of NAPI			
	06/21/03					T .			esence of NAPL	_	T	
	03/12/03	470	3,600	4,500	14,000	<100	<0.010 °	<100	-	-	-	5,030

							Concent	tration (µ	ug/L) ^a					
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total		
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes		
BMW-4	08/25/01													
(cont.)	through					Well no	ot sampled o	due to pr	esence of NAPI	_				
	12/12/02													
	03/24/01	3,400	17,000	3,400	18,000	<100	<0.010 °	<100	-	1	-	NA		
	04/07/99	1,600	5,900	4,500	18,000	<100	<100	<100	-	ı	-	970		
BMW-4R	10/22/19	1.7	<1.0	100	4.3	<1.0	<1.0	<1.0	<2.0	10	<4.0	10		
	02/12/19	<1.0	<1.0	12	<1.5	<1.0	<1.0	<1.0	-	-	-	6.7		
	11/15/18	1.3	<1.0	35	<1.5	<1.0	<1.0	<1.0	-	-	-	15		
	08/08/18	2.8	< 2.0	180	< 3.0	< 2.0	< 2.0	< 2.0	-	-	-	45		
	05/01/18	<1.0	<1.0	45	<1.5	<1.0	<1.0	<1.0	-	-	-	14		
	01/05/18	<1.0	<1.0	33	8.6	<1.0	<1.0	<1.0	-	-	-	5.9		
	07/27/17	<1.0	<1.0	33	<1.5	1.3	<1.0	<1.0	-	-	-	12		
	04/19/17	<1.0	<1.0	100	<1.5	<1.0	<1.0	<1.0	-	-	-	41.1		
	11/11/16	<1.0	<1.0	41	<1.5	<1.0	<1.0	<1.0	-	-	-	13		
	02/18/16	1.6	<1.0	130	8.1	<1.0	<0.10 °	<1.0	-	-	-	30.8		
	03/30/12	< 2.0	< 2.0	110	25	< 2.0	< 2.0	< 2.0	-	-	-	122		
	10/04/09	240	270	2,300	8,300	58	< 2.0	< 5.0	-	-	-	597		
	12/04/08	9.1	14	480	280	<1.0	<1.0	<1.0	-	-	-	577		
	07/29/08	24	<10	850	140	<10	<1.0	<10	-	-	-	191		
	04/01/08	18	42	1,100	1,600	< 50	<10	<10	-	-	-	1,750		
	10/17/07					Well no			parked over wel	1				
	07/25/07	110	50	1,900	500	< 5.0	NA	NA	-	-	-	470		
	03/14/07		Well not sampled - vehicle parked over well											
	12/12/06	79	60	1,700	830	<30	NA	<20	-	-	-	431		
	09/11/06	170	230	3,300	2,500	<150	NA	<100	-	-	-	700		
	06/07/06	62	200	3,100	2,500	<75	NA	< 50	-	-	-	1,000		
	01/11/06	110	<100	2,000	2,100	<100	NA	<100	-	-	-	930		

							Concen	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl-naphthalene	Total Naphthalenes
BMW-4R	10/11/05	220	710	2,900	5,000	<100	NA	<100	-	-	-	980
(cont.)	08/04/05	150	190	3,100	7,000	<100	NA	<100	-	-	-	1,200
	05/04/05	110	290	3,600	9,200	<100	NA	<100	-	-	-	1,100
BMW-5	10/22/19	6.7	< 2.0	540	<3.0	< 2.0	< 2.0	<2.0	<4.0	12	<8.0	12
	02/13/19	<2.0	< 2.0	< 2.0	49	< 2.0	< 2.0	<2.0	-	-	-	38
	11/14/18	3.6	<1.0	<1.0	73	1.1	<1.0	<1.0	-	-	-	14.3
	08/09/18	<10	<10	<10	63	<10	<10	<10	-	-	-	32
	05/02/18	<10	<20	270	200	<20	<20	<20	-	-	-	120
	01/05/18	<10	<10	45	420	<10	<10	<10	-	-	-	120
	07/28/17	14	21	1,400	2,600	<20	<20	<20	-	-	-	390
	04/20/17	<10	16	2,400	5,700	<10	<10	<10	-	-	-	787
	01/20/17	<10	15	1,900	5,100	<10	<10	<10	-	-	-	825
	05/04/05					Well	not sample	d - presu	med destroyed			
	03/12/03 through 10/12/03					Well	not sample	d - presu	med destroyed			
	08/25/01 through 12/12/02					Well no	ot sampled	due to pr	esence of NAPI			
	03/24/01	BAL	BAL	BAL	BAL	BAL	BAL	BAL	-	-	-	BAL
	04/07/99	BAL	BAL	BAL	BAL	BAL	BAL	BAL	-	-	-	BAL
BMW-5R	10/22/19	13	<10	820	450	<10	<10	<10	25	52	<40	77
	02/13/19	< 5.0	< 5.0	350	47	< 5.0	< 5.0	< 5.0	-	-	-	55
	11/15/18	< 5.0	< 5.0	420	270	< 5.0	< 5.0	< 5.0	-	-	-	108
	09/12/18	<10	11	1,300	950	<10	<10	<10	-	-	-	364
	08/09/18	<10	10	260	330	<10	<10	<10	-	-	-	229
	05/02/18	< 20	<20	520	130	<20	<20	<20	-	-	-	156

							Concen	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-5R	01/05/18	<10	<10	300	240	<10	<10	<10	-	-	-	238
(cont.)	07/28/17	<20	<20	190	1,700	< 20	<20	<20	-	-	-	457
	04/20/17	<10	<10	1,200	1,700	<10	<10	<10	-	-	-	573
	01/20/17	< 50	< 50	2,200	6,800	< 50	< 50	< 50	-	-	-	750
	02/18/16					Well			med destroyed			
	03/29/12						Well	not loca	ted			
	10/04/09	340	370	3,900	14,000	80	NA	10	-	-	-	901
	12/04/08	370	540	4,100	14,000	45	NA	<10	-	-	-	965
	07/29/08	390	480	4,500	15,000	<100	NA	<100	-	-	-	920
	04/01/08	440	860	4,400	17,000	< 50	NA	< 50	-	-	-	1,000
	10/17/07	810	430	3,700	13,000	170	NA	<10	-	-	-	871
	07/25/07	500	110	3,600	12,000	61	NA	NA	-	-	-	942
	03/14/07	770	700	3,400	13,000	<100	NA	<100	-	-	-	490
	12/12/06	1,300	830	4,300	19,000	490	NA	230	-	-	-	1,200
	09/11/06	1,500	1,700	4,700	19,000	<380	NA	<250	-	-	-	1,200
	06/07/06	1,700	2,500	6,600	30,000	260	NA	<100	-	-	-	1,000
	01/11/06		1			1		not samp	led			
	10/11/05	1,900	7,000	6,700	25,000	370	NA	<100	-	-	-	780
	08/04/05	1,800	6,500	4,800	22,000	340	NA	<250	-	-	-	1,300
	05/04/05	2,000	12,000	6,100	22,000	190	NA	<100	-	-	-	760
BMW-6	02/18/16					Well	not sample	d - presu	med destroyed			
	06/21/03											
	through					Well	not sample	d - presu	med destroyed			
	05/04/05											
	08/25/01											
	through					Well no	ot sampled	due to pr	esence of NAPI			
	03/12/03											

							Concent	tration (µ	ug/L) ^a				
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total	
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes	
BMW-6	03/24/01	5,000	13,000	4,300	20,000	280	<0.010 °	<100	-	-	-	NA	
(cont.)	04/07/99	7,900	7,100	4,500	20,000	1,000	<100	<100	-	-	-	730	
BMW-7	02/18/16					Well	not sampled	d - presu	med destroyed				
	03/29/12						Well	not loca	ted				
	10/04/09	340	400	2,900	13,000	<10	NA	<10	-	-	-	949	
	12/04/08	520	700	2,900	14,000	< 20	NA	<20	-	-	-	790	
	07/29/08	600	870	3,400	17,000	<100	NA	<100	-	-	-	860	
	04/10/08	950	1,200	4,300	18,000	< 50	NA	< 50	-	-	-	990	
	10/17/07	770	880	3,300	16,000	<10	NA	<10	-	-	-	1,004	
	07/25/07	710	980	3,100	16,000	<10	NA	NA	-	-	-	1,038	
	03/14/07	990	1,300	2,800	15,000	<100	NA	<100	-	-	-	630	
	12/12/06	1,100	1,800	3,900	21,000	<150	NA	<100	-	-	-	760	
	09/11/06	1,500	2,300	4,000	20,000	<150	NA	<100	-	-	-	750	
	06/07/06	2,100	3,100	5,100	25,000	<150	NA	<100	-	-	-	1,100	
	01/11/06	1,900	3,300	4,800	24,000	<100	NA	<100	-	-	-	1,200	
	10/11/05	2,000	1,100	4,000	20,000	<100	NA	<100	-	-	-	800	
	08/04/05	2,500	2,800	4,600	18,000	<100	NA	<100	-	-	-	930	
	05/04/05	2,300	2,300	4,100	23,000	<100	<100	<100	-	-	-	710	
	10/12/03												
	through					Well no	ot sampled o	due to pr	esence of NAPL	_			
	01/11/05					1		ı	T	T	1		
	06/21/03	2,300	5,600	4,800	23,000	150	<0.010 °	< 50	-	-	-	466	
	03/12/03								esence of NAPL				
	12/12/02								esence of NAPL	I	T		
	01/24/02	2,600	7,500	3,900	18,000	73	<20	<20	-	-	-	930	
	11/20/01		Well not sampled due to presence of NAPL										
	08/25/01					Well no	ot sampled of	due to pr	esence of NAPL	_			

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl-naphthalene	Total Naphthalenes
BMW-7	03/24/01	1,400	6,100	3,800	19,000	< 500	<0.010 °	< 500	-	-	-	NA
(cont.)	04/07/99	670	2,400	2,400	12,000	<100	<100	<100	-	-	-	440
BMW-8	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	1.8	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	3.2	<1.0	<1.0	-	ı	ı	<10
	08/08/18	<1.0	<1.0	<1.0	<1.5	2.4	<1.0	<1.0	-	ı	ı	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	2.2	<1.0	<1.0	-	-	-	<10
	01/05/18	<1.0	<1.0	<1.0	<1.5	2.4	<1.0	<1.0	-	-	-	<10
	07/26/17	<1.0	<1.0	<1.0	<1.5	7.0	<1.0	<1.0	-	-	-	<10
	04/19/17	<1.0	<1.0	<1.0	<1.5	12	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	7.4	<1.0	<1.0	-	-	-	<10
	02/16/16	5.0	<1.0	<1.0	<1.5	24	<0.010 °	<1.0	-	-	-	<10
	03/29/12							not locat	ted			
	10/04/09	4,300	14,000	1,200	5,600	38	NA	< 5.0	-	-	-	444
	12/04/08	1.5	33	340	1,900	<1.0	NA	<1.0	-	-	-	289
	07/29/08	<1.0	<1.0	<1.0	<1.5	47	NA	<1.0	-	-	-	<10
	04/01/08	2.1	<1.0	<1.0	<1.5	75	NA	<1.0	-	-	-	<10
	10/17/07	<1.0	<1.0	<1.0	<1.5	34	NA	<1.0	-	-	-	<10
	07/25/07	<1.0	<1.0	<1.0	<1.5	35	NA	NA	-	-	-	<10
	03/13/07	<1.0	<1.0	<1.0	<1.5	57	NA	<1.0	-	-	-	<10
	12/12/06	<1.0	<1.0	<1.0	<3.0	72	NA	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	<1.0	<3.0	60	NA	<1.0	-	-	-	<10
	06/07/06	<1.0	<1.0	3.5	<3.0	84	NA	<1.0	-	-	-	<10
	01/11/06	<1.0	<1.0	11	<1.0	45	NA	<1.0	-	-	-	<10
	10/11/05	6.4	<1.0	11	<1.0	51	NA	<1.0	-	-	-	<10
	08/04/05	20	<1.0	24	5.0	64	NA	<1.0	-	-	-	<10
	05/04/05	<1.0	<1.0	<1.0	<1.0	49	NA	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl-naphthalene	Total Naphthalenes
BMW-8	01/11/05				-			<1.0			1	<u>,</u>
		16	<1.0	34	<1.0	86	NA		-	-	-	<10
(cont.)	10/15/04	22	<1.0	24	<1.0	100	NA	<1.0	-	-	-	<10
	07/08/04 04/11/04	60	<2.0	60 100	15 <2.0	89 70	NA NA	<1.0 <2.0	-	-	-	4.8 <20
		77					NA		-	-	-	
	10/12/03	33	68	57	160	86	<0.010 °	<2.0	-	-	-	NA 2.7
	06/21/03	39	<2.0	39	2.4	83	<0.010 °	<2.0	-	-	-	2.7
	03/12/03	55	<2.0	63	10	100	<0.010 °	<2.0	-	-	-	<7.5
	12/12/02	80	<2.0	8.7	7.1	170	<2.0	<2.0	-	-	-	7.5
	01/24/02	<1.0	<1.0	<1.0	1.6	120	<1.0	<1.0	-	-	-	<10
	11/20/01	<1.0	<1.0	<1.0	<1.0	110	<1.0	<1.0	-	-	-	NA
	08/25/01	23	<2.0	<2.0	25	80	<2.0	<2.0	-	-	-	NA
D) (IV) 0	03/07/01	12	0.69	13	3.2	130	<0.010 °	NA	-	-	-	NA
BMW-9	10/22/19	< 5.0	< 5.0	57	<7.5	< 5.0	< 5.0	< 5.0	<10	<20	<20	<20
	02/12/19	<2.0	<2.0	77	3.8	<2.0	<2.0	<2.0	-	-	-	14
	11/14/18	<2.5	<2.5	69	<3.8	<2.5	<2.5	<2.5	-	-	-	11
	08/09/18	< 5.0	< 5.0	30	<7.5	< 5.0	< 5.0	< 5.0	-	-	-	<50
	01/04/18	< 5.0	< 5.0	31	<7.5	< 5.0	< 5.0	< 5.0	-	-	-	<50
	07/27/17	<10	<10	170	<15	14	<10	<10	-	-	-	70
	04/19/17	<10	<10	440	58	41	<10	<10	-	-	-	102
	02/17/16	<10	<10	420	130	11	<0.10 °	<10	-	-	-	136
	03/30/12	24	24	1,300	960	100	<20	<20	-	-	-	484
	10/04/09	28	31	880	610	80	<1.0	<1.0	-	-	-	227
	12/04/08	<1.0	<1.0	2.3	<1.5	6.7	<1.0	<1.0	-	-	-	<10
	07/29/08	<10	<10	310	150	20	<10	<10	-	-	-	110
	05/01/08	<10	<10	58	<15	<10	<10	<10	-	-	-	<100
	04/01/08	99	50	1,400	1,700	330	<10	<10	-	-	-	610
	10/16/07	18	18	850	650	49	< 5.0	< 5.0	-	-	-	222

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-9	07/27/07	12	12	860	670	31	< 5.0	< 5.0	-	-	-	360
(cont.)	03/13/07	29	26	1,400	1,200	61	<10	<10	-	-	-	336
	12/12/06	63	56	1,800	1,700	120	<10	<10	-	-	-	580
	11/11/06	<10	<10	270	120	11	<10	<10	-	-	-	117
	09/11/06	72	42	1,400	1,100	160	<10	<10	-	-	-	616
	06/06/06	130	76	1,800	1,200	210	<10	<10	-	-	-	489
	01/10/06	29	46	1,200	1,300	<10	<10	<10	-	-	-	820
	10/11/05	130	< 50	1,500	1,200	110	< 50	< 50	-	-	-	950
	08/03/05	150	81	1,300	980	220	< 50	< 50	-	-	-	310
	05/04/05	110	85	1,900	1,700	140	< 50	270	-	-	-	330
	01/10/05	260	280	2,100	2,700	230	< 50	< 50	-	-	-	330
	10/14/04	350	360	1,500	1,900	390	< 50	< 50	-	-	-	220
	07/08/04	390	350	2,200	3,100	290	< 50	< 50	-	-	-	690
	04/11/04	510	540	2,400	3,400	440	<100	<100	-	-	-	460
	10/12/03	770	730	2,400	4,100	580	<0.010 °	NA	-	-	-	NA
	06/21/03	430	400	2,000	2,800	250	<0.010 °	NA	-	-	-	NA
	03/11/03	690	500	2,100	2,800	430	<0.010 °	NA	-	-	-	NA
	01/24/02	740	410	1,800	2,500	400	<20	NA	-	-	-	NA
	11/20/01	720	320	1,700	<200	350	<100	NA	-	-	-	NA
	08/25/01	970	560	2,000	5,200	560	< 50	NA	-	-	-	NA
	03/07/01	910	1,400	1,900	5,700	260	<0.010 °	NA	-	-	-	NA
BMW-10	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	2.6	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/08/18	<1.0	<1.0	2.9	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	4.3	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-10	07/27/17	<1.0	<1.0	1.6	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	04/18/17	<1.0	<1.0	22	<1.5	2.4	<1.0	<1.0	-	ı	-	<10
	11/10/16	<1.0	<1.0	55	2.5	5.3	<1.0	<1.0	-	ı	-	18.3
	02/17/16	<1.0	<1.0	59	3.1	6.3	<0.010 °	<1.0	-	ı	-	16.1
	03/30/12	<1.0	1.1	200	29	15	<1.0	<1.0	-	-	-	38
	10/04/09	<1.0	<1.0	2.7	<1.5	34	<1.0	<1.0	-	-	-	<10
	12/04/08	<1.0	<1.0	5.8	5.5	<1.0	<1.0	<1.0	-	-	-	6.4
	07/29/08	<1.0	<1.0	<1.0	<1.5	20	<1.0	<1.0	-	-	-	5.2
	04/01/08	<1.0	<1.0	77	9.0	67	<1.0	<1.0	-	-	-	43.7
	10/16/07	1.2	<1.0	38	1.7	9.9	<1.0	<1.0	-	-	-	<100
	07/24/07	<1.0	<1.0	1.2	<1.5	16	<1.0	<1.0	-	-	-	<10
	03/13/07	<1.0	<1.0	94	3.6	83	<1.0	<1.0	-	-	-	26
	12/12/06	< 5.0	< 5.0	92	<15	82	< 5.0	< 5.0	-	-	-	< 50
	09/11/06	7.0	< 5.0	200	<15	82	< 5.0	< 5.0	-	-	-	21
	06/06/06	7.4	< 5.0	320	<15	120	< 5.0	< 5.0	-	-	-	15
	01/10/06	< 5.0	< 5.0	170	7.9	38	< 5.0	< 5.0	-	-	-	58
	10/11/05	13	< 5.0	190	12	20	< 5.0	< 5.0	-	-	-	71
	08/03/05	6.4	<1.0	190	<1.0	3.2	<1.0	<1.0	-	-	-	7.0
	05/04/05	< 5.0	< 5.0	5.1	< 5.0	11	< 5.0	< 5.0	-	-	-	< 50
	01/10/05	<10	<10	230	39	19	<10	NA	-	-	-	24
	10/14/04	38	<20	690	<20	56	<20	<20	-	-	-	< 200
	07/08/04	63	10	400	56	95	<10	<10	-	-	-	54
	04/11/04	<10	<10	300	200	11	<10	<10	-	-	-	120
	10/12/03	65	<20	740	21	58	<0.010 °	NA	-	-	-	NA
	06/21/03	100	<20	810	20	110	<0.010 °	NA	-	-	-	41.8
	03/11/03	76	<20	740	88	130	<0.010 °	NA	-	-	-	58
	12/13/02	45	20	730	42	23	<0.010 °	NA	-	-	-	32

							Concen	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-10	01/24/02	140	61	790	170	160	<20	NA	-	-	-	NA
(cont.)	11/20/01	150	72	610	130	99	<10	NA	-	ı	-	NA
	08/25/01	180	64	830	470	150	<20	NA	-	ı	1	NA
	03/07/01	300	370	930	1,300	150	<0.010 °	NA	-	ı	-	NA
BMW-11	10/21/19	<1.0	<1.0	<1.0	<1.5	8.1	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	16	54	5.6	<1.0	<1.0	-	-	-	24
	11/14/18	<1.0	<1.0	<1.0	<1.5	7.8	<1.0	<1.0	-	-	-	<10
	09/12/18	<2.5	< 2.5	11	<3.8	8.4	<2.5	< 2.5	-	-	-	<15
	08/09/18	<10	<10	<10	16	<10	<10	<10	-	-	-	23
	05/02/18	<10	<10	240	290	<10	<10	<10	-	-	-	679
	01/04/18	< 5.0	< 5.0	130	170	6.0	< 5.0	< 5.0	-	-	-	496
	07/26/17	<10	<10	190	320	<10	<10	<10	-	-	-	373
	04/19/17	< 5.0	< 5.0	330	810	12	< 5.0	< 5.0	-	-	-	567
	11/11/16	< 5.0	< 5.0	57	110	12	< 5.0	< 5.0	-	-	-	66
	02/17/16	< 5.0	< 5.0	390	1,400	10	<0.10 °	< 5.0	-	-	-	692
	03/30/12	< 5.0	< 5.0	470	1,700	7.1	< 5.0	< 5.0	-	-	-	416
	10/04/09	<10	<10	480	110	42	<10	<10	-	-	-	210
	12/04/08	8.7	270	3,300	11,000	50	< 5.0	< 5.0	-	-	-	1,016
	04/29/08	<10	120	3,600	11,000	36	<10	<10	-	-	-	560
	04/01/08	8.7	650	4,100	13,000	160	<10	<10	-	-	-	1,270
	10/16/07	<10	450	2,000	4,300	360	< 5.0	< 5.0	-	-	-	950
	07/25/07	58	350	3,400	9,400	180	< 5.0	< 5.0	-	-	-	1,240
	03/14/07	130	900	6,300	19,000	190	< 50	< 50	-	-	-	950
	12/12/06	< 5.0	< 5.0	92	<15	23	< 5.0	< 5.0	-	-	-	< 5.0
	09/11/06	87	140	1,700	3,400	260	<10	<10	-	-	-	740
	06/06/06	240	1,500	7,100	23,000	<150	<100	<100	-	-	-	1,100
	01/10/06	420	1,400	5,600	17,000	240	<20	<20	-	-	-	990

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-11	10/11/05	150	<100	1,500	1,700	200	<100	<100	-	-	-	570
(cont.)	08/03/05	320	1,500	4,300	6,600	210	<100	<100	-	-	-	850
	05/04/05	530	5,100	6,100	18,000	380	<100	<100	-	-	-	730
	01/10/05	810	7,600	4,300	15,000	810	<100	<100	-	-	-	620
	10/14/04	790	6,800	4,100	15,000	1,000	<100	<100	-	-	-	460
	07/08/04	1,000	3,700	3,400	8,400	1,100	< 50	< 50	-	-	-	430
	04/11/04	520	4,100	2,500	7,000	400	<100	<100	-	-	-	350
	10/12/03	1,600	14,000	4,500	15,000	1,300	<0.010 °	NA	-	ı	1	NA
	06/21/03	1,000	3,600	2,900	6,000	710	<0.010 °	NA	-	ı	1	164
	03/11/03	910	5,000	2,900	6,200	770	<0.010 °	NA	-	ı	-	178
	12/23/02	1,200	11,000	3,400	12,000	1,500	<0.010 °	NA	-	-	-	243
	01/24/02	1,200	4,700	3,300	9,600	750	< 50	NA	-	-	-	NA
	11/20/01	1,400	4,700	3,200	11,000	1,300	<250	NA	-	-	-	NA
BMW-12	10/23/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	07/26/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/17/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10
	03/30/12	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	10/04/09	<1.0	<1.0	<1.0	<1.5	1.2	<1.0	<1.0	-	-	-	<10
	07/19/08	1.6	29	990	4,400	12	<1.0	<1.0	-	-	-	398
	04/01/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
BMW-12	03/13/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	12/12/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	8.5	<3.0	<1.5	<1.0	<1.0	-	-	-	39.8
	06/06/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	-	-	-	7.1
	01/10/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	ı	-	13.3
	10/11/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	ı	-	30
	08/03/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	ı	-	11.2
	05/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	ı	1	12.3
	01/10/05	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	ı	1	58
	10/14/04	< 5.0	< 5.0	920	9.8	< 5.0	< 5.0	< 5.0	-	ı	-	730
	07/08/04	<10	<10	<10	<10	<10	<10	<10	-	-	-	95
	04/11/04	<10	<10	450	<10	<10	<10	<10	-	-	-	610
	10/12/03	<10	<10	590	810	<10	<0.010 °	NA	-	-	-	NA
	06/21/03	<10	<10	510	<10	<10	<0.010 °	NA	-	-	-	227
	03/11/03	<10	<10	590	20.0	<10	<0.010 °	NA	-	-	-	223
	12/13/02	<10	48	1,400	95.0	<10	<0.010 °	NA	-	-	-	428
	01/24/02	1,300	5,600	3,300	10,000	800	<10	NA	-	-	-	NA
	11/20/01	<1.0	1.2	900	49.0	<1.0	<1.0	NA	-	-	-	NA
	08/25/01	2,100	9,700	4,000	16,000	1,700	<250	NA	-	-	-	NA
	03/07/01	<10	70	200	2,400	< 50	<0.010 °	NA	-	-	-	NA
BMW-14	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	09/12/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	01/03/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-14	07/27/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/16/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10
	03/30/12						Well 1	not samp	oled			
	03/13/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	12/12/06	<1.0	<1.0	<1.0	< 3.0	<1.5	<1.0	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	<1.0	<3.0	<1.5	<1.0	<1.0	-	-	-	<10
	06/06/06	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	-	-	-	<10
	01/10/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/11/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	08/03/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	05/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	01/10/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/14/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	07/08/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	04/11/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	NA
	06/21/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	NA
	12/13/02	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	NA
BMW-15	10/22/19	<2.0	<2.0	170	14	< 2.0	<2.0	< 2.0	8.0	51	<8.0	59
	02/12/19	<1.0	<1.0	39	6.3	<1.0	<1.0	<1.0	-	-	-	25
	11/15/18	<1.0	<1.0	1.6	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/09/18	<2.0	<2.0	160	<3.0	<2.0	<2.0	<2.0	-	-	-	52
	05/01/18	<2.0	<2.0	130	<3.0	<2.0	<2.0	<2.0	-	-	-	61
	01/04/18	<1.0	<1.0	71	<1.5	1.2	<1.0	<1.0	-	-	-	20
	07/27/17	<10	<10	<10	<15	<10	<10	<10	-	-	-	67

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-15	04/19/17	<1.0	<1.0	290	<1.5	29	<1.0	<1.0	-	-	-	80.9
(cont.)	11/11/16	<1.0	<1.0	36	5.5	1.9	<1.0	<1.0	-	-	-	20.2
	02/17/16	<1.0	1.2	250	15	4.4	<0.010 °	<1.0	-	-	-	147
	03/30/12	23	52	1,100	2,300	230	< 2.0	< 2.0	-	-	-	640
	10/04/09	6.6	< 5.0	130	55	12	< 5.0	< 5.0	-	-	-	13
	12/04/08	9.6	13	630	270	36	<1.0	<1.0	-	-	-	197
	07/29/08	<10	<10	600	260	30	<10	<10	-	-	-	262
	04/01/08	<1.0	63	1,300	2,300	210	< 5.0	< 5.0	-	-	-	1,040
	10/16/07	<1.0	<10	140	120	16	<10	<10	-	-	-	<100
	07/27/07	12	73	1,800	3,300	<10	<10	<10	-	-	-	1,140
	12/12/06	120	190	3,800	11,000	160	<10	<10	-	-	-	1,230
	09/11/06	26	35	520	1,000	29	<10	<10	-	-	-	95
	06/06/06	160	370	3,800	12,000	220	<10	<10	-	-	-	1,270
	01/10/06	46	210	3,400	9,200	< 5.0	< 5.0	< 5.0	-	-	-	1,480
	10/11/05	5.6	< 5.0	87	250	20	< 5.0	< 5.0	-	-	-	14
	08/03/05	120	760	2,800	9,300	<100	<100	<100	-	-	-	680
	05/04/05	170	600	4,000	15,000	130	<100	<100	-	-	-	840
	01/10/05	570	2,800	4,100	17,000	200	<100	<100	-	-	-	1,000
	10/14/04	<1.0	3.6	6.3	31	8.4	<1.0	<1.0	-	-	-	<10
	07/08/04	26	16	45	150	21	<1.0	<1.0	-	-	-	41.9
	04/11/04	22	17	14	100	9.9	<1.0	<1.0	-	-	-	10
	10/12/03	85	63	56	690	32	<0.010 °	NA	-	-	-	NA
	06/21/03	44	39	78	410	21	<0.010 °	NA	-	-	-	31.7
	03/11/03	100	160	190	1,000	54	<0.010 °	NA	-	-	-	72
	12/13/02	52	360	640	2,500	< 50	<0.010 °	NA	-	-	-	181
BMW-16	10/23/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
BMW-16	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	ı	-	<10
	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	ı	-	<10
	07/27/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/17/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10
	03/30/12						Well 1	not samp	led			
	05/01/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	10/16/07	<1.0	<1.0	<1.0	<1.5	<10	<1.0	<1.0	-	-	-	<10
	07/27/07	<1.0	<1.0	<1.0	<1.5	<10	<1.0	<1.0	-	-	-	<10
	03/13/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	12/12/06	<1.0	<1.0	<1.0	< 3.0	<1.5	<1.0	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	<1.0	< 3.0	<1.5	<1.0	<1.0	-	-	-	<10
	06/06/06	<1.0	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	-	-	-	<10
	01/10/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/11/05	<1.0	<1.0	<1.0	<1.0	2.8	<1.0	<1.0	-	-	-	<10
	08/03/05	<1.0	<1.0	<1.0	<1.0	2.8	<1.0	<1.0	-	-	-	<10
	05/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	01/10/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/14/04	<1.0	<1.0	<1.0	<1.0	2.5	<1.0	<1.0	-	-	-	<10
	04/11/04	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	-	-	-	<10
	10/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	NA
	06/21/03	<1.0	<1.0	<1.0	<1.0	1.7	<0.010 °	NA	-	-	-	<7.5
	03/11/03	<1.0	<1.0	<1.0	<1.0	4.1	<0.010 °	NA	-	-	-	<7.5
	12/13/02	<1.0	<1.0	<1.0	2.7	1.3	<0.010 °	NA	-	-	-	<7.5

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-17	02/15/16					Well	not located	l - presur	ned destroyed			
	03/30/12	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	1	<10
	07/29/08	1.4	24	470	1,400	11	<1.0	<1.0	-	-	ı	205
	04/01/08	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	10/16/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	07/25/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	03/13/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	12/12/06	<1.0	<1.0	<1.0	< 3.0	<1.0	<1.0	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	<1.0	-	-	-	<10
	06/06/06	<1.0	<1.0	<1.0	3.0	<1.0	<1.0	<1.0	-	-	-	<10
	01/10/06	<10	<10	71	<10	<1.0	<1.0	<1.0	-	-	-	<10
	10/11/05	<10	<10	120	58	<1.0	<1.0	<1.0	-	-	-	<10
	08/03/05	<1.0	<1.0	41	7.1	<1.0	<1.0	<1.0	-	-	-	<10
	05/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	01/10/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/14/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	07/08/04	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	04/11/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	06/21/03	<1.0	<1.0	27	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	03/11/03	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	12/13/02	<1.0	<1.0	12	1.0	<1.0	<1.0	<1.0	-	-	-	<10
BMW-18	10/21/19	<2.0	< 2.0	140	<3.0	4.2	<2.0	< 2.0	<4.0	9.8	<8.0	9.8
	02/12/19	<1.0	<1.0	49	6.9	3.2	<1.0	<1.0	-	-	-	17.8
	11/15/18	<1.0	<1.0	51	1.8	2.7	<1.0	<1.0	-	-	-	28
	09/12/18	<10	<10	310	160	<10	<10	<10	-	-	-	470
	08/09/18	<10	<10	26	150	<10	<10	<10	-	-	-	810

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-18	05/02/18	<20	<20	790	330	<20	<20	<20	-	-	-	920
(cont.)	01/04/18	<10	<10	740	320	<10	<10	<10	-	-	-	676
	07/26/17	<20	<20	1,300	960	<20	<20	<20	-	-	-	1,080
	04/19/17	< 5.0	< 5.0	1,300	1,000	< 5.0	< 5.0	< 5.0	-	-	-	1,180
	11/10/16	<1.0	1.2	1,100	870	6.3	<1.0	<1.0	-	-	-	819
	02/17/16	<1.0	<1.0	98	62	6.2	<0.010 °	<1.0	-	-	-	61.6
	03/30/12	<1.0	1.2	180	270	<1.0	<1.0	<1.0	-	-	-	66.7
	07/29/08	18	50	5,500	11,000	<10	<10	<10	-	-	-	855
	04/01/08	210	270	4,800	8,100	100	< 5.0	< 5.0	-	-	-	1,780
	10/16/07	27	<10	790	590	24	<10	<10	-	-	-	940
	07/25/07	230	300	6,900	8,600	78	<10	<10	-	-	-	2,050
	03/13/07	140	97	3,700	5,500	78	<10	<10	-	1	-	570
	12/12/06	53	<10	750	590	40	<10	<10	-	-	-	120
	09/11/06	270	220	3,000	5,300	160	<10	<10	-	-	-	1,130
	06/06/06	580	450	8,200	17,000	<150	<100	<100	-	ı	1	1,500
	10/11/05	150	<100	1,500	1,700	200	<100	<100	-	-	-	570
	08/03/05	1,200	700	11,000	20,000	530	<250	<250	-	1	-	4,000
	05/04/05	730	2,100	6,000	22,000	860	< 50	< 50	-	-	-	1,450
	01/10/05	520	640	1,900	5,300	150	< 20	< 20	-	-	-	425
	10/14/04	210	470	930	1,800	57	<10	<10	-	-	-	240
	07/08/04	60	51	250	310	230	<10	<10	-	-	-	53
	04/11/04	74	98	370	460	20	<10	<10	-	-	-	79
	10/12/03	680	2,000	3,100	5,900	160	<0.010 °	NA	-	-	-	NA
	06/21/03	90	150	420	1,100	20	<0.010 °	NA	-	-	-	36.5
	03/11/03	67	180	240	940	20	<0.010 °	NA	-	-	-	75
	12/13/02	130	1,400	1,000	4,000	< 50	<0.010 °	NA	-	-	-	175

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-19	02/15/16					Well	not located	l - presur	ned destroyed			
	03/30/12	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	07/29/08						Well	not samp	led			
	04/01/08						Well	not samp	oled			
	10/16/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	ı	<10
	07/25/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	ı	<10
	03/13/07	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	12/12/06	<1.0	<1.0	<1.0	< 3.0	<1.0	<1.0	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	<1.0	< 3.0	<1.0	<1.0	<1.0	-	-	-	<10
	06/06/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	01/10/06	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/11/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	08/03/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	05/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	01/10/05	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/14/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	07/08/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	04/22/04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<10
	10/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	NA
	06/21/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	<7.5
	03/11/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	NA	-	-	-	<7.5
	12/13/02	<1.0	7.4	9.7	43	<1.0	<0.010 °	NA	-	-	-	<7.5
BMW-20	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well	Date	Домитомо	Toluene	Ethyl-	Total	MTBE	EDD	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl-	Total Naphthalenes
Name	Sampled	Benzene		benzene	Xylenes		EDB		Naphthalene	napntnaiene	naphthalene	
BMW-20	01/05/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	07/26/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/15/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10
	03/30/12							not loca				
	10/17/07					1		not samp	oled	T	T	
	03/13/07	<1.0	<1.0	<1.0	<1.5	<1.0	NA	<1.0	-	-	-	<10
	12/12/06	<1.0	<1.0	<1.0	<3.0	<1.0	NA	<1.0	-	-	-	<10
	09/11/06	<1.0	<1.0	<1.0	<3.0	<1.0	NA	<1.0	-	-	-	<10
	01/11/06	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	10/11/05	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	08/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	05/04/05	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	01/11/05	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	10/15/04	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	07/08/04	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	04/12/04	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	<10
	10/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0	-	-	-	NA
	06/21/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	<1.0	-	-	-	<7.5
	03/12/03	<1.0	<1.0	<1.0	<1.0	<1.0	<0.010 °	<1.0	-	-	-	<7.5
	12/12/02	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	<7.5
BMW-21	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	1.7	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/09/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	2.5	2.9	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
BMW-21	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	07/28/17	<1.0	<1.0	1.5	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	04/19/17	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	-	ı	-	<10
	11/10/16	<1.0	<1.0	2.0	2.1	<1.0	<1.0	<1.0	-	ı	-	<10
	02/15/16	<1.0	<1.0	28	97	<1.0	<0.010 °	<1.0	-	ı	-	12
	03/30/12	<1.0	4.9	18	41	14	<1.0	<1.0	-	-	-	5.2
	10/04/09	66	59	97	3,500	6.5	NA	<1.0	-	ı	-	478
	12/04/08	1.6	2.0	14	59	3.1	NA	<1.0	-	-	-	9.8
	07/29/08	58	65	570	4,000	<10	NA	<10 d	-	-	-	494
	04/01/08	110	19	560	1,200	<10	NA	<10 d	-	ı	-	93
	10/17/07	190	7.3	640	400	5.5	NA	<5.0 d	-	-	-	200
	07/25/07	270	300	1,400	7,800	< 5.0	NA	NA	-	-	-	760
	03/14/07	270	100	860	2,700	<10	NA	<10 d	-	-	-	150
	12/12/06	63	<10	110	410	<15	NA	<10 d	-	-	-	24
	09/11/06	320	100	880	520	<15	NA	<10 d	-	-	-	368
	06/07/06	43	80	250	1,300	<15	NA	<10 d	-	-	-	61
	01/11/06	130	100	450	1,700	7.3	NA	<5.0 d	-	-	-	136
	10/11/05	57	18	<10	400	<1.0	NA	<10 d	-	-	-	46
	08/04/05	640	280	1,600	13,000	< 50	NA	<50 d	-	-	-	600
	05/04/05	320	170	170	4,900	56	NA	<50 d	-	-	-	390
	01/11/05	2.8	<1.0	<1.0	<1.0	4.2	NA	<1.0	-	-	-	<10
	10/15/04	1,200	830	2,000	4,000	< 5.0	NA	233	-	-	-	120
	07/08/04	<1.0	120	240	400	17	NA	<1.0	-	-	-	16.9
	04/11/04	6.0	6.2	2.3	18	6.4	NA	<1.0	-	-	-	<10
	10/12/03	850	710	1,200	2,600	34	NA	< 5.0	-	-	-	NA
	06/21/03	140	100	170	420	16	<0.010 °	< 5.0	-	-	-	6.5

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
BMW-21	Sampled				-		<0.010 °		<u> </u>	1	1	1
	03/12/03	100	18	160	390	9.3 9.7	<0.010 °	<5.0	-	-	-	10.9
(cont.) BMW-22	12/12/02	25	170	130	630		<2.0	<1.0	6.5	33	<8.0	14.9
BIVI W - 22	10/22/19	<2.0	<2.0	72 29	28	<2.0	<2.0	<2.0				39.5
	02/13/19	<2.0	<2.0		21	<2.0		<2.0	-	-	-	27
	11/14/18	<2.0	<2.0	50	36	<2.0	<2.0	<2.0	-	-	-	45
	08/09/18	<2.0	<2.0	4.8	<3.0	<2.0	<2.0	<2.0	-	-	-	<20
	05/02/18	<2.0	<2.0	86	6.8	<2.0	<2.0	<2.0	-	-	-	41
	01/03/18	<1.0	<1.0	52	53	<1.0	<1.0	<1.0	-	-	-	57
	07/27/17	<2.0	<2.0	3.5	3.2	<2.0	<2.0	<2.0	-	-	-	13
	04/19/17	< 5.0	< 5.0	57	190	< 5.0	< 5.0	< 5.0	-	-	-	98
	11/11/16	<10	<10	39	39	<10	<10	<10	-	-	-	<100
	02/15/16	<10	<10	240	390	<10	<0.10 °	<10	-	-	-	330
	03/29/12				1	T		not loca	ted		1	Ī
	10/04/09	< 5.0	5.3	49	230	19	NA	< 5.0	-	-	-	13
	12/04/08	< 5.0	5.3	80	430	< 5.0	NA	< 5.0	-	-	-	76
	07/29/08	<10	240	1,600	9,700	<10	NA	<10	-	-	-	1,820
	04/01/08	14	210	2,100	12,000	<10	NA	<10	-	-	-	1,037
	10/17/07	<10	65	390	2,600	<10	NA	<10	-	-	-	201
	07/25/07	19	320	1,800	11,000	<10	NA	<10	-	-	-	1,620
	03/14/07	32	400	3,500	20,000	<10	NA	<10	-	-	-	979
	12/12/06	53	340	1,300	5,600	<75	NA	<75	-	-	-	230
	09/11/06	13	150	1,100	4,700	<15	NA	<15	-	-	-	526
	06/07/06	32	450	1,300	9,000	<15	NA	<15	-	-	-	651
	01/11/06	30	380	1,900	9,700	< 5.0	NA	< 5.0	-	ı	-	605
	10/11/05	< 5.0	36	130	650	< 5.0	NA	< 5.0	-	-	-	25
	08/04/05	<10	72	260	1,300	<10	NA	<10	-	-	-	134
	05/04/05	160	2,000	4,200	23,000	<10	NA	<10	-	-	-	1,060

			Concentration (µg/L) ^a 1 Mothyd 2 Mothyd Total											
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total		
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes		
BMW-22	01/11/05					Well no	t sampled -	vehicle	parked over wel	1				
(cont.)	10/15/04						Well	not loca	ted					
	03/12/03													
	through					Well no	ot sampled	due to pr	esence of NAPI	_				
	07/08/04													
	12/12/02	91	1,600	1,700	4,900	<10	<10	<10	-	-	-	444		
DBS-1	10/22/19	< 2.0	< 2.0	21	<3.0	2.5	< 2.0	< 2.0	17	<8.0	<8.0	17		
	02/12/19	<1.0	<1.0	88	4.3	1.3	<1.0	<1.0	-	-	-	<10		
	11/14/18	<1.0	<1.0	99	10	<1.0	<1.0	<1.0	-	-	-	<10		
	08/09/18	<2.0	<2.0	200	25	2.4	<2.0	< 2.0	-	-	-	<20		
	05/02/18	2.1	2.4	600	140	5.5	< 2.0	< 2.0	-	-	-	30		
	01/05/18	< 5.0	< 5.0	210	83	< 5.0	< 5.0	< 5.0	-	-	-	21		
	07/26/17	1.6	2.1	440	290	< 2.0	<2.0	< 2.0	-	-	-	68		
	04/19/17	1.6	6.6	510	760	1.3	<1.0	<1.0	-	-	-	71		
	11/11/16	<1.0	<1.0	65	65	1.7	<1.0	<1.0	-	-	-	7.3		
	02/18/16	3.4	8.9	490	1,100	<1.0	<0.10 °	<1.0	-	-	-	94.9		
DBS-2	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0		
	02/12/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	07/26/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	02/16/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10		

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
DBS-3	10/21/19	<1.0	<1.0	<1.0	<1.5	1.1	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/12/19	<1.0	<1.0	<1.0	<1.5	1.7	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	1.5	<1.0	<1.0	-	-	-	<10
	08/08/18	<1.0	<1.0	<1.0	<1.5	1.4	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	01/03/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	07/26/17	<1.0	<1.0	<1.0	<1.5	5.7	<1.0	<1.0	-	-	-	<10
	04/18/17	<1.0	<1.0	<1.0	<1.5	3.7	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	8.7	<1.0	<1.0	-	-	-	<10
	02/16/16	1.7	<1.0	<1.0	<1.5	11	<0.010 °	<1.0	-	-	-	<10
DBS-4	10/22/19	1.3	1.9	430	310	<1.0	<1.0	<1.0	21	18	<4.0	39
	02/12/19	<1.0	<1.0	24	78	<1.0	<1.0	<1.0	-	-	-	17.5
	11/14/18	<1.0	1.7	64	200	<1.0	<1.0	<1.0	-	-	-	21.5
	08/08/18	<1.0	2.7	71	210	<1.0	<1.0	<1.0	-	-	-	29.0
	05/02/18	<1.0	<1.0	13	44	<1.0	<1.0	<1.0	-	-	-	2.8
	01/03/18	<1.0	1.8	48	170	<1.0	<1.0	<1.0	-	-	-	24.7
	07/27/17	<1.0	1.8	41	180	<1.0	<1.0	<1.0	-	-	-	22
	04/19/17	<1.0	<1.0	8.9	20	<1.0	<1.0	<1.0	-	-	-	<10
	11/11/16	<1.0	<1.0	10	39	<1.0	<1.0	<1.0	-	-	-	2.7
	02/18/16	<10	11	170	1,100	<10	<0.10 °	<10	-	-	-	122
DBS-5	10/22/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	<2.0	<4.0	<4.0	<4.0
	02/11/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	09/12/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	01/03/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10

							Concent	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl-naphthalene	Total Naphthalenes
DBS-5	07/26/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
(cont.)	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/15/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10
DBS-6	02/11/19	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/14/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	08/09/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	1	<10
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	ı	ı	<10
	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	ı	<10
	07/26/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	ı	<10
	04/18/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/15/16	<1.0	<1.0	<1.0	<1.5	<1.0	<0.010 °	<1.0	-	-	-	<10
P-5	03/30/12	< 2.0	< 2.0	< 2.0	< 3.0	< 2.0	< 2.0	< 2.0	-	-	-	<20
	10/04/09	41	39	55	2,600	4.1	NA	<1.0	-	-	-	362
	12/04/08	<1.0	<1.0	<1.0	<1.5	3.9	NA	<1.0	-	-	-	<10
	07/29/08	<1.0	<1.0	<1.0	<1.5	49	NA	<1.0	-	-	-	<10
	04/01/08	<1.0	<1.0	<1.0	<1.5	<1.0	NA	<1.0	-	-	-	<10
	10/17/07	<1.0	<1.0	<1.0	<1.5	<1.0	NA	NA	-	-	-	<10
	07/25/07	<1.0	<1.0	<1.0	<1.5	<1.0	NA	NA	-	-	-	<10
W-1	10/23/19	<2.0	< 2.0	770	< 3.0	< 2.0	< 2.0	< 2.0	36	59	<8.0	95
	02/11/19	<2.0	3.2	770	120	< 2.0	<2.0	< 2.0	-	-	-	103
	11/15/18	<1.0	3.2	65	140	<1.0	<1.0	<1.0	-	-	-	51
	09/12/18	<2.0	5.0	550	230	< 2.0	<2.0	< 2.0	-	-	-	96
	08/08/18	< 5.0	< 5.0	150	70	< 5.0	< 5.0	< 5.0	-	-	-	26
	05/02/18	< 5.0	< 5.0	140	46	< 5.0	< 5.0	< 5.0	-	-	-	132
	07/26/17	< 5.0	< 5.0	26	40	< 5.0	< 5.0	< 5.0	-	-	-	12

							Concent	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
W-1	04/18/17	<1.0	6.6	360	380	<1.0	<1.0	<1.0	-	-	-	317
(cont.)	11/11/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10
	02/17/16	<1.0	48	700	1,100	<1.0	<0.010 °	<1.0	-	-	-	264
	03/29/12						Well	not locat	ted			
	10/04/09	<1.0	<1.0	7.7	8.5	860	<1.0	<1.0	-	-	-	5.0
	12/04/08	< 5.0	35	220	340	860	< 5.0	< 5.0	-	-	-	70
	07/29/08						Well	not samp	oled			
	04/02/08	10	< 5.0	350	76	< 5.0	< 5.0	< 5.0	-	-	-	89
	01/04/08	<1.0	<1.0	63	20	<1.0	<1.0	<1.0	-	-	-	87
	10/16/07	25	30	170	1,500	< 5.0	< 5.0	< 5.0	-	-	-	255
	07/25/07	96	350	320	1,700	< 5.0	< 5.0	< 5.0	-	-	-	630
	03/13/07	34	290	25	1,400	<10	<10	<10	-	-	-	262
	12/12/06	37	100	680	1,200	<15	<10	<10	-	-	-	307
	09/11/06	43	150	260	920	<15	<10	<10	-	-	-	790
	06/06/06	63	37	800	320	< 50	<10	<10	-	-	-	440
	01/10/06	180	1,800	2,300	9,200	< 50	< 50	< 50	-	-	-	1,490
	10/11/05	220	1,200	2,800	20,000	< 50	< 50	< 50	-	-	-	1,730
	08/03/05	190	1,500	2,000	8,800	<100	<100	<100	-	-	-	610
	05/04/05	310	4,200	4,200	17,000	71	< 50	< 50	-	-	-	970
	01/10/05	410	3,400	2,300	10,000	<100	<100	<100	-	-	-	680
	10/14/04	370	4,600	2,600	14,000	78	< 50	< 50	-	-	-	1,140
	07/08/04	320	3,700	280	14,000	<100	<100	<100	-	-	-	540
	04/11/04	260	5,500	1,600	13,000	100	<100	<100	-	-	-	770
	10/12/03	500	7,000	2,100	16,000	<250	<0.010 °	NA	-	-	-	NA
	06/21/03	620	7,800	2,100	18,000	130	<0.010 °	NA	-	-	-	570
	03/11/03	780	9,100	2,200	14,000	210	<0.010 °	NA	-	-	-	NA
	12/13/02	720	9,400	2,500	16,000	170	<0.010 °	NA	-	-	-	441

			Concentration (µg/L) ^a											
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes		
W-1	01/24/02	1,200	12,000	2,700	16,000	280	<20	NA	-	-	-	NA		
(cont.)	11/20/01	980	9,300	2,300	14,000	260	<250	NA	-	1	-	NA		
	08/25/01	1,700	14,000	3,200	21,000	250	<100	NA	-	ı	-	NA		
	03/24/01	1,600	14,000	3,100	20,000	260	<100	NA	-	-	-	NA		
	06/27/99	6,000	31,000	6,900	37,000	470	0.25 ^c	NA	-	-	-	NA		
W-2	10/23/19	<1.0	<1.0	4.2	<1.5	<1.0	<1.0	<1.0	<2.0	11	<4.0	11		
	02/13/19	<1.0	<1.0	1.1	<1.5	<1.0	<1.0	<1.0	-	-	-	4.8		
	11/14/18	<1.0	<1.0	1.1	<1.5	<1.0	<1.0	<1.0	-	-	-	4.9		
	08/08/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	4.0		
	05/01/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	01/04/18	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	<10		
	07/27/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	7.3		
	04/19/17	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	6.0		
	11/10/16	<1.0	<1.0	<1.0	<1.5	<1.0	<1.0	<1.0	-	-	-	4.5		
	02/17/16	<1.0	<1.0	1.4	<1.5	<1.0	<0.10 °	<1.0	-	-	-	11		
	10/16/07 through 03/29/12							not samp	oled					
	03/13/07	<1.0	<1.0	23	<1.5	<1.0	<1.0	<1.0	-	-	-	56.3		
	12/12/06	< 5.0	< 5.0	53	<15	<7.5	< 5.0	<10	-	-	-	294		
	09/11/06	<10	<10	97	<30	<15	<10	<10	-	-	-	294		
	06/06/06	<10	<10	91	<30	<15	<10	<10	-	-	-	410		
	01/10/06							not samp						
	10/11/05					•		not samp	led					
	05/04/05	< 5.0	< 5.0	180	7.2	< 5.0	< 5.0	< 5.0	-	-	-	194		
	01/10/05	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	-	-	-	211		
	10/14/04	<10	<10	250	<10	<10	<10	<10	-	-	-	290		

							Concent	tration (µ	ιg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
W-2	07/08/04	<10	<10	76	<10	<10	<10	<10	-	-	-	374
(cont.)	04/11/04	<10	<10	130	<10	<10	<10	<10	-	-	-	312
	10/12/03	<10	<10	400	510	<10	<0.010 °	NA	-	-	-	NA
	06/21/03	<10	<10	200	<10	<10	<0.010 °	NA	-	-	-	131
	03/11/03	<10	<10	210	25	<10	<0.010 °	NA	-	-	-	228
	12/13/02	<10	<10	320	22	<10	<0.010 °	NA	-	-	-	185
	06/27/99	<10	50	2,600	2,100	<10	<0.010 °	NA	-	-	-	NA
W-3	10/23/19	19	21	1,700	980	<10	<10	<10	320	82	48	450
	02/13/19	6.8	20	810	350	< 5.0	< 5.0	< 5.0	-	-	-	181
	11/15/18	<10	30	1,000	570	<10	<10	<10	-	-	1	245
	09/12/18	<20	260	2,000	2,700	<20	<20	<20	-	1	ı	550
	08/09/18	30	1,300	2,200	4,800	<20	<20	<20	-	1	ı	664
	05/02/18	<20	110	1,200	660	<20	<20	<20	-	-	ı	500
	01/04/18	<10	41	880	310	<10	<10	<10	-	1	ı	241
	07/26/17	11	420	2,200	2,100	<20	< 20	<20	-	1	ı	590
	04/19/17	<10	610	2,500	2,800	12	<10	<10	-	-	ı	743
	11/11/16	< 50	180	2,100	1,200	< 50	< 50	< 50	-	-	1	500
	02/17/16	< 50	430	2,500	2,000	< 50	<0.10 °	< 50	-	1	ı	860
	03/30/12	72	430	1,400	1,800	210	<10	<10	-	-	ı	820
	10/04/09	<1.0	<1.0	7.7	8.5	860	< 5.0	< 5.0	-	-	-	770
	12/04/08	< 5.0	35	220	340	860	< 5.0	< 5.0	-	-	-	860
	07/29/08	10	< 5.0	350	76	< 5.0	<10	<10	-	-	-	429
	04/01/08	10	< 5.0	350	76	< 5.0	< 50	< 50	-	-	-	830
	10/16/07	25	30	170	1,500	< 5.0	<10	<10	-	-	-	817
	07/25/07	96	350	320	1,700	< 5.0	<10	<10	-	-	-	1,269
	03/13/07	34	290	25	1,400	<10	<100	<100	-	-	-	1,000
	12/12/06	37	100	680	1,200	<15	<10	<10	-	-	-	1,320

							Concen	tration (µ	ıg/L) ^a			
Well	Date			Ethyl-	Total					1-Methyl-	2-Methyl-	Total
Name	Sampled	Benzene	Toluene	benzene	Xylenes	MTBE	EDB	EDC	Naphthalene	naphthalene	naphthalene	Naphthalenes
W-3	09/11/06	43	150	260	920	<15	< 5.0	< 5.0	-	-	-	2,820
(cont.)	06/06/06	63	37	800	320	< 50	<100	<100	-	1	-	1,100
	01/10/06	180	1,800	2,300	9,200	< 50	<100	<100	-	ı	-	2,610
	10/11/05	220	1,200	2,800	20,000	< 50	<100	<100	-	ı	-	1,980
	08/03/05	190	1,500	2,000	8,800	<100	<250	<250	-	ı	-	2,000
	05/04/05	310	4,200	4,200	17,000	71	<100	<100	-	ı	-	990
	12/13/02											
	through					Well no	ot sampled	due to pro	esence of NAPL	_		
	07/08/04											
	01/24/02	3,400	13,000	3,300	14,000	2,900	< 50	NA	-	ı	-	NA
	11/20/01	1,900	6,300	2,200	9,900	2,700	<250	NA	-	ı	-	NA
	08/25/01	3,200	11,000	2,900	15,000	3,100	<250	NA	-	ı	-	NA
	03/24/01	3,500	13,000	3,100	12,000	1,100	<100	NA	-	-	-	NA
	06/27/99	7,500	19,000	5,900	31,000	2,200	<0.010 °	NA	-	-	-	NA
Tap Samples ^d												
Dominguez	10/21/19	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	< 0.50	-	-	-	NA
	02/13/19	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	11/15/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	08/09/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	05/01/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	01/03/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	07/27/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	04/18/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	11/10/16	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	-	-	NA
Gallegos	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	-	-	NA
Martinez	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	-	-	NA

							Concen	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
MDWCA	10/21/19	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	< 0.50	-	-	-	NA
South	02/15/19	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	ı	1	NA
	11/15/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	08/09/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	05/01/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	01/05/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	07/28/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	04/18/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	11/11/16	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	-	-	NA
MDWCA	10/21/19	< 0.50	< 0.50	< 0.50	< 0.50	NA	NA	< 0.50	-	-	-	NA
North	02/15/19	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	11/15/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	08/09/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	05/01/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	01/03/18	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	07/27/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	04/18/17	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	11/11/16	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	NA	< 0.50	-	-	-	NA
	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	1	-	NA
Moberg, E.	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	-	-	NA
Moberg, R.	02/16/16	< 0.50	< 0.50	< 0.50	< 0.50	NA	<0.010 ^c	< 0.50	-	-	-	NA

							Concen	tration (µ	ıg/L) ^a			
Well Name	Date Sampled	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	EDB	EDC	Naphthalene	1-Methyl- naphthalene	2-Methyl- naphthalene	Total Naphthalenes
WVFD	02/16/16	< 0.50	50 <0.50 <0.50 NA <0.010 <0.50 - NA									
NMWQCC Standard b 5 1,000 700 620				620	100	0.05	5				30	

Notes:

Bold indicates value that exceeds the NMWQCC standard

Data prior to October 2019 reported by Daniel B. Stephens & Associates, inc. (DBS&A, 2019)

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

^b New Mexico Water Quality Control Commission standard

^c Samples analyzed in accordance with EPA Method 504.1

^d Samples analyzed in accordance with EPA Method 524

NA = Not analyzed

NAPL = Non-aqueous phase liquid

BAL = Historical data, definition not provided

 μ g/L = Micrograms per liter

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

MTBE = Methyl tertiary-butyl ether

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

TABLE 3. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS TOTAL PETROLEUM HYDROCARBONS FULL RANGE MOBERG'S GARAGE AND TEXACO STATION, WATROUS, NEW MEXICO

Well Number	Date Sampled	DRO (mg/L)	MRO (mg/L)	GRO (mg/L)
BMW-1	10/22/2019	9.1	< 5.0	19
BMW-2	10/22/2019	11	< 5.0	14
BMW-3	10/22/2019	9.1	< 5.0	7.2
BMW-4R	10/22/2019	2.4	< 5.0	0.84
BMW-5	10/22/2019	1.7	< 5.0	3.3
BMW-5R	10/22/2019	6.8	< 5.0	20
BMW-8	10/22/2019	<1.0	< 5.0	0.065
BMW-9	10/22/2019	3.1	< 5.0	2.8
BMW-10	10/22/2019	<1.0	< 5.0	< 0.050
BMW-11	10/21/2019	<1.0	< 5.0	0.84
BMW-12	10/23/2019	<1.0	< 5.0	< 0.050
BMW-14	10/22/2019	<1.0	< 5.0	< 0.050
BMW-15	10/22/2019	2.9	< 5.0	2.2
BMW-16	10/23/2019	<1.0	< 5.0	< 0.050
BMW-18	10/21/2019	<1.0	< 5.0	0.81
BMW-20	10/22/2019	<1.0	< 5.0	< 0.050
BMW-21	10/22/2019	<1.0	< 5.0	0.11
BMW-22	10/22/2019	4.1	< 5.0	3.1
DBS-1	10/22/2019	<1.0	< 5.0	0.27
DBS-2	10/22/2019	<1.0	< 5.0	< 0.050
DBS-3	10/21/2019	<1.0	< 5.0	< 0.050
DBS-4	10/22/2019	2.2	< 5.0	5.8
DBS-5	10/22/2019	<1.0	< 5.0	< 0.050
DBS-6		Not sampled - w	ell obstructed	
W-1	10/23/2019	3.6	< 5.0	9.1
W-2	10/23/2019	1.6	< 5.0	0.48
W-3	10/23/2019	7.2	< 5.0	17

Notes:

Total petroleum hydrocarbons analyzed by EPA Method 8015M/D

DRO = Diesel-range organics

MRO = Motor oil-range organics

GRO = Gasoline-range organics

mg/L = Milligrams per liter

TABLE 4. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS BOD, COD, TDS, DISSOLVED IRON AND MANGANESE, ORP, AND DO MOBERG'S GARAGE AND TEXACO STATION SEPTEMBER 2018 SAMPLING EVENT

					Dissolved	Dissolved		
Well ID	Plume	BOD	COD	TDS	Iron	Manganese	ORP	DO
		mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L
BMW-1	Moberg's	280	690	1,260	2.3	1.3	-310	0.12
BMW-2	Moberg's	23	136	1,240	0.19	2.4	-142	0.14
BMW-3	Moberg's	377	656	1,260	2.3	5.3	-148	0.21
BMW-5R	Moberg's	390	409	2,050	8.1	1.3	-284	0.06
Moberg's Average		268	473	1,453	3.2	2.6	-221	0.13

Well ID	Plume	BOD	COD	TDS	Dissolved Iron	Dissolved Manganese	ORP	DO
		mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L
W-1	Texaco	30	65.6	1,710	15	9.9	113	0.29
W-3	Texaco	160	256	4,280	390	57	-71	6.7
Texaco's Average		95	161	2,995	203	33.5	21	0.29

					Dissolved	Dissolved		
Well ID	Area	BOD	COD	TDS	Iron	Manganese	ORP	DO
		mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L
DBS-5	Upgradient of Moberg's	<2.0	53.5	820	0.080	0.013	37	0.4
BMW-11	Between Plumes	47	54.1	2,170	7.5	7.9	-92	9.54
BMW-18	Between Plumes	31	205	1,560	15	5.8	-26	0.5
BMW-14	Downgradient of Texaco	< 2.0	36.0	774	0.29	0.14	140	1.3

Notes:

BOD Biological Oxygen Demand

COD Chemical Oxygen Demand

DO Dissolved Oxygen

mg/L milligrams per liter

mV milliVolts

ORP Oxidation-Reduction Potential

TDS Total Dissolved Solids

TABLE 5. MIX QUANTITIES MOBERG'S GARAGE AND TEXACO STATION, WATROUS, NEW MEXICO

Parameter	Units	Moberg's	Texaco	Total	Notes					
	•	Input								
Target Area	ft ²	8,000	2,500	10,500						
Target Thickness	ft	6	6							
ORC-A Density	lb/ft ³	137	137		Solids (not bulk)					
ORC-A Mass Per Foot	lb/ft	15.9	15.0		Design					
Slurry Mix Ratio	gal water/lb ORC-A	0.357	0.357		25% by mass					
Total Quatities										
Number of Injection Points	points	106	20	127	Drawing C-1					
ORC-A Mass, Total	lb	10,120	1,840	11,960	Regenesis					
Regenox Part-A Mass, Total	lb/point	318	0							
Water Volume, Total	gal	3,613	657	4,270						
ORC-A Volume, Total	gal	551	100	651	Solids (not bulk)					
Slurry Volume, Total	gal	4,164	757	4,921						
	•	Quantites Pe	er Point		•					
ORC-A Target Mass Per Point	lb/point	95.4	90.0							
Regenox Part A Mass Per Point	lb/point	3.0	0.0							
Water Volume, Per Point	gal	34	32							
Slurry Volume, Per Point	gal	39	37							

Notes:

ORC-A mass per foot, Slurry Mix Ratio, and/or Number of Injection Points may be adjusted based on field conditions.

- ft feet
- ft² square feet
- ft³ cubic feet
- gal gallons
- lb pounds
- sf square feet

TABLE 6. GROUNDWATER MONITORING AND PERFORMANCE ASSESSMENT MOBERG'S GARAGE AND TEXACO STATION, WATROUS, NEW MEXICO

					Labor	ratory		Field Parameters				
Well Identification Southern "Texaco Station" H	Matrix		Sampling Schedule	VOC 8260B	TPH (GRO, DRO, MRO) 8015B	BOD & COD	Biotraps™	Dissolved Oxygen	ORP	Conductivity	Hq	Temperature
W-1	ot Spot	Treatment Area	Q	4	4	1 (A)		4	4	4	4	4
W-2			S	2	4	1 (A)		2	2	2	2	2
W-3		Down-hole Meter	Q	4	4	1 (A)	1	4	4	4	4	4
BMW-9		(measure two	S	2				2	2	2	2	2
BMW-10		intervals: top of	S	2				2	2	2	2	2
BMW-11	Water	water column and at	Q	4				4	4	4	4	4
BMW-12		bottom of screen).	S	2				2	2	2	2	2
BMW-14		Bail three casing	S	2	4	1 (4)		2	2	2	2	2
BMW-15 BMW-16		volumes and sample.	Q S	2	4	1 (A)		2	4 2	2	2	4 2
BMW-18			S	2				2	2	2	2	2
Northern "Moberg's Garage"	' Hot Sn	ot Treatment Area	S									
BMW-1	1100 55	ot Treatment In ca	Q	4	4	1 (A)	1	4	4	4	4	4
BMW-2			Q	4	4	1 (A)	1	4	4	4	4	4
BMW-3			Q	4	4	1 (A)		4	4	4	4	4
BMW-4			Q	4		- ()		4	4	4	4	4
BMW-5			S	2				2	2	2	2	2
BMW-5R		Down-hole Meter	Q	4	4	1 (A)		4	4	4	4	4
BMW-8		(measure two	S	2	· ·	1 (11)		2	2	2	2	2
BMW-20		intervals: top of water column and at	A	1				1	1	1	1	1
BMW-21		bottom of screen).	S	2				2	2	2	2	2
BMW-21	Water	Bail three casing	Q	4		1 (A)		4	4	4	4	4
DBS-1		volumes and sample.	S	2		1 (A)		2	2	2	2	2
DBS-2			A	1				1	1	1	1	1
DBS-3			A	1				1	1	1	1	1
DBS-4R			S	2				2	2	2	2	2
DBS-5			A	1				1	1	1	1	1
North MDWCA Supply Well		Тар	Q	4								
South MDWCA Supply Well		Tap	Q	4								
Dominguez/Maldonado		Tap	Q	4								
Total Samples	NA	NA	NA	80	28		3					

NOTES:

A = Annual

BOD = Biological Oxygen Demand

COD = Chemical Oxygen Demand

DRO = Diesel Range Organics

GRO = Gasoline Range Organics

MRO = Morot Oil Range Organics

NA = Not applicable

ORP = Oxidation-reduction potential

Q = Quarterly

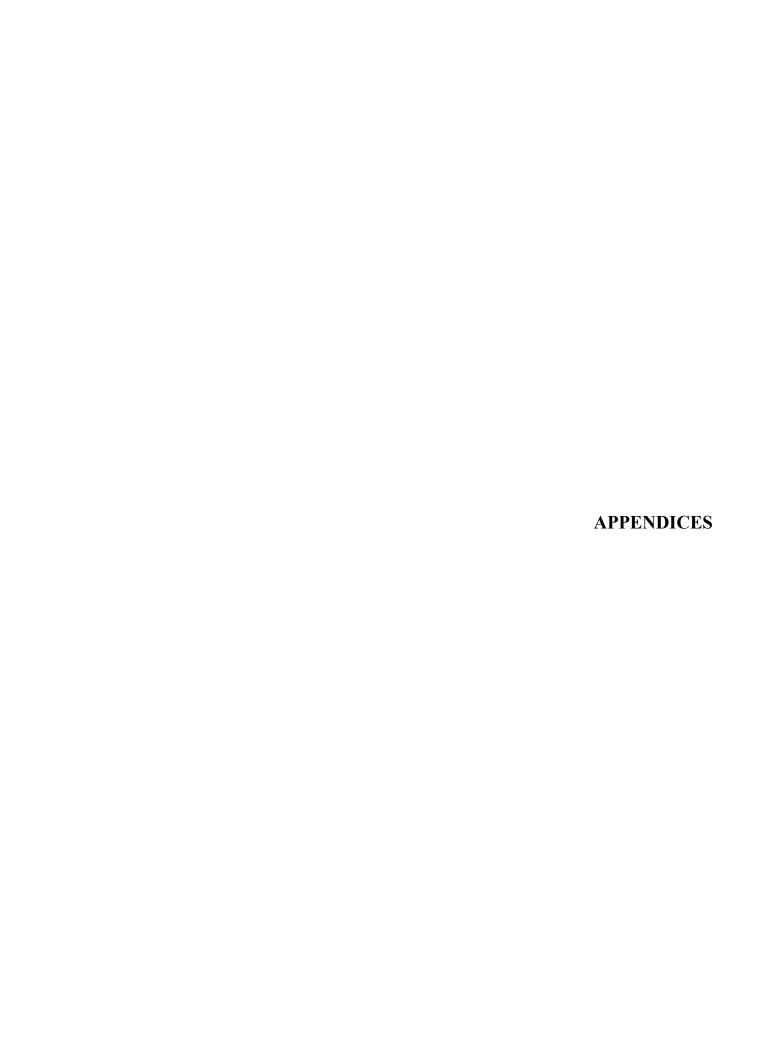
S = Semiannual

TPH = Total Petroleum Hydrocarbons

VOC = Volatile organic compound

TABLE 7. OPTIMIZATION AND CONTINGENCY PLAN MOBERG'S GARAGE AND TEXACO STATION, WATROUS, NEW MEXICO

	Optimum	Timeframe for	Means of Data	Contingency
Goal	Condition	Goal Attainment	Collection	Plan
Inject Remediation Amendments	According to the design	During Mobilization	Measuring vessel, weighing, flowmeters, package quantities.	Adjust amount of water in the slurry. Adjust injection mass per point and point spacing. Adjust injection pressure and/or flowrate.
Demonstrate aerobic bioremediation within "hot spots."	Significant increase in aerobic microbial count, dissolved oxygen available, and declining solute concentrations.	Throughout remediation	Dissolved oxygen and oxidation-reduction potential in groundwater. Increased microbial populations in groundwater based on Biotrap™ Samplers. Volatile organic compound (VOC) concentration decline in groundwater.	Localized subsequent injections in recalcitrant areas.
Ensure public water supplies are not impacted by solute plumes.	Stable to declining "hot spots" post treatment, both in area and contaminant mass.	Throughout remediation	Quarterly groundwater monitoring and tap sampling of public water supplies.	Localized subsequent injections to prevent contaminant migration in groundwater.



APPENDIX A SEPTEMBER 2018 LABORATORY REPORTS



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

October 01, 2018

Tom Golden

Daniel B. Stephens & Assoc. 6020 Academy NE Suite 100 Albuquerque, NM 87109

TEL: (505) 822-9400 FAX (505) 822-8877

RE: Mobergs Garage OrderNo.: 1809700

Dear Tom Golden:

Hall Environmental Analysis Laboratory received 11 sample(s) on 9/13/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-14

Project: Mobergs Garage
 Collection Date: 9/12/2018 11:50:00 AM

 Lab ID: 1809700-001
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst:	SMS
Biochemical Oxygen Demand	DO Depletion<2.0	2.0		mg/L	1	9/18/2018 3:24:00 PM	40335
SM2540C MOD: TOTAL DISSOLVED	SOLIDS					Analyst:	SRM
Total Dissolved Solids	774	40.0	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
	774	40.0		mg/L	•		
SM4500-H+B / 9040C: PH						Analyst:	
рН	7.24		Н	pH units	1	9/18/2018 11:18:58 AM	R54265
EPA METHOD 6010B: DISSOLVED MI	ETALS					Analyst:	ELS
Iron	0.29	0.020		mg/L	1	9/15/2018 1:42:24 PM	A54168
Manganese	0.14	0.0020		mg/L	1	9/15/2018 1:42:24 PM	A54168
EPA METHOD 8260B: VOLATILES						Analyst:	RAA
Benzene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Toluene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Ethylbenzene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Methyl tert-butyl ether (MTBE)	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2,4-Trimethylbenzene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
1,3,5-Trimethylbenzene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Naphthalene	ND	2.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
1-Methylnaphthalene	ND	4.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
2-Methylnaphthalene	ND	4.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Acetone	ND	10		μg/L	1	9/17/2018 6:27:00 PM	R54185
Bromobenzene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Bromodichloromethane	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Bromoform	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Bromomethane	ND	3.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
2-Butanone	ND	10		μg/L	1	9/17/2018 6:27:00 PM	R54185
Carbon disulfide	ND	10		μg/L	1	9/17/2018 6:27:00 PM	R54185
Carbon Tetrachloride	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Chlorobenzene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Chloroethane	ND	2.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Chloroform	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
Chloromethane	ND	3.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
2-Chlorotoluene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
4-Chlorotoluene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
cis-1,2-DCE	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
cis-1,3-Dichloropropene	ND	1.0		μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	2.0		μg/L	1	9/17/2018 6:27:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order **1809700**

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-14

 Project:
 Mobergs Garage
 Collection Date: 9/12/2018 11:50:00 AM

 Lab ID:
 1809700-001
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Dibromochloromethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Dibromomethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2-Dichlorobenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,3-Dichlorobenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,4-Dichlorobenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1-Dichloroethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1-Dichloroethene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2-Dichloropropane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,3-Dichloropropane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
2,2-Dichloropropane	ND	2.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1-Dichloropropene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Hexachlorobutadiene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
2-Hexanone	ND	10	μg/L	1	9/17/2018 6:27:00 PM	R54185
Isopropylbenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
4-Isopropyltoluene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
4-Methyl-2-pentanone	ND	10	μg/L	1	9/17/2018 6:27:00 PM	R54185
Methylene Chloride	ND	3.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
n-Butylbenzene	ND	3.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
n-Propylbenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
sec-Butylbenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Styrene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
tert-Butylbenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
trans-1,2-DCE	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1,1-Trichloroethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,1,2-Trichloroethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Trichloroethene (TCE)	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Trichlorofluoromethane	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
1,2,3-Trichloropropane	ND	2.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Vinyl chloride	ND	1.0	μg/L	1	9/17/2018 6:27:00 PM	R54185
Xylenes, Total	ND	1.5	μg/L	1	9/17/2018 6:27:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	98.5	70-130	%Rec	1	9/17/2018 6:27:00 PM	R54185
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	9/17/2018 6:27:00 PM	R54185

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-14

Project: Mobergs Garage
 Collection Date: 9/12/2018 11:50:00 AM

 Lab ID: 1809700-001
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	107	70-130	%Rec	1	9/17/2018 6:27:00 PM	R54185
Surr: Toluene-d8	91.4	70-130	%Rec	1	9/17/2018 6:27:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: DBS-5

Project: Mobergs Garage
 Collection Date: 9/12/2018 12:30:00 PM

 Lab ID: 1809700-002
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst	SMS
Biochemical Oxygen Demand	DO Depletion<2.0	2.0		mg/L	1	9/18/2018 3:24:00 PM	40335
SM2540C MOD: TOTAL DISSOLVED	SOLIDS					Analyst	SRM
Total Dissolved Solids	820	40.0	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH			_		-	Analyst	
	7.04				4	-	
рН	7.24		Н	pH units	1	9/18/2018 11:23:22 AM	
EPA METHOD 6010B: DISSOLVED MI	ETALS					Analyst	ELS
Iron	0.080	0.020		mg/L	1	9/15/2018 1:49:25 PM	A54168
Manganese	0.013	0.0020		mg/L	1	9/15/2018 1:49:25 PM	A54168
EPA METHOD 8260B: VOLATILES						Analyst	RAA
Benzene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Toluene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Ethylbenzene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Methyl tert-butyl ether (MTBE)	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2,4-Trimethylbenzene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
1,3,5-Trimethylbenzene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Naphthalene	ND	2.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
1-Methylnaphthalene	ND	4.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
2-Methylnaphthalene	ND	4.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Acetone	ND	10		μg/L	1	9/17/2018 7:40:00 PM	R54185
Bromobenzene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Bromodichloromethane	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Bromoform	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Bromomethane	ND	3.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
2-Butanone	ND	10		μg/L	1	9/17/2018 7:40:00 PM	R54185
Carbon disulfide	ND	10		μg/L	1	9/17/2018 7:40:00 PM	R54185
Carbon Tetrachloride	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Chlorobenzene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Chloroethane	ND	2.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Chloroform	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
Chloromethane	ND	3.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
2-Chlorotoluene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
4-Chlorotoluene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
cis-1,2-DCE	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
cis-1,3-Dichloropropene	ND	1.0		μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	2.0		μg/L	1	9/17/2018 7:40:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: DBS-5

 Project:
 Mobergs Garage
 Collection Date: 9/12/2018 12:30:00 PM

 Lab ID:
 1809700-002
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	:: RAA
Dibromochloromethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Dibromomethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2-Dichlorobenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,3-Dichlorobenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,4-Dichlorobenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Dichlorodifluoromethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1-Dichloroethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1-Dichloroethene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2-Dichloropropane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,3-Dichloropropane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
2,2-Dichloropropane	ND	2.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1-Dichloropropene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Hexachlorobutadiene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
2-Hexanone	ND	10	μg/L	1	9/17/2018 7:40:00 PM	R54185
Isopropylbenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
4-Isopropyltoluene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
4-Methyl-2-pentanone	ND	10	μg/L	1	9/17/2018 7:40:00 PM	R54185
Methylene Chloride	ND	3.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
n-Butylbenzene	ND	3.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
n-Propylbenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
sec-Butylbenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Styrene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
tert-Butylbenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
trans-1,2-DCE	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1,1-Trichloroethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,1,2-Trichloroethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Trichloroethene (TCE)	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Trichlorofluoromethane	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
1,2,3-Trichloropropane	ND	2.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Vinyl chloride	ND	1.0	μg/L	1	9/17/2018 7:40:00 PM	R54185
Xylenes, Total	ND	1.5	μg/L	1	9/17/2018 7:40:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	98.8	70-130	%Rec	1	9/17/2018 7:40:00 PM	R54185
Surr: 4-Bromofluorobenzene	94.2	70-130	%Rec	1	9/17/2018 7:40:00 PM	R54185

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: DBS-5

Project: Mobergs Garage
 Collection Date: 9/12/2018 12:30:00 PM

 Lab ID: 1809700-002
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	106	70-130	%Rec	1	9/17/2018 7:40:00 PM	R54185
Surr: Toluene-d8	91.4	70-130	%Rec	1	9/17/2018 7:40:00 PM	R54185

Blank
Page 6 of 43
1 age 0 01 43
t as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-11

Project: Mobergs Garage
 Collection Date: 9/12/2018 1:30:00 PM

 Lab ID: 1809700-003
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst	SMS
Biochemical Oxygen Demand	47	2.0		mg/L	1	9/18/2018 3:24:00 PM	40335
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst	SRM
Total Dissolved Solids	2170	40.0	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH			_		-	Analyst	
	7.00				4	-	
рН	7.02		Н	pH units	1	9/18/2018 11:27:53 AM	
EPA METHOD 6010B: DISSOLVED METALS						Analyst	ELS
Iron	7.5	0.20		mg/L	10	9/15/2018 2:32:33 PM	A54168
Manganese	7.9	0.020		mg/L	10	9/15/2018 2:32:33 PM	A54168
EPA METHOD 8260B: VOLATILES						Analyst	RAA
Benzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Toluene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Ethylbenzene	11	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Methyl tert-butyl ether (MTBE)	8.4	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2,4-Trimethylbenzene	19	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,3,5-Trimethylbenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Naphthalene	ND	5.0	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1-Methylnaphthalene	ND	10	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
2-Methylnaphthalene	ND	10	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Acetone	ND	25	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Bromobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Bromodichloromethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Bromoform	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Bromomethane	ND	7.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
2-Butanone	ND	25	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Carbon disulfide	ND	25	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Carbon Tetrachloride	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Chlorobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Chloroethane	ND	5.0	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Chloroform	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Chloromethane	ND	7.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
2-Chlorotoluene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
4-Chlorotoluene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
cis-1,2-DCE	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
cis-1,3-Dichloropropene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	5.0	D	μg/L	5	9/17/2018 8:04:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 7 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-11

Project: Mobergs Garage
 Collection Date: 9/12/2018 1:30:00 PM

 Lab ID: 1809700-003
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst	:: RAA
Dibromochloromethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Dibromomethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2-Dichlorobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,3-Dichlorobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,4-Dichlorobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Dichlorodifluoromethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1-Dichloroethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1-Dichloroethene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2-Dichloropropane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,3-Dichloropropane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
2,2-Dichloropropane	ND	5.0	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1-Dichloropropene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Hexachlorobutadiene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
2-Hexanone	ND	25	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Isopropylbenzene	6.1	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
4-Isopropyltoluene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
4-Methyl-2-pentanone	ND	25	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Methylene Chloride	ND	7.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
n-Butylbenzene	ND	7.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
n-Propylbenzene	15	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
sec-Butylbenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Styrene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
tert-Butylbenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	5.0	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Tetrachloroethene (PCE)	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
trans-1,2-DCE	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
trans-1,3-Dichloropropene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2,3-Trichlorobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2,4-Trichlorobenzene	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1,1-Trichloroethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,1,2-Trichloroethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Trichloroethene (TCE)	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Trichlorofluoromethane	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
1,2,3-Trichloropropane	ND	5.0	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Vinyl chloride	ND	2.5	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Xylenes, Total	ND	3.8	D	μg/L	5	9/17/2018 8:04:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	96.7	70-130	D	%Rec	5	9/17/2018 8:04:00 PM	R54185
Surr: 4-Bromofluorobenzene	94.8	70-130	D	%Rec	5	9/17/2018 8:04:00 PM	R54185

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-11

Project: Mobergs Garage
 Collection Date: 9/12/2018 1:30:00 PM

 Lab ID: 1809700-003
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst	: RAA
Surr: Dibromofluoromethane	107	70-130	D	%Rec	5	9/17/2018 8:04:00 PM	R54185
Surr: Toluene-d8	92.6	70-130	D	%Rec	5	9/17/2018 8:04:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 9 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
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Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: W-1

Project: Mobergs Garage
 Collection Date: 9/12/2018 2:05:00 PM

 Lab ID: 1809700-004
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst:	SMS
Biochemical Oxygen Demand	30	2.0		mg/L	1	9/18/2018 3:24:00 PM	40335
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	SRM
Total Dissolved Solids	1710	40.0	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH			_		-	Analyst:	
	7.00				4	-	
рН	7.06		Н	pH units	1	9/18/2018 11:32:11 AM	
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	ELS
Iron	15	0.40		mg/L	20	9/15/2018 2:33:52 PM	A54168
Manganese	9.9	0.040		mg/L	20	9/15/2018 2:33:52 PM	A54168
EPA METHOD 8260B: VOLATILES						Analyst:	RAA
Benzene	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Toluene	5.0	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Ethylbenzene	550	20		μg/L	20	9/18/2018 11:53:00 AM	R54215
Methyl tert-butyl ether (MTBE)	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2,4-Trimethylbenzene	430	20		μg/L	20	9/18/2018 11:53:00 AM	R54215
1,3,5-Trimethylbenzene	110	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Naphthalene	60	4.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
1-Methylnaphthalene	36	8.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
2-Methylnaphthalene	ND	8.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Acetone	23	20		μg/L	2	9/17/2018 8:28:00 PM	R54185
Bromobenzene	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Bromodichloromethane	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Bromoform	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Bromomethane	ND	6.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
2-Butanone	ND	20		μg/L	2	9/17/2018 8:28:00 PM	R54185
Carbon disulfide	ND	20		μg/L	2	9/17/2018 8:28:00 PM	R54185
Carbon Tetrachloride	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Chlorobenzene	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Chloroethane	ND	4.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Chloroform	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
Chloromethane	ND	6.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
2-Chlorotoluene	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
4-Chlorotoluene	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
cis-1,2-DCE	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
cis-1,3-Dichloropropene	ND	2.0		μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	4.0		μg/L	2	9/17/2018 8:28:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 10 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order 1809700 Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: W-1

Project: Mobergs Garage **Collection Date:** 9/12/2018 2:05:00 PM 1809700-004 Lab ID: Matrix: AQUEOUS Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Dibromochloromethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Dibromomethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2-Dichlorobenzene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,3-Dichlorobenzene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,4-Dichlorobenzene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Dichlorodifluoromethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1-Dichloroethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1-Dichloroethene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2-Dichloropropane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,3-Dichloropropane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
2,2-Dichloropropane	ND	4.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1-Dichloropropene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Hexachlorobutadiene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
2-Hexanone	ND	20	μg/L	2	9/17/2018 8:28:00 PM	R54185
Isopropylbenzene	28	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
4-Isopropyltoluene	4.5	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
4-Methyl-2-pentanone	ND	20	μg/L	2	9/17/2018 8:28:00 PM	R54185
Methylene Chloride	ND	6.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
n-Butylbenzene	14	6.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
n-Propylbenzene	100	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
sec-Butylbenzene	8.6	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Styrene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
tert-Butylbenzene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	4.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Tetrachloroethene (PCE)	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
trans-1,2-DCE	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
trans-1,3-Dichloropropene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2,3-Trichlorobenzene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2,4-Trichlorobenzene	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1,1-Trichloroethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,1,2-Trichloroethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Trichloroethene (TCE)	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Trichlorofluoromethane	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
1,2,3-Trichloropropane	ND	4.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Vinyl chloride	ND	2.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Xylenes, Total	230	3.0	μg/L	2	9/17/2018 8:28:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	94.2	70-130	%Rec	2	9/17/2018 8:28:00 PM	R54185
Surr: 4-Bromofluorobenzene	101	70-130	%Rec	2	9/17/2018 8:28:00 PM	R54185

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 11 of 43 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: W-1

Project: Mobergs Garage
 Collection Date: 9/12/2018 2:05:00 PM

 Lab ID: 1809700-004
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	99.3	70-130	%Rec	2	9/17/2018 8:28:00 PM	R54185
Surr: Toluene-d8	90.7	70-130	%Rec	2	9/17/2018 8:28:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 12 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-18

Project: Mobergs Garage
 Collection Date: 9/12/2018 3:50:00 PM

 Lab ID: 1809700-005
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst:	SMS
Biochemical Oxygen Demand	31	2.0		mg/L	1	9/19/2018 12:17:00 PM	40347
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	SRM
Total Dissolved Solids	1560	40.0	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH				3		Analyst:	IDD
•	6.80		Н	pH units	1	9/18/2018 11:36:31 AM	
pH	0.00		п	pn units	1		
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	
Iron	15	0.40		mg/L	20	9/15/2018 2:35:10 PM	A54168
Manganese	5.8	0.040		mg/L	20	9/15/2018 2:35:10 PM	A54168
EPA METHOD 8260B: VOLATILES						Analyst:	RAA
Benzene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Toluene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Ethylbenzene	310	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Methyl tert-butyl ether (MTBE)	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2,4-Trimethylbenzene	1500	100		μg/L	100	9/17/2018 8:52:00 PM	R54185
1,3,5-Trimethylbenzene	530	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Naphthalene	250	20		μg/L	10	9/17/2018 9:16:00 PM	R54185
1-Methylnaphthalene	120	40		μg/L	10	9/17/2018 9:16:00 PM	R54185
2-Methylnaphthalene	100	40		μg/L	10	9/17/2018 9:16:00 PM	R54185
Acetone	ND	100		μg/L	10	9/17/2018 9:16:00 PM	R54185
Bromobenzene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Bromodichloromethane	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Bromoform	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Bromomethane	ND	30		μg/L	10	9/17/2018 9:16:00 PM	R54185
2-Butanone	ND	100		μg/L	10	9/17/2018 9:16:00 PM	R54185
Carbon disulfide	ND	100		μg/L	10	9/17/2018 9:16:00 PM	R54185
Carbon Tetrachloride	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Chlorobenzene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Chloroethane	ND	20		μg/L	10	9/17/2018 9:16:00 PM	R54185
Chloroform	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
Chloromethane	ND	30		μg/L	10	9/17/2018 9:16:00 PM	R54185
2-Chlorotoluene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
4-Chlorotoluene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
cis-1,2-DCE	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
cis-1,3-Dichloropropene	ND	10		μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	20		μg/L	10	9/17/2018 9:16:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 13 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order 1809700

Hall Environmental Analysis Laboratory, Inc. Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** BMW-18

Project: Mobergs Garage **Collection Date:** 9/12/2018 3:50:00 PM 1809700-005 Lab ID: Matrix: AQUEOUS Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Dibromochloromethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Dibromomethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2-Dichlorobenzene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,3-Dichlorobenzene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,4-Dichlorobenzene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Dichlorodifluoromethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1-Dichloroethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1-Dichloroethene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2-Dichloropropane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,3-Dichloropropane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
2,2-Dichloropropane	ND	20	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1-Dichloropropene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Hexachlorobutadiene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
2-Hexanone	ND	100	μg/L	10	9/17/2018 9:16:00 PM	R54185
Isopropylbenzene	37	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
4-Isopropyltoluene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
4-Methyl-2-pentanone	ND	100	μg/L	10	9/17/2018 9:16:00 PM	R54185
Methylene Chloride	ND	30	μg/L	10	9/17/2018 9:16:00 PM	R54185
n-Butylbenzene	32	30	μg/L	10	9/17/2018 9:16:00 PM	R54185
n-Propylbenzene	130	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
sec-Butylbenzene	13	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Styrene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
tert-Butylbenzene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	20	μg/L	10	9/17/2018 9:16:00 PM	R54185
Tetrachloroethene (PCE)	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
trans-1,2-DCE	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
trans-1,3-Dichloropropene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2,3-Trichlorobenzene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2,4-Trichlorobenzene	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1,1-Trichloroethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,1,2-Trichloroethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Trichloroethene (TCE)	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Trichlorofluoromethane	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
1,2,3-Trichloropropane	ND	20	μg/L	10	9/17/2018 9:16:00 PM	R54185
Vinyl chloride	ND	10	μg/L	10	9/17/2018 9:16:00 PM	R54185
Xylenes, Total	160	15	μg/L	10	9/17/2018 9:16:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	96.4	70-130	%Rec	10	9/17/2018 9:16:00 PM	R54185
Surr: 4-Bromofluorobenzene	98.2	70-130	%Rec	10	9/17/2018 9:16:00 PM	R54185

Qualifiers: *	Value exceeds Maximum	Contaminant Lo
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- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 14 of 43 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-18

Project: Mobergs Garage
 Collection Date: 9/12/2018 3:50:00 PM

 Lab ID: 1809700-005
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qı	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	103	70-130	%Rec	10	9/17/2018 9:16:00 PM	R54185
Surr: Toluene-d8	92.2	70-130	%Rec	10	9/17/2018 9:16:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 15 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	3	70 Recovery outside of range due to dilution of matrix	**	Sample container temperature is out of mint as specified

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-5R

Project: Mobergs Garage
 Collection Date: 9/12/2018 4:21:00 PM

 Lab ID: 1809700-006
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst:	SMS
Biochemical Oxygen Demand	390	2.0		mg/L	1	9/19/2018 12:17:00 PM	40347
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	SRM
Total Dissolved Solids	2050	100	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH			_		•	Analyst	
	7.40				4	-	
рН	7.10		Н	pH units	1	9/18/2018 11:40:58 AM	
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	ELS
Iron	8.1	0.20		mg/L	10	9/15/2018 2:36:28 PM	A54168
Manganese	1.3	0.020		mg/L	10	9/15/2018 2:36:28 PM	A54168
EPA METHOD 8260B: VOLATILES						Analyst:	RAA
Benzene	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Toluene	11	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Ethylbenzene	1300	100		μg/L	100	9/18/2018 12:17:00 PM	R54215
Methyl tert-butyl ether (MTBE)	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2,4-Trimethylbenzene	2300	100		μg/L	100	9/18/2018 12:17:00 PM	R54215
1,3,5-Trimethylbenzene	990	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2-Dichloroethane (EDC)	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2-Dibromoethane (EDB)	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Naphthalene	170	20		μg/L	10	9/17/2018 9:40:00 PM	R54185
1-Methylnaphthalene	130	40		μg/L	10	9/17/2018 9:40:00 PM	R54185
2-Methylnaphthalene	64	40		μg/L	10	9/17/2018 9:40:00 PM	R54185
Acetone	230	100		μg/L	10	9/17/2018 9:40:00 PM	R54185
Bromobenzene	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Bromodichloromethane	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Bromoform	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Bromomethane	ND	30		μg/L	10	9/17/2018 9:40:00 PM	R54185
2-Butanone	ND	100		μg/L	10	9/17/2018 9:40:00 PM	R54185
Carbon disulfide	ND	100		μg/L	10	9/17/2018 9:40:00 PM	R54185
Carbon Tetrachloride	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Chlorobenzene	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Chloroethane	ND	20		μg/L	10	9/17/2018 9:40:00 PM	R54185
Chloroform	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
Chloromethane	ND	30		μg/L	10	9/17/2018 9:40:00 PM	R54185
2-Chlorotoluene	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
4-Chlorotoluene	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
cis-1,2-DCE	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
cis-1,3-Dichloropropene	ND	10		μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2-Dibromo-3-chloropropane	ND	20		μg/L	10	9/17/2018 9:40:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 16 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order 1809700 Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** BMW-5R

Project: Mobergs Garage **Collection Date:** 9/12/2018 4:21:00 PM 1809700-006 Lab ID: Matrix: AQUEOUS Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Dibromochloromethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Dibromomethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2-Dichlorobenzene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,3-Dichlorobenzene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,4-Dichlorobenzene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Dichlorodifluoromethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1-Dichloroethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1-Dichloroethene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2-Dichloropropane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,3-Dichloropropane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
2,2-Dichloropropane	ND	20	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1-Dichloropropene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Hexachlorobutadiene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
2-Hexanone	ND	100	μg/L	10	9/17/2018 9:40:00 PM	R54185
Isopropylbenzene	87	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
4-Isopropyltoluene	30	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
4-Methyl-2-pentanone	ND	100	μg/L	10	9/17/2018 9:40:00 PM	R54185
Methylene Chloride	ND	30	μg/L	10	9/17/2018 9:40:00 PM	R54185
n-Butylbenzene	80	30	μg/L	10	9/17/2018 9:40:00 PM	R54185
n-Propylbenzene	280	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
sec-Butylbenzene	34	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Styrene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
tert-Butylbenzene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1,1,2-Tetrachloroethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1,2,2-Tetrachloroethane	ND	20	μg/L	10	9/17/2018 9:40:00 PM	R54185
Tetrachloroethene (PCE)	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
trans-1,2-DCE	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
trans-1,3-Dichloropropene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2,3-Trichlorobenzene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2,4-Trichlorobenzene	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1,1-Trichloroethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,1,2-Trichloroethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Trichloroethene (TCE)	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Trichlorofluoromethane	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
1,2,3-Trichloropropane	ND	20	μg/L	10	9/17/2018 9:40:00 PM	R54185
Vinyl chloride	ND	10	μg/L	10	9/17/2018 9:40:00 PM	R54185
Xylenes, Total	950	15	μg/L	10	9/17/2018 9:40:00 PM	R54185
Surr: 1,2-Dichloroethane-d4	91.2	70-130	%Rec	10	9/17/2018 9:40:00 PM	R54185
Surr: 4-Bromofluorobenzene	108	70-130	%Rec	10	9/17/2018 9:40:00 PM	R54185

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 17 of 43 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-5R

Project: Mobergs Garage
 Collection Date: 9/12/2018 4:21:00 PM

 Lab ID: 1809700-006
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qu	ıal Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	98.4	70-130	%Rec	10	9/17/2018 9:40:00 PM	R54185
Surr: Toluene-d8	86.8	70-130	%Rec	10	9/17/2018 9:40:00 PM	R54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 18 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Analytical ReportLab Order **1809700**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-1

Project: Mobergs Garage
 Collection Date: 9/12/2018 4:53:00 PM

 Lab ID: 1809700-007
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst	SMS
Biochemical Oxygen Demand	280	2.0		mg/L	1	9/19/2018 12:17:00 PM	40347
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	SRM
Total Dissolved Solids	1260	100	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH				J		Analyst:	JRR
pH	7.52		Н	pH units	1	9/18/2018 11:45:16 AM	
•	7.02			pri unito	'		
EPA METHOD 6010B: DISSOLVED METALS						Analyst	
Iron	2.3	0.10		mg/L	5	9/15/2018 2:37:47 PM	B54168
Manganese	1.3	0.010		mg/L	5	9/15/2018 2:37:47 PM	B54168
EPA METHOD 8260B: VOLATILES						Analyst	RAA
Benzene	80	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Toluene	210	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Ethylbenzene	1300	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Methyl tert-butyl ether (MTBE)	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2,4-Trimethylbenzene	2700	200		μg/L	200	9/17/2018 11:40:00 PM	B54185
1,3,5-Trimethylbenzene	1700	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2-Dichloroethane (EDC)	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2-Dibromoethane (EDB)	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Naphthalene	800	40		μg/L	20	9/18/2018 12:04:00 AM	B54185
1-Methylnaphthalene	200	80		μg/L	20	9/18/2018 12:04:00 AM	B54185
2-Methylnaphthalene	230	80		μg/L	20	9/18/2018 12:04:00 AM	B54185
Acetone	330	200		μg/L	20	9/18/2018 12:04:00 AM	B54185
Bromobenzene	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Bromodichloromethane	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Bromoform	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Bromomethane	ND	60		μg/L	20	9/18/2018 12:04:00 AM	B54185
2-Butanone	ND	200		μg/L	20	9/18/2018 12:04:00 AM	B54185
Carbon disulfide	ND	200		μg/L	20	9/18/2018 12:04:00 AM	B54185
Carbon Tetrachloride	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Chlorobenzene	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Chloroethane	ND	40		μg/L	20	9/18/2018 12:04:00 AM	B54185
Chloroform	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
Chloromethane	ND	60		μg/L	20	9/18/2018 12:04:00 AM	B54185
2-Chlorotoluene	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
4-Chlorotoluene	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
cis-1,2-DCE	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
cis-1,3-Dichloropropene	ND	20		μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2-Dibromo-3-chloropropane	ND	40		μg/L	20	9/18/2018 12:04:00 AM	B54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 19 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order 1809700 Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-1

Project: Mobergs Garage **Collection Date:** 9/12/2018 4:53:00 PM 1809700-007 Lab ID: Matrix: AQUEOUS **Received Date:** 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	RAA
Dibromochloromethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Dibromomethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,3-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,4-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Dichlorodifluoromethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1-Dichloroethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1-Dichloroethene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2-Dichloropropane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,3-Dichloropropane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
2,2-Dichloropropane	ND	40	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1-Dichloropropene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Hexachlorobutadiene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
2-Hexanone	ND	200	μg/L	20	9/18/2018 12:04:00 AM	B54185
Isopropylbenzene	51	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
4-Isopropyltoluene	30	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
4-Methyl-2-pentanone	ND	200	μg/L	20	9/18/2018 12:04:00 AM	B54185
Methylene Chloride	ND	60	μg/L	20	9/18/2018 12:04:00 AM	B54185
n-Butylbenzene	ND	60	μg/L	20	9/18/2018 12:04:00 AM	B54185
n-Propylbenzene	46	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
sec-Butylbenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Styrene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
tert-Butylbenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1,1,2-Tetrachloroethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1,2,2-Tetrachloroethane	ND	40	μg/L	20	9/18/2018 12:04:00 AM	B54185
Tetrachloroethene (PCE)	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
trans-1,2-DCE	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
trans-1,3-Dichloropropene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2,3-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2,4-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1,1-Trichloroethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,1,2-Trichloroethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Trichloroethene (TCE)	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Trichlorofluoromethane	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
1,2,3-Trichloropropane	ND	40	μg/L	20	9/18/2018 12:04:00 AM	B54185
Vinyl chloride	ND	20	μg/L	20	9/18/2018 12:04:00 AM	B54185
Xylenes, Total	4200	30	μg/L	20	9/18/2018 12:04:00 AM	B54185
Surr: 1,2-Dichloroethane-d4	87.6	70-130	%Rec	20	9/18/2018 12:04:00 AM	B54185
Surr: 4-Bromofluorobenzene	98.4	70-130	%Rec	20	9/18/2018 12:04:00 AM	B54185

Qualifiers: * Value excee

- ds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Η Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 20 of 43 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-1

Project: Mobergs Garage
 Collection Date: 9/12/2018 4:53:00 PM

 Lab ID: 1809700-007
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qu	ial Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	t: RAA
Surr: Dibromofluoromethane	98.3	70-130	%Rec	20	9/18/2018 12:04:00 Af	M B54185
Surr: Toluene-d8	92.3	70-130	%Rec	20	9/18/2018 12:04:00 Af	И B54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 21 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: W-3

Project: Mobergs Garage
 Collection Date: 9/12/2018 5:20:00 PM

 Lab ID: 1809700-008
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst	SMS
Biochemical Oxygen Demand	160	2.0		mg/L	1	9/19/2018 12:17:00 PM	40347
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	SRM
Total Dissolved Solids	4280	100	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH				J		Analyst:	IRR
pH	6.27		Н	pH units	1	9/18/2018 11:49:32 AM	
•	0.21			pri unito	•		
EPA METHOD 6010B: DISSOLVED METALS						Analyst	
Iron	390	10		mg/L		9/15/2018 2:40:43 PM	B54168
Manganese	57	0.20		mg/L	100	9/15/2018 2:39:24 PM	B54168
EPA METHOD 8260B: VOLATILES						Analyst	RAA
Benzene	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Toluene	260	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Ethylbenzene	2000	200		μg/L	200	9/18/2018 12:28:00 AM	B54185
Methyl tert-butyl ether (MTBE)	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2,4-Trimethylbenzene	1900	200		μg/L	200	9/18/2018 12:28:00 AM	B54185
1,3,5-Trimethylbenzene	840	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2-Dichloroethane (EDC)	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2-Dibromoethane (EDB)	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Naphthalene	420	40		μg/L	20	9/18/2018 12:52:00 AM	B54185
1-Methylnaphthalene	130	80		μg/L	20	9/18/2018 12:52:00 AM	B54185
2-Methylnaphthalene	ND	80		μg/L	20	9/18/2018 12:52:00 AM	B54185
Acetone	440	200		μg/L	20	9/18/2018 12:52:00 AM	B54185
Bromobenzene	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Bromodichloromethane	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Bromoform	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Bromomethane	ND	60		μg/L	20	9/18/2018 12:52:00 AM	B54185
2-Butanone	460	200		μg/L	20	9/18/2018 12:52:00 AM	B54185
Carbon disulfide	ND	200		μg/L	20	9/18/2018 12:52:00 AM	B54185
Carbon Tetrachloride	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Chlorobenzene	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Chloroethane	ND	40		μg/L	20	9/18/2018 12:52:00 AM	B54185
Chloroform	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
Chloromethane	ND	60		μg/L	20	9/18/2018 12:52:00 AM	B54185
2-Chlorotoluene	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
4-Chlorotoluene	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
cis-1,2-DCE	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
cis-1,3-Dichloropropene	ND	20		μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2-Dibromo-3-chloropropane	ND	40		μg/L	20	9/18/2018 12:52:00 AM	B54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 22 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order **1809700**

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: W-3

 Project:
 Mobergs Garage
 Collection Date: 9/12/2018 5:20:00 PM

 Lab ID:
 1809700-008
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	RAA
Dibromochloromethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Dibromomethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,3-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,4-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Dichlorodifluoromethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1-Dichloroethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1-Dichloroethene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2-Dichloropropane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,3-Dichloropropane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
2,2-Dichloropropane	ND	40	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1-Dichloropropene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Hexachlorobutadiene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
2-Hexanone	ND	200	μg/L	20	9/18/2018 12:52:00 AM	B54185
Isopropylbenzene	120	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
4-Isopropyltoluene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
4-Methyl-2-pentanone	ND	200	μg/L	20	9/18/2018 12:52:00 AM	B54185
Methylene Chloride	ND	60	μg/L	20	9/18/2018 12:52:00 AM	B54185
n-Butylbenzene	ND	60	μg/L	20	9/18/2018 12:52:00 AM	B54185
n-Propylbenzene	390	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
sec-Butylbenzene	25	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Styrene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
tert-Butylbenzene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1,1,2-Tetrachloroethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1,2,2-Tetrachloroethane	ND	40	μg/L	20	9/18/2018 12:52:00 AM	B54185
Tetrachloroethene (PCE)	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
trans-1,2-DCE	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
trans-1,3-Dichloropropene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2,3-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2,4-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1,1-Trichloroethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,1,2-Trichloroethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Trichloroethene (TCE)	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Trichlorofluoromethane	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
1,2,3-Trichloropropane	ND	40	μg/L	20	9/18/2018 12:52:00 AM	B54185
Vinyl chloride	ND	20	μg/L	20	9/18/2018 12:52:00 AM	B54185
Xylenes, Total	2700	30	μg/L	20	9/18/2018 12:52:00 AM	B54185
Surr: 1,2-Dichloroethane-d4	86.6	70-130	%Rec	20	9/18/2018 12:52:00 AM	B54185
Surr: 4-Bromofluorobenzene	99.8	70-130	%Rec	20	9/18/2018 12:52:00 AM	B54185

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 23 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: W-3

Project: Mobergs Garage
 Collection Date: 9/12/2018 5:20:00 PM

 Lab ID: 1809700-008
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analys	st: RAA
Surr: Dibromofluoromethane	94.7	70-130	%Rec	20	9/18/2018 12:52:00 A	M B54185
Surr: Toluene-d8	91.5	70-130	%Rec	20	9/18/2018 12:52:00 A	M B54185

*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 24 of 43
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	D H ND	 D Sample Diluted Due to Matrix H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit 	D Sample Diluted Due to Matrix E H Holding times for preparation or analysis exceeded J ND Not Detected at the Reporting Limit P PQL Practical Quanitative Limit RL

Analytical ReportLab Order **1809700**

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/1/2018

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-3

Project: Mobergs Garage
 Collection Date: 9/12/2018 5:46:00 PM

 Lab ID: 1809700-009
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst:	SMS
Biochemical Oxygen Demand	>372.84	2.0		mg/L	1	9/19/2018 12:17:00 PM	40347
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst:	SRM
Total Dissolved Solids	1260	100	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH			_	g/ =	-		
	7.00					Analyst:	
рН	7.36		Н	pH units	1	9/18/2018 11:53:53 AM	
EPA METHOD 6010B: DISSOLVED METALS						Analyst:	ELS
Iron	2.3	0.20		mg/L	10	9/15/2018 2:42:02 PM	B54168
Manganese	5.3	0.020		mg/L	10	9/15/2018 2:42:02 PM	B54168
EPA METHOD 8260B: VOLATILES						Analyst:	RAA
Benzene	450	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Toluene	300	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Ethylbenzene	920	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Methyl tert-butyl ether (MTBE)	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2,4-Trimethylbenzene	1300	200		μg/L	200	9/18/2018 12:41:00 PM	R54215
1,3,5-Trimethylbenzene	1100	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2-Dichloroethane (EDC)	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2-Dibromoethane (EDB)	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Naphthalene	190	40		μg/L	20	9/18/2018 1:16:00 AM	B54185
1-Methylnaphthalene	130	80		μg/L	20	9/18/2018 1:16:00 AM	B54185
2-Methylnaphthalene	ND	80		μg/L	20	9/18/2018 1:16:00 AM	B54185
Acetone	570	200		μg/L	20	9/18/2018 1:16:00 AM	B54185
Bromobenzene	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Bromodichloromethane	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Bromoform	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Bromomethane	ND	60		μg/L	20	9/18/2018 1:16:00 AM	B54185
2-Butanone	ND	200		μg/L	20	9/18/2018 1:16:00 AM	B54185
Carbon disulfide	ND	200		μg/L	20	9/18/2018 1:16:00 AM	B54185
Carbon Tetrachloride	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Chlorobenzene	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Chloroethane	ND	40		μg/L	20	9/18/2018 1:16:00 AM	B54185
Chloroform	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
Chloromethane	ND	60		μg/L	20	9/18/2018 1:16:00 AM	B54185
2-Chlorotoluene	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
4-Chlorotoluene	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
cis-1,2-DCE	ND	20		μg/L	20	9/18/2018 1:16:00 AM	B54185
cis-1,3-Dichloropropene	ND	20		μg/L "	20	9/18/2018 1:16:00 AM	B54185
1,2-Dibromo-3-chloropropane	ND	40		μg/L	20	9/18/2018 1:16:00 AM	B54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 25 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order 1809700 Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Client Sample ID:** BMW-3

Project: Mobergs Garage **Collection Date:** 9/12/2018 5:46:00 PM 1809700-009 Lab ID: Matrix: AQUEOUS Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Dibromochloromethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Dibromomethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,3-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,4-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Dichlorodifluoromethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1-Dichloroethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1-Dichloroethene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2-Dichloropropane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,3-Dichloropropane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
2,2-Dichloropropane	ND	40	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1-Dichloropropene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Hexachlorobutadiene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
2-Hexanone	1500	200	μg/L	20	9/18/2018 1:16:00 AM	B54185
Isopropylbenzene	84	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
4-Isopropyltoluene	37	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
4-Methyl-2-pentanone	ND	200	μg/L	20	9/18/2018 1:16:00 AM	B54185
Methylene Chloride	ND	60	μg/L	20	9/18/2018 1:16:00 AM	B54185
n-Butylbenzene	76	60	μg/L	20	9/18/2018 1:16:00 AM	B54185
n-Propylbenzene	100	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
sec-Butylbenzene	38	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Styrene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
tert-Butylbenzene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1,1,2-Tetrachloroethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1,2,2-Tetrachloroethane	ND	40	μg/L	20	9/18/2018 1:16:00 AM	B54185
Tetrachloroethene (PCE)	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
trans-1,2-DCE	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
trans-1,3-Dichloropropene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2,3-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2,4-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1,1-Trichloroethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,1,2-Trichloroethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Trichloroethene (TCE)	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Trichlorofluoromethane	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
1,2,3-Trichloropropane	ND	40	μg/L	20	9/18/2018 1:16:00 AM	B54185
Vinyl chloride	ND	20	μg/L	20	9/18/2018 1:16:00 AM	B54185
Xylenes, Total	2400	30	μg/L	20	9/18/2018 1:16:00 AM	B54185
Surr: 1,2-Dichloroethane-d4	87.4	70-130	%Rec	20	9/18/2018 1:16:00 AM	B54185
Surr: 4-Bromofluorobenzene	103	70-130	%Rec	20	9/18/2018 1:16:00 AM	B54185

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 26 of 43 J
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Analytical ReportLab Order **1809700**

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-3

Project: Mobergs Garage
 Collection Date: 9/12/2018 5:46:00 PM

 Lab ID: 1809700-009
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qı	ial Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	95.8	70-130	%Rec	20	9/18/2018 1:16:00 AM	B54185
Surr: Toluene-d8	90.3	70-130	%Rec	20	9/18/2018 1:16:00 AM	B54185

*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 27 of 43
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	D H ND	 D Sample Diluted Due to Matrix H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit 	D Sample Diluted Due to Matrix E H Holding times for preparation or analysis exceeded J ND Not Detected at the Reporting Limit P PQL Practical Quanitative Limit RL

Analytical ReportLab Order **1809700**

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-2

 Project:
 Mobergs Garage
 Collection Date: 9/12/2018 6:15:00 PM

 Lab ID:
 1809700-010
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst	SMS
Biochemical Oxygen Demand	23	2.0		mg/L	1	9/19/2018 12:17:00 PM	40347
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst	SRM
Total Dissolved Solids	1240	100	*D	mg/L	1	9/21/2018 8:11:00 AM	40459
SM4500-H+B / 9040C: PH			_		-		
	7.40			مالد سالم	4	Analyst	
рН	7.16		Н	pH units	1	9/18/2018 11:58:04 AM	
EPA METHOD 6010B: DISSOLVED METALS						Analyst	ELS
Iron	0.19	0.020		mg/L	1	9/15/2018 2:00:37 PM	B54168
Manganese	2.4	0.010		mg/L	5	9/15/2018 2:48:45 PM	B54168
EPA METHOD 8260B: VOLATILES						Analyst	RAA
Benzene	330	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Toluene	150	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Ethylbenzene	1000	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Methyl tert-butyl ether (MTBE)	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2,4-Trimethylbenzene	1100	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
1,3,5-Trimethylbenzene	450	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2-Dichloroethane (EDC)	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2-Dibromoethane (EDB)	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Naphthalene	230	40		μg/L	20	9/18/2018 2:04:00 AM	B54185
1-Methylnaphthalene	89	80		μg/L	20	9/18/2018 2:04:00 AM	B54185
2-Methylnaphthalene	100	80		μg/L	20	9/18/2018 2:04:00 AM	B54185
Acetone	ND	200		μg/L	20	9/18/2018 2:04:00 AM	B54185
Bromobenzene	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Bromodichloromethane	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Bromoform	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Bromomethane	ND	60		μg/L	20	9/18/2018 2:04:00 AM	B54185
2-Butanone	ND	200		μg/L	20	9/18/2018 2:04:00 AM	B54185
Carbon disulfide	ND	200		μg/L	20	9/18/2018 2:04:00 AM	B54185
Carbon Tetrachloride	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Chlorobenzene	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Chloroethane	ND	40		μg/L	20	9/18/2018 2:04:00 AM	B54185
Chloroform	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
Chloromethane	ND	60		μg/L	20	9/18/2018 2:04:00 AM	B54185
2-Chlorotoluene	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
4-Chlorotoluene	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
cis-1,2-DCE	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
cis-1,3-Dichloropropene	ND	20		μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2-Dibromo-3-chloropropane	ND	40		μg/L	20	9/18/2018 2:04:00 AM	B54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit Page 28 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-2

 Project:
 Mobergs Garage
 Collection Date: 9/12/2018 6:15:00 PM

 Lab ID:
 1809700-010
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Dibromochloromethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Dibromomethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,3-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,4-Dichlorobenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Dichlorodifluoromethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1-Dichloroethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1-Dichloroethene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2-Dichloropropane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,3-Dichloropropane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
2,2-Dichloropropane	ND	40	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1-Dichloropropene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Hexachlorobutadiene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
2-Hexanone	ND	200	μg/L	20	9/18/2018 2:04:00 AM	B54185
Isopropylbenzene	44	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
4-Isopropyltoluene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
4-Methyl-2-pentanone	ND	200	μg/L	20	9/18/2018 2:04:00 AM	B54185
Methylene Chloride	ND	60	μg/L	20	9/18/2018 2:04:00 AM	B54185
n-Butylbenzene	ND	60	μg/L	20	9/18/2018 2:04:00 AM	B54185
n-Propylbenzene	130	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
sec-Butylbenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Styrene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
tert-Butylbenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1,1,2-Tetrachloroethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1,2,2-Tetrachloroethane	ND	40	μg/L	20	9/18/2018 2:04:00 AM	B54185
Tetrachloroethene (PCE)	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
trans-1,2-DCE	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
trans-1,3-Dichloropropene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2,3-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2,4-Trichlorobenzene	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1,1-Trichloroethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,1,2-Trichloroethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Trichloroethene (TCE)	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Trichlorofluoromethane	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
1,2,3-Trichloropropane	ND	40	μg/L	20	9/18/2018 2:04:00 AM	B54185
Vinyl chloride	ND	20	μg/L	20	9/18/2018 2:04:00 AM	B54185
Xylenes, Total	980	30	μg/L	20	9/18/2018 2:04:00 AM	B54185
Surr: 1,2-Dichloroethane-d4	85.2	70-130	%Rec	20	9/18/2018 2:04:00 AM	B54185
Surr: 4-Bromofluorobenzene	99.8	70-130	%Rec	20	9/18/2018 2:04:00 AM	B54185

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 29 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. Client Sample ID: BMW-2

Project: Mobergs Garage
 Collection Date: 9/12/2018 6:15:00 PM

 Lab ID: 1809700-010
 Matrix: AQUEOUS
 Received Date: 9/13/2018 8:20:00 AM

Analyses	Result	PQL Qı	ial Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Surr: Dibromofluoromethane	93.5	70-130	%Rec	20	9/18/2018 2:04:00 AM	B54185
Surr: Toluene-d8	91.1	70-130	%Rec	20	9/18/2018 2:04:00 AM	B54185

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 30 of 43
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Lab Order 1809700

Date Reported: 10/1/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: TRIP BLANK

Project: Mobergs Garage Collection Date:

Lab ID: 1809700-011 **Matrix:** TRIP BLANK **Received Date:** 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
Benzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Toluene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Ethylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Methyl tert-butyl ether (MTBE)	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2,4-Trimethylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,3,5-Trimethylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2-Dichloroethane (EDC)	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2-Dibromoethane (EDB)	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Naphthalene	ND	2.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1-Methylnaphthalene	ND	4.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
2-Methylnaphthalene	ND	4.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Acetone	ND	10	μg/L	1	9/18/2018 2:28:00 AM	B54185
Bromobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Bromodichloromethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Bromoform	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Bromomethane	ND	3.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
2-Butanone	ND	10	μg/L	1	9/18/2018 2:28:00 AM	B54185
Carbon disulfide	ND	10	μg/L	1	9/18/2018 2:28:00 AM	B54185
Carbon Tetrachloride	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Chlorobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Chloroethane	ND	2.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Chloroform	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Chloromethane	ND	3.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
2-Chlorotoluene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
4-Chlorotoluene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
cis-1,2-DCE	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
cis-1,3-Dichloropropene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2-Dibromo-3-chloropropane	ND	2.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Dibromochloromethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Dibromomethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2-Dichlorobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,3-Dichlorobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,4-Dichlorobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Dichlorodifluoromethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,1-Dichloroethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,1-Dichloroethene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2-Dichloropropane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,3-Dichloropropane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
2,2-Dichloropropane	ND	2.0	μg/L	1	9/18/2018 2:28:00 AM	B54185

- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 31 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order **1809700**Date Reported: **10/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.

Client Sample ID: TRIP BLANK

Project: Mobergs Garage Collection Date:

Lab ID: 1809700-011 **Matrix:** TRIP BLANK **Received Date:** 9/13/2018 8:20:00 AM

Analyses	Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES					Analyst	: RAA
1,1-Dichloropropene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Hexachlorobutadiene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
2-Hexanone	ND	10	μg/L	1	9/18/2018 2:28:00 AM	B54185
Isopropylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
4-Isopropyltoluene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
4-Methyl-2-pentanone	ND	10	μg/L	1	9/18/2018 2:28:00 AM	B54185
Methylene Chloride	ND	3.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
n-Butylbenzene	ND	3.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
n-Propylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
sec-Butylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Styrene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
tert-Butylbenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,1,1,2-Tetrachloroethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,1,2,2-Tetrachloroethane	ND	2.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Tetrachloroethene (PCE)	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
trans-1,2-DCE	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
trans-1,3-Dichloropropene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2,3-Trichlorobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2,4-Trichlorobenzene	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,1,1-Trichloroethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,1,2-Trichloroethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Trichloroethene (TCE)	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Trichlorofluoromethane	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
1,2,3-Trichloropropane	ND	2.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Vinyl chloride	ND	1.0	μg/L	1	9/18/2018 2:28:00 AM	B54185
Xylenes, Total	ND	1.5	μg/L	1	9/18/2018 2:28:00 AM	B54185
Surr: 1,2-Dichloroethane-d4	87.4	70-130	%Rec	1	9/18/2018 2:28:00 AM	B54185
Surr: 4-Bromofluorobenzene	94.3	70-130	%Rec	1	9/18/2018 2:28:00 AM	B54185
Surr: Dibromofluoromethane	96.3	70-130	%Rec	1	9/18/2018 2:28:00 AM	B54185
Surr: Toluene-d8	93.7	70-130	%Rec	1	9/18/2018 2:28:00 AM	B54185

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

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 32 of 43
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

1809700-001E BMW-14

Collected date/time: 09/12/18 11:50

SAMPLE RESULTS - 01

ONE LAB. NATIONWIDE.

\$2.000 per 100	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	8
COD	36.0		10.0	1	09/16/2018 12:49	WG1167040



















1809700-002E DBS-5 Collected date/time: 09/12/18 12:30

SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.

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The state of the s	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
COD	53.5		10.0	1	09/16/2018 12:49	WG1167040





















1809700-003E BMW-11

Collected date/time: 09/12/18 13:30

SAMPLE RESULTS - 03

ONE LAB. NATIONWIDE.

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	187-1854
COD	54.1		10.0	1	09/16/2018 12:49	WG1167040





















1809700-004E W-1 Collected date/time: 09/12/18 14:05 SAMPLE RESULTS - 04

ONE LAB. NATIONWIDE.

34

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l	500 == -1,00	mg/l		date / time	(2) T
COD	65.6		10.0	1	09/16/2018 12:49	WG1167040



















1809700-005E BMW-18

Collected date/time: 09/12/18 15:50

SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
COD	205		10.0	1	09/16/2018 12:50	WG1167040





















1809700-006E BMW-5R

Collected date/time: 09/12/18 16:21

SAMPLE RESULTS - 06

ONE LAB. NATIONWIDE.

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/I		date / time	Diameter 1
COD	409		10.0	1	09/16/2018 12:51	WG1167040























1809700-007E BMW-1 Collected date/time: 09/12/18 16:53

SAMPLE RESULTS - 07

ONE LAB, NATIONWIDE.

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100.000	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
COD	690		10.0	1.	09/16/2018 12:51	WG1167040





















1809700-008E W-3 Collected date/time: 09/12/18 17:20 SAMPLE RESULTS - 08

ONE LAB. NATIONWIDE.

L1026118

APPRINCE NO CONTRACTOR	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/I		mg/l		date / time	
COD	256		10.0	1	09/16/2018 12:51	WG1167040





















1809700-009E BMW-3 Collected date/time: 09/12/18 17:46

SAMPLE RESULTS - 09

ONE LAB. NATIONWIDE.

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	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	mg/l		mg/I		date / time		
COD	656		10.0	1	09/16/2018 12:51	WG1167040	





















1809700-010E BMW-2

SAMPLE RESULTS - 10

ONE LAB, NATIONWIDE,

Collected date/time: 09/12/18 18:15

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/I		mg/II		date / time	(1) I
COD	136		10,0	1	09/16/2018 12:52	WG1167040



















Method Blank	(MB)												
MB) R3342305-1 09	9/16/18 12:44												
Name of the Control o	MB Result	MB Qualifier	MB MDL	MB RDL									
Analyte	mg/I		mg/l	mg/I									
COD	U		3.00	10.0									
L1025868-01 C	Original Sample	(OS) • Dup	olicate (D	UP)									
OS) L1025868-01 0	9/16/18 12:47 • (DUP)	R3342305-4	09/16/18 12:	47		**********							
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits							
Analyte	mg/I	mg/l		%		%							
000	33.6	31.6	1	6.25		20							
L1026184-01 Or	riginal Sample	(OS) • Dun	licate (D)	IPI									
		the second to the second	14 of partition Training										
		Section Francisco											
		R3342305-7 (09/16/18 12:5		DUP Qualifier	DUP RPD Limits							
OS) L1026184-01 OS	9/16/18 12:52 • (DUP)	R3342305-7 (09/16/18 12 : Dilution	52	DUP Qualifier								
OS) L1026184-01 OS Analyte COD	9/16/18 12:52 + (DUP) Original Result mg/l 675	R3342305-7 (DUP Result mg/l 570	09/16/18 12:5 Dilution	52 DUP RPD % 0.763		Limits % 20							
(OS) L1026184-01 OS Analyte COD Laboratory Cor (LCS) R3342305-2 O	Original Result mg/l 675	R3342305-7 (DUP Result mg/l 570 CS) + Labor D) R3342305-3 LCS Result	Dilution 1 ratory Co	DUP RPD % 0.763 control Sam 2:45 lt LCS Rec.	ple Duplic	timits % 20 ate (LCSD) . Rec. Limits	LCS Quali	fier LCSD (Qualifier	RPD	RPD Li	mits	
(OS) L1026184-01 OS Analyte COD Laboratory Cor	9/16/18 12:52 • (DUP) Original Result mg/l 675 ntrol Sample (Li	R3342305-7 (DUP Result mg/l 570 CS) • Labor D) R3342305-3 LCS Result mg/l	Dilution 1 ratory Co	52 DUP RPD % 0.763 ontrol Sam 2:45	ple Duplic	timits % 20 ate (LCSD)	LCS Quali	fier LCSD (RPD %	RPD Li	mits	
(OS) L1026184-01 OS Analyte COD Laboratory Cor (LCS) R3342305-2 O	9/16/18 12:52 • (DUP) Original Result mg/l 675 Ottrol Sample (L) 19/16/18 12:44 • (LCS) Spike Amount	R3342305-7 (DUP Result mg/l 570 CS) + Labor D) R3342305-3 LCS Result	Dilution 1 ratory Co 3 09/16/18 1 LCSD Resu	DUP RPD % 0.763 control Sam 2:45 lt LCS Rec.	ple Duplic	timits % 20 ate (LCSD) . Rec. Limits	LCS Duali	fier LCSD (mits	
OS) L1026184-01 OS Analyte COD Laboratory Cor LCS) R3342305-2 O Analyte COU	Original Result mg/l 675 Ottool Sample (L) 19/16/18 12:44 • (LCS) Spike Amount mg/l 242	R3342305-7 (DUP Result mg/l 570 CS) + Labo D) R3342305-3 LCS Result mg/l 218	Dilution 1 ratary Co 3 09/16/18 1 LCSD Resu mg/l 219 IX Spike	DUP RPD % 0.763 control Sam 2:45 It LCS Rec. % 90.1	ple Duplic LCSD Rec % 90.6 rix Spike I	ate (LCSD) Rec. Limits % 90.0-110		fier LCSD (%	%	mits	
OS) L1026184-01 OS Analyte COD Laboratory Cor LCS) R3342305-2 O Analyte COU	Original Result mg/l 675 Ottrol Sample (Li 19/16/18 12:44 • (LCS) Spike Amount mg/l 242 Original Sample • W16/18 12:49 • (MS) R	R3342305-7 (CS) • Labor CS) • Labor D) R3342305-3 LCS Result mg/l 218 (OS) • Matr 3342305-5 CS	Dilution 1 ratory Co 3 09/16/18 1 LCSD Resu mg/l 219 IX Spike 8/16/18 12:50	52 DUP RPD % 0.763 control Sam 2:45 It LCS Rec. % 90.1 (MS) • Mat 0 • (MSD) R334	ple Duplic LCSD Rec % 90.6 rrx Spike I	ate (LCSD) Rec. Limits % 90.0-110 Duplicate (MS	D)	200001100100000000000000000000000000000		% 0.549	% 20	20. 20.22	
OS) L1026184-01 OS Analyte COD Laboratory Cor LCS) R3342305-2 O Analyte COU L1026118-04 Or OS) L102618-04 OS	Original Result mg/l 675 Ottrol Sample (Li 19/16/18 12:44 • (LCSI Spike Amount mg/l 242 riginal Sample • (MS) R Spike Amount	R3342305-7 (CS) • Laboration (CS) • Matrix	Dilution 1 ratory Co 8 09/16/18 1 LCSD Resu mg/l 219 ix Spike 8/16/18 12:50 MS Result	DUP RPD 50.763 control Sam 2:45 It LCS Rec. 90.1 (MS) - Mat 0 - (MSD) R334 MSD Resu	ple Duplic LCSD Rec % 90.6 rrx Spike I 12305-6 09/10 It MS Rec.	ate (LCSD) Rec. Limits % 90.0-110 Duplicate (MS 5/18 12:50 MSD Rec.	D)	Rec Limits		% 0.549	%	<u>r</u> RPD	RPD Limits
(OS) L1026184-01 OS Analyte COD Laboratory Cor (LCS) R3342305-2 O	Original Result mg/l 675 Ottrol Sample (Li 19/16/18 12:44 • (LCS) Spike Amount mg/l 242 Original Sample • W16/18 12:49 • (MS) R	R3342305-7 (CS) • Labor CS) • Labor D) R3342305-3 LCS Result mg/l 218 (OS) • Matr 3342305-5 CS	Dilution 1 ratory Co 3 09/16/18 1 LCSD Resu mg/l 219 IX Spike 8/16/18 12:50	52 DUP RPD % 0.763 control Sam 2:45 It LCS Rec. % 90.1 (MS) • Mat 0 • (MSD) R334	ple Duplic LCSD Rec % 90.6 rrx Spike I	ate (LCSD) Rec. Limits % 90.0-110 Duplicate (MS	D)	200001100100000000000000000000000000000		% 0.549	% 20	20. 20.22	RPD Limits % 20



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

Appreviations an	a Definitions
MDL.	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cr)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID RB

Sample ID 100ng lcs	SampT	ype: LC	S	Tes	tCode: El					
Client ID: LCSW	Batch	1D: R5	4185	F	RunNo: 54185					
Prep Date:	Analysis Date: 9/17/2018			S	SeqNo: 1	792541	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	103	70	130			
Toluene	19	1.0	20.00	0	96.3	70	130			
Chlorobenzene	20	1.0	20.00	0	98.2	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	111	70	130			
Trichloroethene (TCE)	19	1.0	20.00	0	95.9	70	130			
Surr: 1,2-Dichloroethane-d4	8.8		10.00		88.5	70	130			
Surr: 4-Bromofluorobenzene	9.7		10.00		97.2	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.1	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Client ID: PBW	Batch ID: R54185			R	RunNo: 5	4185				
Prep Date:	Analysis D	ate: 9	17/2018	S	SeqNo: 1	792544	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

TestCode: EPA Method 8260B: VOLATILES

- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1809700

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID RB	SampType: MBLK			Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: R5	4185	F	RunNo: 5	4185				
Prep Date:	Analysis D	ate: 9/	17/2018	S	SeqNo: 1	792544	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
т, 2, 3- птотногоргоране	שוו	2.0								

Qualifiers:

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

RL

Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

9.9

9.1

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Surr: Dibromofluoromethane

Surr: Toluene-d8

Sample ID RB SampType: MBLK TestCode: EPA Method 8260B: VOLATILES Client ID: **PBW** Batch ID: **R54185** RunNo: 54185 Analysis Date: 9/17/2018 Prep Date: SeqNo: 1792544 Units: µg/L Analyte SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Vinyl chloride ND 1.0 Xylenes, Total ND 1.5 89.4 70 Surr: 1,2-Dichloroethane-d4 8.9 10.00 130 Surr: 4-Bromofluorobenzene 9.6 10.00 96.0 70 130

98.6

91.4

70

70

130

130

10.00

10.00

Sample ID 1809700-001ams SampType: MS TestCode: EPA Method 8260B: VOLATILES Client ID: **BMW-14** Batch ID: **R54185** RunNo: 54185 Prep Date: Analysis Date: 9/17/2018 SeqNo: 1792589 Units: µg/L %REC Result **PQL** SPK value SPK Ref Val HighLimit %RPD **RPDLimit** Analyte LowLimit Qual Benzene 23 1.0 20.00 113 60.5 19 20.00 0 97.0 70 130 Toluene 1.0 20 20.00 98.4 70 Chlorobenzene 1.0 0 130 25 0 123 70 1,1-Dichloroethene 1.0 20.00 130 Trichloroethene (TCE) 21 1.0 20.00 0 107 70 130 Surr: 1,2-Dichloroethane-d4 9.8 10.00 98.2 70 130 95.4 70 Surr: 4-Bromofluorobenzene 9.5 10.00 130 Surr: Dibromofluoromethane 11 10.00 107 70 130 Surr: Toluene-d8 9.1 10.00 91.1 70 130

Sample ID 1809700-001amsd	SampT	ype: MS	SD	Tes	tCode: El	ATILES				
Client ID: BMW-14	Batch	1D: R5	4185	F	RunNo: 5	4185				
Prep Date:	Analysis D	ate: 9/	17/2018	8	SeqNo: 1	792590	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	107	60.5	137	5.60	20	
Toluene	19	1.0	20.00	0	94.3	70	130	2.77	20	
Chlorobenzene	19	1.0	20.00	0	96.4	70	130	1.99	20	
1,1-Dichloroethene	23	1.0	20.00	0	113	70	130	9.05	20	
Trichloroethene (TCE)	20	1.0	20.00	0	99.3	70	130	7.06	20	
Surr: 1,2-Dichloroethane-d4	9.7		10.00		97.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	9.6		10.00		95.5	70	130	0	0	
Surr: Dibromofluoromethane	11		10.00		107	70	130	0	0	
Surr: Toluene-d8	9.2		10.00		92.3	70	130	0	0	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID rb4

Sample ID 100ng lcs2	SampT	ype: LC	S	Tes	tCode: El					
Client ID: LCSW	Batch	n ID: B5	4185	F	RunNo: 5	4185				
Prep Date:	Analysis D	Analysis Date: 9/17/2018			SeqNo: 1	792606	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	108	70	130			
Toluene	20	1.0	20.00	0	97.7	70	130			
Chlorobenzene	20	1.0	20.00	0	98.7	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		92.6	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.6	70	130			
Surr: Dibromofluoromethane	10		10.00		101	70	130			
Surr: Toluene-d8	9.3		10.00		93.0	70	130			

TestCode: EPA Method 8260B: VOLATILES

Ethylbenzene ND 1.0 Methyl tert-butyl ether (MTBE) ND 1.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 4.0 Scotone ND 1.0 Bromodichloromethane ND 1.0 Bromodichloromethane ND 1.0 Bromomethane ND 3.0 2-Butanone ND 1.0 Carbon disulfide ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0	Client ID: PBW	Batch	Batch ID: B54185 RunNo: 54185				64185						
Benzene ND 1.0	Prep Date:	Analysis D	ate: 9	/17/2018	S	SeqNo: 1	792607	Units: µg/L					
Toluene ND 1.0 Ethylbenzene ND 1.0 Methyl tert-butyl ether (MTBE) ND 1.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dibfromethane (EDC) ND 1.0 1,2-Dibfromethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 Acetone ND 1.0 Bromobenzene ND 1.0 Bromoform ND 1.0 Bromoform ND 1.0 Bromomethane ND 1.0 2-Butanone ND 1.0 Carbon Tetrachloride ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobezaene ND 1.0 Chloroform ND 1.0 Chloroform ND 1.0 Chloroform ND 1.0 Chloroform ND 1.0 <tr< th=""><th>Analyte</th><th>Result</th><th>PQL</th><th>SPK value</th><th>SPK Ref Val</th><th>%REC</th><th>LowLimit</th><th>HighLimit</th><th>%RPD</th><th>RPDLimit</th><th>Qual</th></tr<>	Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Ethylbenzene ND 1.0 Methyl tert-butyl ether (MTBE) ND 1.0 1,2,4 Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dibroroethane (EDC) ND 1.0 Naphthalene (EDB) ND 1.0 Naphthalene ND 4.0 2-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 1.0 Bromodenzene ND 1.0 Bromodichloromethane ND 1.0 Bromodichloromethane ND 1.0 Bromodichloromethane ND 1.0 Carbon Tetrachloride ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroform ND 2.0 Chloroform ND 2.0 Chloroform ND 3.0	Benzene	ND	1.0										
Methyl tert-bulyl ether (MTBE) ND 1.0 1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dichloroethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 10 Bromobenzene ND 10 Bromobenzene ND 10 Bromodichloromethane ND 1.0 Bromodichloromethane ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromoformethane ND 1.0 Bromothane ND 1.0 Bromoformethane ND 1.0 Bromoformethane ND 1.0 Carbon disulfide ND 1.0 Carbon disulfide ND 1.0 Chloroethane ND 1.0	Toluene	ND	1.0										
1,2,4-Trimethylbenzene ND 1.0 1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 1.0 Bromobenzene ND 1.0 Bromofichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 1.0 Carbon disulfide ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroform ND 1.0 Chloroform ND 1.0 Chloroform ND 1.0 Chloroform ND 3.0	Ethylbenzene	ND	1.0										
1,3,5-Trimethylbenzene ND 1.0 1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 1.0 Bromobenzene ND 1.0 Bromofichloromethane ND 1.0 Bromofform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 1.0 Carbon disulfide ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chlorotethane ND 2.0 Chloroform ND 3.0	Methyl tert-butyl ether (MTBE)	ND	1.0										
1,2-Dichloroethane (EDC) ND 1.0 1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 1.0 Bromobenzene ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 3.0 2-Butanone ND 3.0 2-Butanone ND 1.0 Carbon disulfide ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0	1,2,4-Trimethylbenzene	ND	1.0										
1,2-Dibromoethane (EDB) ND 1.0 Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 4.0 Acetone ND 1.0 Bromobenzene ND 1.0 Bromoform ND 1.0 Bromoethane ND 3.0 2-Butanone ND 1.0 Carbon disulfide ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0	1,3,5-Trimethylbenzene	ND	1.0										
Naphthalene ND 2.0 1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 4.0 Acetone ND 1.0 Bromobenzene ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 1.0 Carbon disulfide ND 1.0 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0	1,2-Dichloroethane (EDC)	ND	1.0										
1-Methylnaphthalene ND 4.0 2-Methylnaphthalene ND 4.0 Acetone ND 10 Bromobenzene ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0	1,2-Dibromoethane (EDB)	ND	1.0										
2-Methylnaphthalene ND 4.0 Acetone ND 10 Bromobenzene ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0 Chloromethane ND 3.0	Naphthalene	ND	2.0										
Acetone ND 10 Bromobenzene ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0 Chloromethane ND 3.0	1-Methylnaphthalene	ND	4.0										
Bromobenzene ND 1.0 Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroform ND 1.0 Chloroform ND 3.0 Chloroform ND 3.0 Chloroform ND 3.0	2-Methylnaphthalene	ND	4.0										
Bromodichloromethane ND 1.0 Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 3.0 Chloromethane ND 3.0	Acetone	ND	10										
Bromoform ND 1.0 Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 Chloromethane ND 3.0	Bromobenzene	ND	1.0										
Bromomethane ND 3.0 2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 Chloromethane ND 3.0	Bromodichloromethane	ND	1.0										
2-Butanone ND 10 Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 Chloromethane ND 3.0	Bromoform	ND	1.0										
Carbon disulfide ND 10 Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 Chloromethane ND 3.0	Bromomethane	ND	3.0										
Carbon Tetrachloride ND 1.0 Chlorobenzene ND 1.0 Chloroethane ND 2.0 Chloroform ND 1.0 Chloromethane ND 3.0	2-Butanone	ND	10										
ChlorobenzeneND1.0ChloroethaneND2.0ChloroformND1.0ChloromethaneND3.0	Carbon disulfide	ND	10										
ChloroethaneND2.0ChloroformND1.0ChloromethaneND3.0	Carbon Tetrachloride	ND	1.0										
Chloroform ND 1.0 Chloromethane ND 3.0	Chlorobenzene	ND	1.0										
Chloromethane ND 3.0	Chloroethane	ND	2.0										
	Chloroform	ND	1.0										
2-Chlorotoluene ND 1.0	Chloromethane	ND	3.0										
	2-Chlorotoluene	ND	1.0										

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID rb4	SampT	уре: М	BLK	Tes	tCode: El	PA Method	8260B: VOL	ATILES		
Client ID: PBW	Batch	ID: B5	4185	F	RunNo: 5	4185				
Prep Date:	Analysis D	ate: 9/	17/2018	5	SeqNo: 1	792607	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
1,2,3 monioropropuno		2.0								

Qualifiers:

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

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Hall Environmental Analysis Laboratory, Inc.

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID rb4	SampType: MBLK			TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: B54185			F	RunNo: 54185					
Prep Date:	Analysis Date: 9/17/2018			5	SeqNo: 1	792607	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		90.9	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		94.3	70	130			
Surr: Dibromofluoromethane	9.9		10.00		99.2	70	130			
Surr: Toluene-d8	9.4		10.00		93.6	70	130			
0 1 10 100 1										

Sample ID 100ng Ics	SampT	SampType: LCS TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch	ID: R5	4215	R	RunNo: 54215					
Prep Date:	Analysis D	ate: 9/	18/2018	S	SeqNo: 1	794532	Units: %Red	:		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	8.6		10.00		85.7	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.3	70	130			
Surr: Dibromofluoromethane	9.6		10.00		96.2	70	130			
Surr: Toluene-d8	9.1		10.00		90.6	70	130			

Sample ID rb	SampType: MBLK TestCode: EPA Method 8260B: VOLATILES									
Client ID: PBW	Batch	n ID: R5	4215	F	RunNo: 54215					
Prep Date:	Analysis D	oate: 9/	18/2018	5	SeqNo: 1	794533	Units: µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Ethylbenzene	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
Surr: 1,2-Dichloroethane-d4	8.6		10.00		86.0	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		93.0	70	130			
Surr: Dibromofluoromethane	9.5		10.00		95.5	70	130			
Surr: Toluene-d8	9.2		10.00		91.9	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 38 of 43

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809700

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID MB-40335 SampType: MBLK TestCode: SM5210B: BOD

Client ID: **PBW** Batch ID: 40335 RunNo: 54252

Prep Date: 9/13/2018 Analysis Date: 9/18/2018 SeqNo: 1794945 Units: mg/L

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

Biochemical Oxygen Demand ND 2.0

TestCode: SM5210B: BOD Sample ID MB--40335 SampType: MBLK

Client ID: PBW Batch ID: 40335 RunNo: 54252

Prep Date: 9/13/2018 Analysis Date: 9/18/2018 SeqNo: 1794946 Units: mg/L

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

Biochemical Oxygen Demand ND 2.0

Sample ID LCS-40335 SampType: LCS TestCode: SM5210B: BOD

Client ID: LCSW Batch ID: 40335 RunNo: 54252

Analysis Date: 9/18/2018 SeqNo: 1794947 Units: mg/L Prep Date: 9/13/2018

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

Biochemical Oxygen Demand 140 198.0 84.6 115.4 2.0 72.8

Sample ID MB-40347 SampType: MBLK TestCode: SM5210B: BOD

Client ID: PBW Batch ID: 40347 RunNo: 54271

Prep Date: 9/14/2018 Analysis Date: 9/19/2018 SeqNo: 1795890 Units: mg/L

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

Biochemical Oxygen Demand ND 2.0

Sample ID MB--40347 SampType: MBLK TestCode: SM5210B: BOD

PBW Batch ID: 40347 RunNo: 54271 Client ID:

Prep Date: 9/14/2018 Analysis Date: 9/19/2018 SeqNo: 1795891 Units: mg/L

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

Biochemical Oxygen Demand ND 2.0

Sample ID LCS-40347 SampType: LCS TestCode: SM5210B: BOD

Batch ID: 40347 Client ID: LCSW RunNo: 54271

Prep Date: 9/14/2018 Analysis Date: 9/19/2018 SeqNo: 1795892 Units: mg/L

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

190 Biochemical Oxygen Demand 2.0 198.0 95.4 84.6 115.4

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Η Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

В Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Detection Limit

Sample container temperature is out of limit as specified

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1809700

0

35.5

01-Oct-18

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

Project: Mobergs Garage

Sample ID 1809700-005BDUP SampType: DUP TestCode: SM5210B: BOD

RunNo: **54271** Client ID: **BMW-18** Batch ID: 40347

9/14/2018 Prep Date: Analysis Date: 9/19/2018 SeqNo: 1795894 Units: mg/L

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

Biochemical Oxygen Demand

31 2.0

В Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

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ND

Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

P Sample pH Not In Range Reporting Detection Limit RL

Sample container temperature is out of limit as specified

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix D

Η Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: 1809700

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID MB-A SampType: MBLK TestCode: EPA Method 6010B: Dissolved Metals

Client ID: **PBW** Batch ID: **A54168** RunNo: 54168

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791275 Units: mg/L

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

Iron ND 0.020 Manganese ND 0.0020

Sample ID LCS-A SampType: LCS TestCode: EPA Method 6010B: Dissolved Metals

Client ID: LCSW Batch ID: **A54168** RunNo: 54168

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791277 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.50 0.020 0.5000 0 101 80 120

0.50 0.0020 0.5000 O 100 80 120 Manganese

SampType: MBLK Sample ID MB-B TestCode: EPA Method 6010B: Dissolved Metals

Client ID: PBW Batch ID: **B54168** RunNo: 54168

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791280 Units: mg/L

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

Iron 0.020 ND 0.0020 Manganese

Sample ID LCS-B SampType: LCS TestCode: EPA Method 6010B: Dissolved Metals

Client ID: LCSW Batch ID: **B54168** RunNo: 54168

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791282 Units: mg/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.51 0.020 102 80 120 Iron 0.5000

Manganese 0.50 0.0020 0.5000 0 101 80 120

Sample ID 1809700-010DMS SampType: MS TestCode: EPA Method 6010B: Dissolved Metals

Client ID: BMW-2 Batch ID: **B54168** RunNo: 54168

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791313 Units: mg/L

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

75 0.67 0.020 0.5000 0.1864 97.6 125 Iron

Sample ID 1809700-010DMSD SampType: MSD TestCode: EPA Method 6010B: Dissolved Metals

Client ID: BMW-2 Batch ID: **B54168** RunNo: 54168

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791316 Units: mq/L

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.68 0.020 0.5000 0.1864 99.3 75 125 1.18 20

Qualifiers:

Iron

Value exceeds Maximum Contaminant Level. В Analyte detected in the associated Method Blank

Е D Sample Diluted Due to Matrix Value above quantitation range

J Holding times for preparation or analysis exceeded Analyte detected below quantitation limits Page 41 of 43

Not Detected at the Reporting Limit P Sample pH Not In Range

> RL Reporting Detection Limit

Sample container temperature is out of limit as specified

Η

ND POL Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID 1809700-010DMS SampType: MS TestCode: EPA Method 6010B: Dissolved Metals

Client ID: **BMW-2** Batch ID: **B54168** RunNo: **54168**

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791341 Units: mg/L

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

Manganese 4.9 0.010 2.500 2.413 101 75 125

Sample ID 1809700-010DMSD SampType: MSD TestCode: EPA Method 6010B: Dissolved Metals

Client ID: **BMW-2** Batch ID: **B54168** RunNo: **54168**

Prep Date: Analysis Date: 9/15/2018 SeqNo: 1791342 Units: mg/L

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

Manganese 4.9 0.010 2.500 2.413 99.8 75 125 0.520 20

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

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P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1809700**

01-Oct-18

Client: Daniel B. Stephens & Assoc.

Project: Mobergs Garage

Sample ID MB-40459 SampType: MBLK TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: PBW Batch ID: 40459 RunNo: 54302

Prep Date: 9/19/2018 Analysis Date: 9/21/2018 SeqNo: 1796863 Units: mg/L

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

Total Dissolved Solids ND 20.0

Sample ID LCS-40459 SampType: LCS TestCode: SM2540C MOD: Total Dissolved Solids

Client ID: LCSW Batch ID: 40459 RunNo: 54302

Prep Date: 9/19/2018 Analysis Date: 9/21/2018 SeqNo: 1796864 Units: mg/L

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

Total Dissolved Solids 990 20.0 1000 0 99.0 80 120

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

Page 43 of 43

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laborator; 4901 Hawkins NE Albuquergue, NM 87105

TEL: 505-345-3975 FAX: 505-345-410; Website: www.hallenvironmental.con

Sample Log-In Check List

Client I	Name:	DBS		Work	Order Nun	nber: 180 9	700			RcptNo:	1	
Receive	ed By:	Isaiah Ort	iz	9/13/201	8 8:20:00	АМ		I G	_	_		
Comple	ted By:	Ashley Ga	,		8 8:46:55			1	£			
Review	-	-		18 @			L	abele	ı d !	by: JA	B09/13/18	,
Chain	of Cus	tody										
		ustody comp	lete?			Yes	✓	No		Not Present		
2. How	was the	sample deliv	ered?			Clier	<u>ıt</u>					
Log Ir	<u> </u>											
3. Was	an attem	pt made to o	ool the sample	es?		Yes	✓	No [NA 🗆		
4. Were	all samp	les received	at a temperat	ure of >0°C to	o 6.0°C	Yes	V	No [NA 🗆		
5. Samı	ple(s) in p	proper contai	ner(s)?			Yes	✓	No [
6. Suffic	ient sam	ple volume f	or indicated te	st(s)?		Yes	✓	No [
7. Are sa	amples (e	except VOA	and ONG) pro	perly preserve	d?	Yes	✓	No [
8. Was i	preservat	ive added to	bottles?					No 🛭	V	NA 🗌		
9. VOA	vials have	e zero heads	pace?			Yes	✓	No [No VOA Vials		
10. Were	any sam	nple containe	rs received br	oken?		Yes		No [✓			
										# of preserved bottles checked	~ A	
		rk match bot	tle labels? iin of custody)			Yes	✓	No [_]	for pH:	2 Unless noted)	
	-		tified on Chain	of Custody?		Yes		No [\neg	Adjusted?	(F)	
			re requested?			Yes		No [_		-Al malizh	a
		ng times able				Yes		-		Checked by:	JAB 09/13/1	0
(If no,	notify cu	istomer for a	uthorization.)						L			
Special	Handli	ing (if app	licable)									
15. Was	client not	tified of all di	screpancies w	ith this order?		Yes		No		NA 🗹	_	
	Person I	Notified:			Date	• [
	By Who	m:			Via:	☐ eMa	ail 🔲	Phone [Fax	☐ In Person		
	Regardi	ng:										
	Client In	structions:										
16. Addi	itional rer	narks:									_	
17. <u>Coo</u>	ler Infor	mation										
	ooler No		Condition	Seal Intact	Seal No	Seal Da	ate	Signed B	By			
1		0.0	···	Not Present			And the second second					
3		0.3 2.3	·	Not Present Not Present			-					

	<u>Chain</u>	<u>-of-Cı</u>	ustody Record	Turn-Around	l Time:							_								
Client:	DBS:	a		Standard Project Nam		n				ΑN	IAL	_Y:	SIS	S L	Al	ВО		ENT		
Mailing	g Address	1000C	academy Dr	+ moo	org's 60	wall					/w.ha									
<u>ara</u>	hm, 8)7100	COCOPINY DV	Project #:	19/00	rage	-			wkins)		
Phone	#: 505	9770°		1 -	0.0011			Te	l. 505	-345-		_	Fax ysis				7			
email	or Fax#: -	be a	negeo-logic com					<u></u>			,		ysis	Req						
QA/QC	Package: ndard	J	0 0		Golder	7	TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	SIMS		NO ₂ , PO ₄ , SO ₄			Total Coliform (Present/Absent)	·Mn				
Accred	litation:	□ Az Co	ompliance	Sampler: H.	Rarnes		MB	P. C.	382	7)	Ī	ő			sen	۲,			1	
□ NEI		□ Other	<u> </u>	On Ice:	Ďa∕Yes .	□No		8)8/s	504.	တ			8	(Pre	12				
L EDI	D (Type) T			# of Coolers:	3		MTBE	<u>©</u>	icide	3310	letal	9)/-ir	orm	20				
				South Telling	Andreading CF):	e Remarks	ν.	015	Pest	by 8	8	<u>ъ</u>	0	Sen	Solifi	3	i	N		
Date		Matrix	Sample Name	Container Type and #	Preservative Type	HEAL NO.	втех/	TPH:8	80811	ELDS (Method 504.1) PAHS by 8310 or 8270SIMS	RCRA 8 Metals	CI, F, Br, NO ₃ ,	8260 (VOA)	8270 (Semi-VOA)	Total (dissolved Fe	ÞН	$ \Delta $	(10)	BOD
9/12/18	1150	JW.	BMW-19	vones	Vares	-001						_	X			Ì	7	1	(1
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	1405		W-1			-004							71			\forall	\Box	\uparrow	T	\dashv
	1550		BMW-18			-005						_				\neg	\dashv	7)	/ -
	1621		BMW-5R			-000						_	7.			-/	71	11	71	1
	1653		BMW-1			-007	7						7			H	71	$\uparrow \uparrow$	\top	$\dagger \Box$
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\downarrow	1815	$\sqrt{}$	BMW-Z	V	V	-01D										Ħ	Ħ	1	\forall	
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APPENDIX B REGENESIS DESIGN



May 15, 2020

To: Michael D. McVey, P.G. – EA Engineering

Vener Mustafin, P.E. – EA Engineering

Jay T. Snyder, P.E., P.G., CHG - EA Engineering

Via email

From: Carlos Ortiz; South Central District Technical Manager, 469.416.9650

Brittain Griffiths, Technical Services West Region 916.587.3098

Proposal #: BRG63658 Moberg's Garage and Texaco Station

Subject: Revisions to the ORC Advanced Design, Design Assumptions and Supporting

Information

Regenesis appreciates the opportunity to prepare this remediation plan for treatment of residual petroleum hydrocarbons dissolved phase plume at the Moberg's Garage and Texaco Station Site in Watrous, NM. Based on the site data provided, the preliminary design and cost estimate includes the use of Oxygen Release Compound Advanced® (ORC Advanced) in combination with RegenOx® In Situ Chemical Oxidation (RegenOx).

Site Conceptual Model

The target treatment zone (TTZ) at the Moberg's Garage location encompasses approximately 8,000 square feet (ft²) with a nominal treatment thickness of 6 ft from 11 ft below ground surface (bgs) to 17 ft bgs. The TTZ at the Texaco Station location encompasses approximately 2,500 ft² with a nominal treatment thickness of 6 ft from 11 ft to 17 ft bgs. The purpose of this application injection is to rapidly reduce contaminant concentrations of petroleum hydrocarbons (PHCs) within the proposed treatment area and aerobically degrade PHCs. An electron acceptor material, ORC Advanced, will supply oxygen to the treatment zone to facilitate aerobic biodegradation. Regenesis in collaboration with EA Engineering (EA) evaluated the site-specific groundwater geochemical characteristics. Based on the available groundwater geochemical data for the site, the site appears to have elevated BOD and COD concentrations. Regenesis recommends adding 3 lbs of RegenOx Part A (sodium percarbonate) per injection point at the Moberg's Garage proposed treatment area. RegenOx Part A will provide a quick supply of oxygen while the ORC Advanced will supply a controlled release of oxygen to support the in-situ aerobic bioremediation of petroleum hydrocarbon for up to 12 months. A site map depicting the treatment area and a summary table specifying design assumptions are includes as attachments.

Remedial Design Assumptions and Calculations

Regenesis utilized the following information as part of the information to develop the proposed remedial design.

- Site Specific Geochemical Data provided by EA.
- For design calculations, Regenesis assumed half of the COD concentrations.
- Regenesis utilized an Engineering Safety Factor of 2.0.
- Design Geochemical Product Demand Summary is provided in the tables below.

Site Specific Geochemical Data

Well ID	Plume	BOD	COD	TDS	Dissolved Iron	Dissolved Manganese	ORP	DO
		mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L
BMW-1	Moberg's	280	690	1,260	2.3	1.3	-310	0.12
BMW-2	Moberg's	23	136	1,240	0.19	2.4	-142	0.14
BMW-3	Moberg's	377	656	1,260	2.3	5.3	-148	0.21
BMW-5R	Moberg's	390	409	2,050	8.1	1.3	-284	0.06
Moberg's Average		268	473	1,453	3.2	2.6	-221	0.13
Well ID	Plume	BOD	COD	TDS	Dissolved Iron	Dissolved Manganese	ORP	DO
WELL ID	Trume	mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L
W-1	Texaco	30	65.6	1.710	15	9.9	113	0.29
W-3	Texaco	160	256	4,280	390	57	-71	6.7
Texaco's Average		95	161	2,995	202.5	33.5	21	0.29
Well ID	Area	BOD	COD	TDS	Dissolved Iron	Dissolved Manganese	ORP	DO
		mg/L	mg/L	mg/L	mg/L	mg/L	mV	mg/L
DB\$-5	Upgradient of Moberg's	<2.0	53.5	820	0.080	0.013	37	0.4
BMW-11	Between Plumes	47	54.1	2,170	7.5	7.9	-92	9.54
BMW-18	Between Plumes	31	205	1,560	15	5.8	-26	0.5
BMW-14	Downgradient of Texaco	<2.0	36.0	774	0.29	0.14	140	1.3

Moberg's Geochemistry Product Demand Summary

	Dissolv	ved Phase Geochemistry	, Contaminant Mass and Pro	oduct Demand Summary	
			Site		
			Treatment Unit		
Petroleum VOCs-Dissolved Phase	Unit	Value	Mass in G₩ (lbs)	O_2 stoich vtO_2/vt cont.	ORC Advanced Required (lbs)
Benzene	μg/L	253	0.2	3.1	4.1
Toluene	μg/L	41	0.0	3.1	0.7
Ethylbenzene	μg/L	1013	0.9	3.2	17.1
Xylenes	μg/L	615	0.6	3.2	10.4
Naphthalene	μg/L	167	0.2	3.0	2.6
Trimethylbenzenes (1,2,4+1,3,5 TMBs)	μg/L	0	0.0	3.2	0.0
		subtotal PHC VOCs	1.9		35.0
roleum Hydrocarbons-Dissolved Ph	Unit	Value	Mass in G₩ (lbs)	O ₂ stoich vtO ₂ /vt cont.	ORC Advanced Required (lbs)
TPH-GRO	mg/L	25	22.0	3.5	453.5
TPH-DRO	mg/L	0	0.0	3.1	0.0
TPH-ERO	mg/L	0	0.0	3.1	0 0
TPH-ORO	mg/L	0	0.0	3.1	0;0
		subtotal TFH	22.0		453.5

Groundwater Geochemistry	Unit	Value	Mass in GW (lbs)	O ₂ stoich wtO ₂ /wt cont.	ORC Advanced Required (lbs)
pH	s.u.		4800		
DO	mg/L	5.0	4.5		
ORP	mV				
Conductance (µS)	μS		11 11 11 11 11 11 11 11 11 11 11 11 11		
Alkalinity	mg/L		0.0		
Sodium	mg/L		0.0		
Nitrate/Nitrite	mg/L	5.0	4.5		
TotalMn	mg/L	5.0	4.5		
Diss. Mn	mg/L	2.6	2.3	0.1	14
Total Iron	mg/L	3.2	2.9		
Diss. Iron	mg/L	25.0	22.5	0.1	13.2
Sulfate	mg/L	50.0	45.0	The state of the s	
Sulfide	mg/L		0.0		
CO2	mg/L		0.0		
Methane	μg/L		0.0	4.0	0.0
Pietnane Ethene	μg/L		0.0	4.0	0.0
Ethane			0.0		
triane TOC	μg/L			2.0	0.0
No. of the second secon	mg/L	200.0	0.0	3.0	
BOD	mg/L	268.0	241.0	1.0	1417.4
COD	mg/L	237.0	213.1	1.0	1253.5
Schroel-Bartenart Ma	vale (Fa E	Ma ") ROD MODNAS	529.8		2695.5
Subrotal - Reduced Me	tals (Fe * ,		529.8 inant Mass and Product De	mand Summary	2885.5
Subrotal - Reduced Me	tals (Fe * ,		inant Mass and Product De Site		2685.5
		Sorbed Phase Contami	inant Mass and Product De Site Treatment Unit	mand Summary	
Petroleum VOCs-Sorbed Phase	Unit	Sorbed Phase Contami	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs)	emand Summary O_2 stoich $\text{wt}O_2/\text{wt}$ cont.	ORC Advanced Required (lbs
Petroleum VOCs-Sorbed Phase Benzene	Unit µg/kg	Sorbed Phase Contami Value 62	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3	O ₂ stoich wtO ₂ /wt cont.	ORC Advanced Required (lbs
Petroleum VOCs-Sorbed Phase Benzene Toluene	Unit µg/kg µg/kg	Sorbed Phase Contami Value 62 22	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1	Oz stoich wtOz/wt cont. 3.10 3.10	ORC Advanced Required (lbs 5.9 2.1
Petroleum VOCs-Sorbed Phase Senzene Toluene Ethylbenzene	Unit µg/kg µg/kg µg/kg	Value 62 22 663	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4	O ₂ stoich wtO ₂ /wt cont. 3.10 3.20	ORC Advanced Required (lbs 5.9 2.1 64.6
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Xylenes	Unit µglkg µglkg µglkg µglkg	Value 62 22 663 367	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9	O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.20 3.20	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8
Petroleum VOCs-Sorbed Phase Benzene Toluene Etkylbenzene Xylenes Naphthalene	Unit µglkg µglkg µglkg µglkg µglkg	Value	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.3	amand Summary □2 stoich wt□2/wt cont. 3.10 3.10 3.20 3.20 3.20 3.00	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6
Petroleum VOCs-Sorbed Phase Benzene Toluene Etkylbenzene Xylenes Naphthalene	Unit µglkg µglkg µglkg µglkg	Value	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7	### Continuation ### Continuat	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0
Petroleum VOCs-Sorbed Phase Benzene Foluene Etyllbenzene Kylenes Vaphthalene	Unit µglkg µglkg µglkg µglkg µglkg	Value	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.3	amand Summary □2 stoich wt□2/wt cont. 3.10 3.10 3.20 3.20 3.20 3.00	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Xylenes Naphthalene Trimethylbenzenes (1,2,4+1,3,5 TMBs) troleum Hydrocarbons-Sorbed Phase	Unit µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg	Value 62 22 663 367 334 0 subtotal PHC VOCs	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0 7.5	O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.00 3.20	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0 38.9
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Xylenes Naphthalene Trimethylbenzenes (1,2,4+1,3,5 TMBs) troleum Hydrocarbons-Sorbed Phase	Unit µglkg µglkg µglkg µglkg µglkg µglkg	Value 62 22 663 367 334 0 subvas/FHC VOCs	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0	O ₂ stoich wtO ₂ /vt cont. 3.10 3.10 3.20 3.20 3.20 3.20	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes Naphthalene Trimethylbenzenes (1,2,4+1,3,5 TMBs) troleum Hydrocarbons-Sorbed Pha	Unit µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg	Value 62 22 663 367 334 0 subrotal/PHC/VOCs Value 18	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0 7.5 Mass in Soil (lbs) 94.7 0.0	O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.00 3.20	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0 138.9 ORC Advanced Required (lbs 1727,7 0.0
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes Naphthalene Trimethylbenzenes (1,2,4+1,3,5 TMBs) troleum Hydrocarbons-Sorbed Phatel-GRO TPH-GRO	Unit µglkg µglkg µglkg µglkg µglkg µglkg µglkg µglkg	Value 62 22 663 367 334 0 subvers/AHCVOCs Value 18	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0 7.5 Mass in Soil (lbs) 94.7	mand Summary □₂ stoich vt□₂/vt cont. 3.10 3.10 3.20 3.20 3.20 3.20 □₂ stoich vt□₂/vt cont. 3.10	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0 138.9 ORC Advanced Required (lbs 1727.7
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes Naphthalene Trimethylbenzenes (1,2,4+1,3,5 TMBs) troleum Hydrocarbons-Sorbed Phatelone TPH-GRO TPH-BRO	Unit µgikg µgikg µgikg µgikg µgikg µgikg µgikg µgikg mgikg	Value 62 22 663 367 334 0 subrotal/PHC/VOCs Value 18	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0 7.5 Mass in Soil (lbs) 94.7 0.0	O ₂ stoich vtD ₂ /vt cont. 3.10 3.20 3.20 3.20 3.20 O ₂ stoich vtD ₂ /vt cont. 3.10 3.10	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0 538.9 ORC Advanced Required (lbs 172.7 0.0
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Xylenes Naphthalene Trimethylbenzenes (1,2,4+1,3,5 TMBs) etroleum Hydrocarbons-Sorbed Phatelone TPH-GRO TPH-GRO TPH-ERO	Unit µglkg µglkg µglkg µglkg µglkg µglkg µglkg mglkg mglkg	Value	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0 2.5 Mass in Soil (lbs) 94.7 0.0	O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.20 3.20 3.20 3.20 O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.10	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0 ################################
	Unit µglkg µglkg µglkg µglkg µglkg µglkg µglkg µglkg mglkg mglkg mglkg	Value	inant Mass and Product De Site Treatment Unit Mass in Soil (lbs) 0.3 0.1 3.4 1.9 1.7 0.0 7.5 Mass in Soil (lbs) 94.7 0.0 0.0 0.0	O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.20 3.20 3.20 3.20 O ₂ stoich vtO ₂ /vt cont. 3.10 3.10 3.10 3.10 3.10	ORC Advanced Required (lbs 5.9 2.1 64.6 35.8 30.6 0.0 ### ORC Advanced Required (lbs 1727.7 0.0 0.0 0.0 0.0

<u>Texaco Station Geochemistry Product Demand Summary</u>

	Dissol	ved Phase Geochemistry	, Contaminant Mass and Pro	duct Demand Summary	
			Site		
			Treatment Unit		
Petroleum VOCs-Dissolved Phase	Unit	Value	Mass in GW (lbs)	O ₂ stoich wtO ₂ /wt cont.	ORC Advanced Required (lbs)
Benzene	μg/L	10	0.0	3.1	0.1
Toluene	μg/L	10	0.0	3.1	0.1
Ethylbenzene	μg/L	1235	0.3	3.2	6.5
Xylenes	μg/L	491	0.1	3.2	2.6
Naphthalene	μg/L	273	0.1	3.0	1.4
Trimethylbenzenes (1,2,4+1,3,5 TMBs)	µg/L	0	0.0	3.2	0.0
		subtotal PHC VOCs	0.6		10.6
Petroleum Hydrocarbons-Dissolved Phase	Unit	Value	Mass in GW (lbs)	O2 stoich wtO2/wt cont.	ORC Advanced Required (lbs)
TPH-GRO	mg/L	18	5.2	3.5	106.7
TPH-DRO	mg/L	0	0.0	3.1	0.0
TPH-ERO	mg/L	0	0.0	3.1	0,0
TPH-ORO	mg/L	0	0.0	3.1	0.0
		subtotal TPH	5.2		106.7

Groundwater Geochemistry	Unit	Value	Mass in GW (lbs)		ORC Advanced Required (lbs)
Н	5.U.				
00	mg/L	0.0	0.0		
DRP	mV		100000		
Conductance (µS)	μS				
Alkalinity	mg/L		0.0		
Sodium	mg/L		0.0		
Nitrate/Nitrite	mg/L	0.0	0.0		
Total Mn	mg/L	0.0	0.0		
Diss. Mn	mg/L	33.5	9.4	0.1	5.5
Total Iron	mg/L	0.0	0.0		
Diss. Iron	mg/L	202.5	56.9	0.1	33.5
Sulfate	mg/L	0.0	0.0		
Sulfide	mg/L	777	0.0		
202	mg/L		0.0		
	The second second			4.0	0.0
Methane	μg/L		0.0	4.0	0.0
Ethene	μg/L		0.0		
Ethane	μg/L		0.0		
гос	mg/L		0.0	3.0	0.0
BOD	mg/L	95.0	26.7	1.0	157.0
	mg/L Metals (Fe ²	80.5 *, Mn²*), BOD, COD Mass Sorbed Phase Contamin	22.6 241.8	1.0	133.0 329.1
Subtotal - Reduced		*, Mn²*), BOD, COD Mass	241.8 nant Mass and Product Der Site	-	1000000
Subtotal - Reduced	Metals (Fe ²	", Mn ² "), BOD, COD Mass Sorbed Phase Contamin	241.8 nant Mass and Product Der Site Treatment Unit	anand Summary	329.1
		, Mn²), BOD, COD Mass	241.8 nant Mass and Product Der Site	-	329.1
Subtotal - Reduced Petroleum VOCs-Sorbed Phase	Metals (Fe ² Unit µg/kg	Sorbed Phase Contamin Value	241.8 ant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0	onand Summary O ₂ stoich wtO ₂ /wt cont. 3.10	329.1 ORC Advanced Required (lbs) 0.1
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene	Metals (Fe ²	Sorbed Phase Contamin Value	241.8 nant Mass and Product Der Site Treatment Unit Mass in Soil (lbs)	mand Summary O ₂ stoich wtO ₂ /wt cont.	329.1 ORC Advanced Required (lbs)
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Toluene	Metals (Fe ² Unit µg/kg	Sorbed Phase Contamin Value	241.8 ant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0	onand Summary O ₂ stoich wtO ₂ /wt cont. 3.10	329.1 ORC Advanced Required (lbs) 0.1
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene	Unit µg/kg µg/kg	Sorbed Phase Contamin Value 2 5	241.8 ant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0	nand Summary O ₂ stoich wtO ₂ /wt cont. 3.10 3.10	ORC Advanced Required (lbs)
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes	Unit ug/kg ug/kg ug/kg	Sorbed Phase Contamin Value 2 5 808	241.8 nant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3	o ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Toluene Etkylbenzene Kylenes Vaphthalene	Unit ug/kg ug/kg ug/kg ug/kg	Sorbed Phase Contamin Value 2 5 808 293	241.8 nant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.20	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Toluene Etylenes Vylenes Vaphthalene	Unit µg/kg µg/kg µg/kg µg/kg µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546	241.8 nant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5 0.9	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.00	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Toluene Etkylbenzene Kylenes Vaphthalene	Unit µg/kg µg/kg µg/kg µg/kg µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546 0	241.8 nant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5 0.9 0.0	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.20	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6 0.0 49.4
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes Naphthalene Irimethylbenzenes (1,2,4+1,3,5 TMBs) Petroleum Hydrocarbons-Sorbed Phase TPH-GRO	Metals (Fe ² Unit µg/kg µg/kg µg/kg µg/kg µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546 0 subtotal PHC VOCs	241.8 ant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5 0.9 0.0 2.7 Mass in Soil (lbs) 22.3	O ₃ stoich wtO ₃ /wt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.20 3.00 3.20	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6 0.0
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes Naphthalene Frimethylbenzenes (1,2,4+1,3,5 TMBs)	Metals (Fe ² Unit µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546 0 subtotal PHC VOCs	ant Mass and Product Der Site Treatment Unit Mass in Soil (Ibs) 0.0 0.0 1.3 0.5 0.9 0.0 2.7 Mass in Soil (Ibs)	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.00 5.20 O ₂ stoich wtO ₂ /wt cont.	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6 0.0 49.4 ORC Advanced Required (lbs)
Petroleum VOCs-Sorbed Phase Benzene Toluene Ethylbenzene Kylenes Naphthalene Irimethylbenzenes (1,2,4+1,3,5 TMBs) Petroleum Hydrocarbons-Sorbed Phase TPH-GRO	Metals (Fe ² Unit µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546 0 subtotal PHC VOCs	241.8 ant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5 0.9 0.0 2.7 Mass in Soil (lbs) 22.3	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.20 3.10 0 ₂ stoich wtO ₂ /wt cont.	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6 0.0 49.4 ORC Advanced Required (lbs) 406.6
Subtotal - Reduced Petroleum VOCs-Sorbed Phase Benzene Foluene Ethylbenzene Kylenes Vaphthalene Frimethylbenzenes (1,2,4+1,3,5 TMBs) Petroleum Hydrocarbons-Sorbed Phase FPH-GRO FPH-DRO	Metals (Fe ² Unit µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546 0 subtotal PHC VOCs Value 14	241.8 nant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5 0.9 0.0 2.7 Mass in Soil (lbs) 22.3 0.0	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.20 O ₂ stoich wtO ₂ /wt cont.	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6 0.0 49.4 ORC Advanced Required (lbs) 406.6 0.0
Petroleum VOCs-Sorbed Phase Senzene Goluene Ethylbenzene Kylenes Vaphthalene Irimethylbenzenes (1,2,4+1,3,5 TMBs) Petroleum Hydrocarbons-Sorbed Phase IPH-GRO IPH-GRO IPH-ERO	Metals (Fe ² Unit µg/kg	Sorbed Phase Contamin Value 2 5 808 293 546 0 subtotal PHC VOCs Value 14 0 0	ant Mass and Product Der Site Treatment Unit Mass in Soil (lbs) 0.0 0.0 1.3 0.5 0.9 0.0 2.7 Mass in Soil (lbs) 22.3 0.0 0.0	O ₂ stoich wtO ₂ /wt cont. 3.10 3.10 3.20 3.20 3.20 3.20 3.00 3.20 O ₂ stoich wtO ₂ /wt cont.	329.1 ORC Advanced Required (lbs) 0.1 0.2 24.6 8.9 15.6 0.0 49.4 ORC Advanced Required (lbs) 406.6 0.0 0.0

Assumptions and Qualifications

In generating this design proposal Regenesis relied upon professional judgment and site-specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site. The attached design summary tables specify the assumptions used in preparation of this technical design. We request that these modeling input assumptions be verified by your firm prior to application.

REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the earlier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS' proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or cause to be presented any claim for payment to the Government.

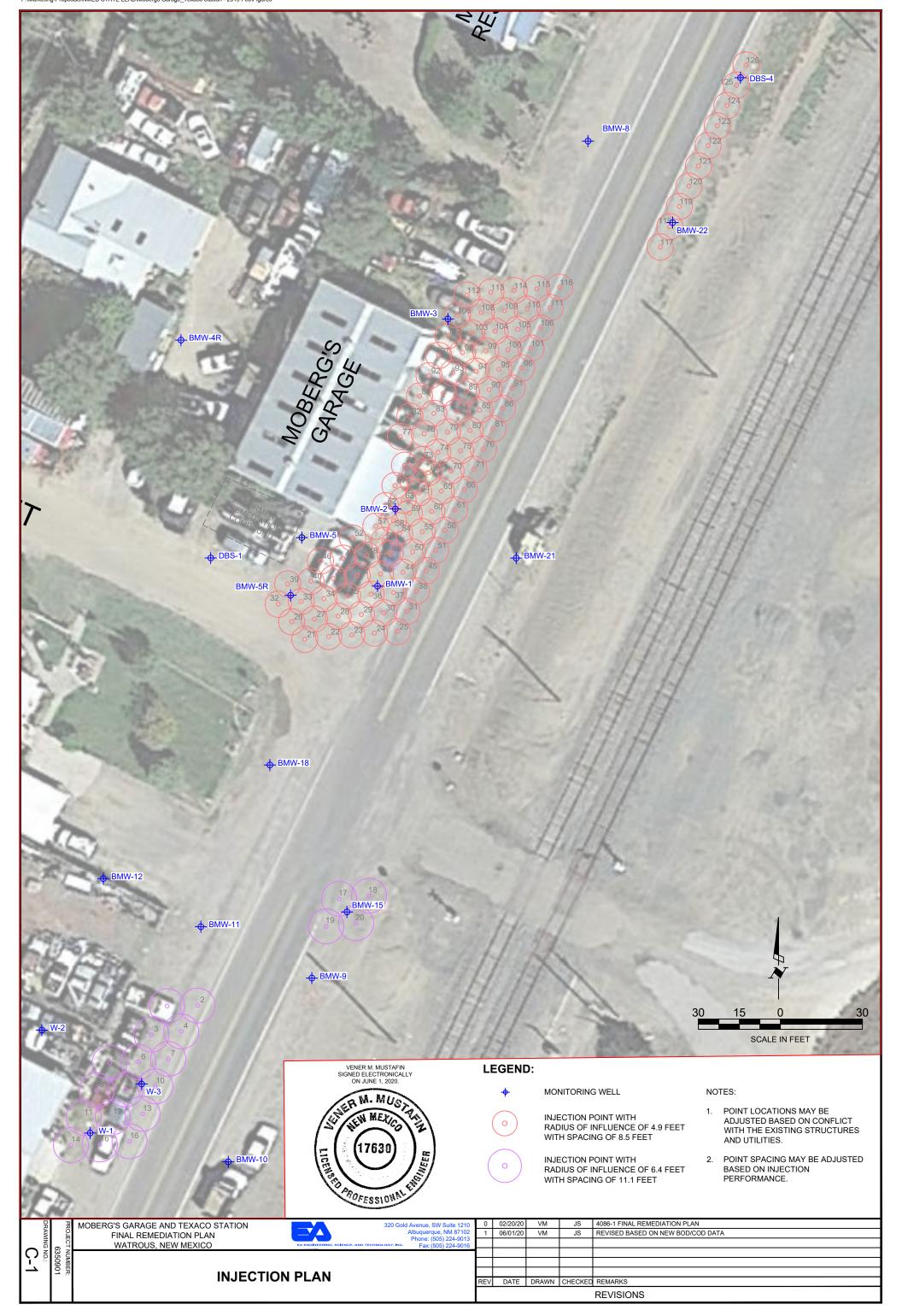
Closing

We sincerely appreciate the opportunity to present you with this proposal and look forward to working with you further on this project. We will contact you to set up a mutually convenient time to address your comments and questions.

REGENESIS

Carlos Ortiz

South Central District Technical Manager





Project	t Info		ORC Advanced® Application Design Summary						
Moberg's	Garage			Moberg's - 28.5 lbs/ft					
Plur	ne		Field App Instructions						
			Application Method	Direct Push					
			Spacing Within Rows (ft)	12.0					
			Spacing Between Rows (ft)	11.3					
Target Treatment Zone (TTZ) Info	Unit	Value	Application Points	59	Input special application instructions here as needed.				
Treatment Area	ft ²	8,000	Areal Extent (square ft)	8,000	nieeded.				
Top Treat Depth	ft	11.0	Top Application Depth (ft bgs)	11					
Bot Treat Depth	ft	17.0	Bottom Application Depth (ft bgs)	17					
Vertical Treatment Interval	ft	6.0	ORC Advanced to be Applied (lbs)	10,120	Field Mixing Ratios				
Freatment Zone Volume	ft ³	48,000	ORC Advanced per point (lbs)	172	Water per Pt (gals)				
Treatment Zone Volume	су	1,778	Percent Slurry	25%	62				
Soil Type		sand	Volume Water (gals)	3,638	ORC Advanced per Pt (lbs)				
Porosity	cm ³ /cm ³	0.30	Volume ORC Advanced (gals)	455	172				
Effective Porosity	cm ³ /cm ³	0.25	Total Application Volume (gals)	4,094	Total Volume per Pt (gals)				
Treatment Zone Pore Volume	gals	107,719	Injection Volume per Point (gals)	69	69				
Treatment Zone Effective Pore Volume	gals	89,766	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
Fraction Organic Carbon (foc)	g/g	0.002		Technical Notes/Discussion					
Soil Density	g/cm ³	1.7							
Soil Density	lb/ft ³	108							
Soil Weight	lbs	5.2E+06							
Hydraulic Conductivity	ft/day	15.0							
Hydraulic Conductivity	cm/sec	5.29E-03	Add 3 lbs of RegenOx Part A per in	ijection point to the ORC-A and in	ject the two products at the same time.				
Hydraulic Gradient	ft/ft	0.003							
GW Velocity	ft/day	0.18							
GW Velocity	ft/yr	66							
Sources of Oxygen Demand	Unit	Value		Assumptions/Qualification					
Dissolved Phase Contaminant Mass	lbs	24		riocampaiono, Quamication					
Sorbed Phase Contaminant Mass	lbs	102			and site specific information provided by others.				
Reduced Metals (Fe2+ and Mn2+) Mass	lbs	25		•	al and geologic relationships to generate an estima				
BOD mass equivalent	lbs	241	of the mass of product and subsurface placemen	nt required to affect remediation of th	e site.				
COD mass equivalent	lbs	213							
Total Mass Contributing to O₂ Demand	lbs	605	REGENESIS developed this Scope of Work in relia	ance upon the data and professional ju	udgments provided by those whom completed the				
Stoichiometric Demand	Unit	Value			ope of Work were generated through REGENESIS'				
Stoichiometric O ₂ Demand	lbs	857	proprietary formulas and thus may not conform	to billing guidelines, constraints or ot	her limits on fees. REGENESIS does not seek				
Stoichiometric ORC Advanced Demand	lbs	5,041	, , , ,	- , , -	ment fund (the "Government"). In any circumstan				
Application Dosing	Unit	Value		·	eimbursement from the Government for all or part				
			the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensemble to the Government prior to submission. When services supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present						
ORC Advanced to be Applied	lbs	10,120	to be presented any claim for payment to the G		ent, nedervesis does not knowingly present or cau				



Top Treat Depth ft 11.0 Top Application Depth (ft bgs) 11 Bot Treat Depth ft 17.0 Bottom Application Depth (ft bgs) 17 Vertical Treatment Interval ft 6.0 ORC Advanced to be Applied (lbs) 10,120 Field Mixing Ratios Treatment Zone Volume ft 3 48,000 ORC Advanced per point (lbs) 10,120 Field Mixing Ratios Treatment Zone Volume cy 1,778 Percent Slurry 25% 36 Soli Type	Proje	ct Info		ORC Ad	vanced® Application Desig	n Summary
Application Method Spacing Within Rows (ft) Spacing Between Rows (ft) Spacin	Moberg	's Garage			Moberg's 16.87 lb/ft	
Application Method Spacing Within Rows (ft) Spacing Between Rows (ft) Spacin	Plu	ıme				Field App Instructions
Target Treatment Zone (TTZ) Info Unit Value Application Points 100 Imput special application instructions here as needed. Treatment Area If \$ 8,000 Application Points 11.0 Top Application Depth (th (bgs) 17 Vertical Treatment Interval If \$ 6.0 ORC Advanced to be Applied (lbs) 17 Vertical Treatment Zone Volume If \$ 48,000 ORC Advanced to be Applied (lbs) 101.10 Water per Pt (gals) Treatment Zone Volume OV \$ 1,778 ORC Advanced per point (lbs) Soil Type				Application Method	Direct Push	
Teatment Zone (TIZ) Info Input special application instructions here as reeded. Application Points Application Points 100 Input special application instructions here as reeded. Treatment Zone (TIZ) Info 11				Spacing Within Rows (ft)	8.0	
Treatment Area ft ' 3,000 Areal Extents (quare ft) 8,000 Freat Depth ft 11.0 For Application Depth (ft bgs) 11 Set Treat Depth ft 17.0 Set Treat Depth ft 11.0 For Application Depth (ft bgs) 11 Set Treat Depth ft 17.0 Set Treat Depth ft 18.0 ORC Advanced to be Applied (lbs) 10,120 Field Mixing Ratios Freatment Zone Volume freatment Zone Volume Cy 1,778 Percent Slurry Coll Type Set				Spacing Between Rows (ft)	10.0	
Treatment Area ft² 8,000 Treat Depth ft 11.0 Top Application Depth (ft bgs) Treatment Interval ft 6.0 ORC Advanced to be Applied (bs) Treatment Tone Volume ft³ 48,000 ORC Advanced be Proint (lbs) Treatment Zone Volume ft³ 48,000 ORC Advanced be Proint (lbs) ORC Advanced per Pt (gals) Treatment Zone Volume or Jr78 ORC Advanced per point (lbs) ORC Advanced per Pt (lbs) ORC Advanced [gals) ORC Advanced [gals] ORC	Target Treatment Zone (TTZ) Info	Unit	Value	Application Points	100	
Set Treat Depth ft 17.0 Set Treat Depth (ft bgs) 17 Vertical Treatment Interval ft 6.0 ORC Advanced to be Applied (bgs) 10,120 Field Mixing Ratios ORC Advanced to be Applied (bgs) 10,120 Field Mixing Ratios ORC Advanced per point (bgs) 10,1 Water per Pt (gals) 101 Water per Pt (gals) 102 Set ORC Advanced per point (bgs) 10,10 Water per Pt (gals) 103 Soll Vpe	Treatment Area	ft ²	8,000	Areal Extent (square ft)	8,000	needed.
Vertical Treatment Interval ft 6.0 ORC Advanced to be Applied (fbs) 10,120 Field Mixing Ratios Treatment Zone Volume ft 3 48,000 ORC Advanced per point (fbs) 101 Water per ft (gals) Treatment Zone Volume cv 1,778 Percent Sturry 25% 36 Soil Type	Top Treat Depth	ft	11.0	Top Application Depth (ft bgs)	11	
Treatment Zone Volume ft 3 48,000 ORC Advanced per point (ibs) 101 Water per Pt (gals) Treatment Zone Volume OY 1,778 Percent Slurry Z5% 3,638 ORC Advanced per pt (lbs) 7 John Water (gals) 3,638 ORC Advanced per pt (lbs) 7 John Water (gals) 8 John Water (gals) 9 John Water (gals) 4 John	Bot Treat Depth	ft	17.0	Bottom Application Depth (ft bgs)	17	
Treatment Zone Volume Ordinary Ord	Vertical Treatment Interval	ft	6.0	ORC Advanced to be Applied (lbs)	10,120	Field Mixing Ratios
Porosity cm³/cm³ 0.30 Volume Water (gals) 3,638 ORC Advanced per Pt (lbs) Porosity cm³/cm³ 0.30 Volume ORC Advanced (gals) 455 101 Freatment Zone Pore Volume gals 107,719 Injection Volume per Pt (gals) Freatment Zone Effective Pore Volume gals 89,766 Soil Density g/cm³ 1.7 Soil Density b/fr³ 108 Soil Density lb/fr³ 108 Soil Weight lbs 5.2E+06 Hydraulic Conductivity ft/day 15.0 Cm/sec 5.29E-03 Hydraulic Conductivity ft/day 0.18 GW Velocity ft/day 0.18 GW Velocity ft/day 0.18 GW Velocity ft/day 0.18 Sorbed Phase Contaminant Mass lbs 102 Sorbed Phase Contaminant Mass lbs 103 BOD mass equivalent lbs 213 GOD mass equivalent lbs 505 Stoichiometric Demand Junit Value Stoichiometric ORC Advanced Demand Junit Value arrives a supplier or subcontractor to an entity which seeks reimbursement from the Government For all Or par August Product and subsurface placement required to affect remediation of the site. Scope of Work and associated charges associated with the Scope of Work were generated through REGENESIS melver very as a supplier or subcontracto	Treatment Zone Volume	ft ³	48,000	ORC Advanced per point (lbs)	101	Water per Pt (gals)
Porosity cm³/cm³ 0.30 Volume ORC Advanced (gals) 455 101 Effective Porosity cm²/cm³ 0.25 Total Application Volume (gals) 4,094 Total Volume per Pt (gals) Treatment Zone Pore Volume gals 89,766 Fraction Organic Carbon (foc) g/g 0.002 Fraction Organic Carbon (foc) g/g 0.002 Soil Density Ib/tt³ 108 Soil Weight Ibs 5.2E+06 Hydraulic Conductivity tf/day 15.0 Add 3 lbs of RegenOx Part A per injection point to the ORC-A and inject the two products at the same time. Hydraulic Conductivity tf/day 0.18 GW Velocity ft/day 0.18 GW Velocity ft/day 0.18 Solved Phase Contaminant Mass Ibs 24 In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Soft beneated an estimated and geologic relationships to generate an estim Reduced Metals (Fe2+ and Mn2+) Mass Ibs 24 In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Soft hemselved the same of the mass of product and subsurface placement required to affect remediation of the site. OD mass equivalent Ibs 241 Total Application Volume per Pt (gals) 4,094 101 411 Total Application Volume per Pt (gals) 411 Total Application Volume per Ptoint (gals) 411 Total Application Volume per Ptoint (gals) 411 Total Application Volume per Ptoint (gals) 411 Tota	Treatment Zone Volume	су	1,778	Percent Slurry	25%	36
Effective Porosity cm³/cm³ 0.25 Total Application Volume (gals) 4,094 Total Volume per Pt (gals) Treatment Zone Pore Volume gals 107,719 Injection Volume per Point (gals) 41 41 Treatment Zone Effective Pore Volume gals 89,766 Fraction Organic Carbon (foc) g/g 0.002 Fraction Organic Carbon (foc) g/g 0.002 Soil Density g/cm³ 1.7 Soil Density lb/ft³ 108 Soil Density lb/ft³ 108 Soil Weight lbs 5.2E+06 Hydraulic Conductivity ff/day 15.0 Hydraulic Conductivity ff/day 0.003 GW Velocity ff/day 0.18 GW Velocity ff/day 0.18 GW Velocity ff/day 0.18 Sources of Oxygen Demand Unit Value Assumptions/Qualifications Dissolved Phase Contaminant Mass lbs 102 Sorbed Phase Contaminant Mass lbs 103 Sorbed Phase Contaminant Mass lbs 103 Sorbed Phase Contaminant Mass lbs 103 Sorbed Phase Contaminant Mass lbs 104 Sorbed Phase Contaminant Mass lbs 105 Sorbed Phase Contaminant Mass lbs 105 Sorbed Phase Contaminant Mass lbs 103 Sorbed Phase Contaminant Mass lbs 103 Sorbed Phase Contaminant Mass lbs 104 Sorbed Phase Contaminant Mass lbs 105 Sorbed Phase Contaminant Mas	Soil Type		sand	Volume Water (gals)	3,638	ORC Advanced per Pt (lbs)
Treatment Zone Pore Volume gals 107,719 gl/g 0.002 Technical Notes/Discussion Te	Porosity	cm ³ /cm ³	0.30	Volume ORC Advanced (gals)	455	101
Treatment Zone Pore Volume gals 107,719 gl/g 0.002 Technical Notes/Discussion Te	Effective Porosity	cm ³ /cm ³	0.25	Total Application Volume (gals)	4.094	Total Volume per Pt (gals)
Treatment Zone Effective Pore Volume gals 89,766 Fraction Organic Carbon (foc) g/g 0.002 Technical Notes/Discussion Technical Notes/Discussion 1.7 Soil Density blyft ³ 108 Soil Weight bls 5,2E+06 Hydraulic Conductivity ft/day 15.0 Hydraulic Conductivity ft/day 15.0 Hydraulic Gradient ft/ft 0.003 GW Velocity ft/day 0.18 GW Velocity ft/day 0.18 GW Velocity ft/day 0.18 Sources of Oxygen Demand Unit Value Assumptions/Qualifications Dissolved Phase Contaminant Mass bs 102 Sorbed Phase Contaminant Mass bs 102 Sorbed Phase Contaminant Mass bs 102 Sorbed Metals (Fe2+ and Mn2+) Mass bs 24 COD mass equivalent bs 241 COD mass equivalent bs 213 Total Mass Contributing to Q, Demand bs 605 Stoichiometric Demand bs 505 Stoichiometric Demand bs 505 Stoichiometric O, Demand bs 504 Stoichiometric O, Demand bs 5,041 Mapplication Dosing Unit Value Stopplication Dosing Unit Value Supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not sowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not stowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not stowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not stowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not stowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not stowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not stowningly present or cause supplier or subcontractor to an entity which seeks reimbursement from the Government or all or patence	Treatment Zone Pore Volume		107.719		· · · · · · · · · · · · · · · · · · ·	41
Fraction Organic Carbon (foc) g/g 0.002 Technical Notes/Discussion 1.7 Soil Density byfra 1.7 Soil Weight bs 5.2E+06 Hydraulic Conductivity ft/day 15.0 Add 3 lbs of RegenOx Part A per injection point to the ORC-A and inject the two products at the same time. Hydraulic Conductivity ft/day 0.003 GW Velocity ft/day 0.18 GW Velocity ft/r 66 Sources of Oxygen Demand Dissolved Phase Contaminant Mass bs 24 Sorbed Phase Contaminant Mass bs 102 Sorbed Phase Contaminant Mass bs 24 Sorbed Phase Contaminant Mass bs 25 Sorbed Sequivalent bs 25 BDD mass equivalent bs 27 Total Mass Contributing to Q, Demand bs 605 REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the Stoichiometric Oz pemand bs 5toichiometric Oz pemand bs 5toi	Treatment Zone Effective Pore Volume	-	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1
Soil Density g/cm³ 1.7 Soil Density Ib/It³ 108 Soil Weight Ibs 5.2E+06 Hydraulic Conductivity It/day 15.0 Hydraulic Conductivity It/day 15.0 Hydraulic Gradient It/day 0.18 GW Velocity It/day 0.18 GW Velocity It/day 0.18 GW Velocity It/day 0.18 Sources of Oxygen Demand Unit Value Assumptions/Qualifications Dissolved Phase Contaminant Mass Ibs 102 In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estim of the mass of product and subsurface placement required to affect remediation of the site. BOD mass equivalent Ibs 241 COD mass equivalent Ibs 213 Total Mass Contributing to Q ₂ Demand Ibs 605 Stoichiometric O ₃ Demand Ibs 857 Stoichiometric O ₄ Demand Ibs 85,041 Application Dosing Unit Value Val	Fraction Organic Carbon (foc)	-			Technical Notes/Discussion	1
Soil Density Ib/ft	, ,		1.7		•	
Add 3 lbs of RegenOx Part A per injection point to the ORC-A and inject the two products at the same time. Hydraulic Conductivity cm/sec 5.29E-03 Hydraulic Gradient ft/ft 0.003 GW Velocity ft/day 0.18 GW Velocity ft/day 0.18 GW Velocity ft/r 66 Sources of Oxygen Demand Unit Value Assumptions/Qualifications Dissolved Phase Contaminant Mass lbs 102 In generating this preliminary estimate, Regenesis relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estim of the mass of product and subsurface placement required to affect remediation of the site. Total Mass Contributing to O ₂ Demand lbs 605 REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the stoichiometric O ₂ Demand lbs 857 proprietary formulas and thus may not conform to billing guidelines, constraints or other limits on fees. REGENESIS does not seek where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government?) In any circumstas where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement for the consument or supplier or subcontractor to an entity which seeks reimbursement from the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government prior to submission. When serving as supplier or subcontractor to	•	-	108			
Hydraulic Conductivity ft/day 15.0 Hydraulic Conductivity cm/sec 5.29E-03 Hydraulic Gradient ft/ft 0.003 GW Velocity ft/day 0.18 GW Velocity ft/yr 66 Sources of Oxygen Demand Unit Value Sorbed Phase Contaminant Mass Ibs 102 Sorbed Phase Contaminant Mass Ibs 102 Sorbed Phase Contaminant Mass Ibs 25 BOD mass equivalent Ibs 24 COD mass equivalent Ibs 241 Total Mass Contributing to Q ₂ Demand Ibs 605 REGENESIS developed this Scope of Work in reliance upon the data and professional judgments provided by those whom completed the safetier environmental site assessment(s). The fees and charges associated with the Scope of Work were generated through REGENESIS does not seek where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government or calculations of the own the own of the street own of the own of the submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government or calculations of the own of the	•					
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BOD mass equivalent Ibs 241 COD mass equivalent Ibs 213 Total Mass Contributing to O ₂ Demand Ibs 605 Stoichiometric Demand Unit Value Stoichiometric O ₂ Demand Ibs 857 Stoichiometric ORC Advanced Demand Ibs 5,041 Application Dosing Unit Value Stoichiometric Ording Unit Value Stoichiometric Ording Unit Value Stoichiometric Ording Unit Value Stoichiometric ORC Advanced Demand Ibs 5,041 Application Dosing Unit Value Stoichiometric Ording Unit Value Stoichiometric ORC Advanced Demand Ibs 5,041 Stoichiometric ORC Advanced Demand Ibs 5,041 Stoichiometric ORC Advanced Demand Ibs 5,041 Application Dosing Unit Value Stoichiometric ORC Advanced Demand Ibs 5,041 Application Dosing Unit Value Stoichiometric ORC Advanced Demand Ibs 5,041 Stoichiometric	Reduced Metals (Fe2+ and Mn2+) Mass				•	
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Stoichiometric O ₂ Demand Ibs 857 Stoichiometric ORC Advanced Demand Ibs 5,041 Application Dosing Unit Value The services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the services performed or subcontractor to an entity which seeks reimbursement prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement, REGENESIS does not seek where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or par the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure the supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or call.	Stoichiometric Demand	Unit	Value			•
Stoichiometric ORC Advanced Demand Ibs 5,041 Application Dosing Unit Value reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumsta where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or par the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure to Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or care.				proprietary formulas and thus may not conform	to billing guidelines, constraints or ot	her limits on fees. REGENESIS does not seek
Application Dosing Unit Value where REGENESIS may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or par the services performed or products provided by REGENESIS, it is the sole responsibility of the entity seeking reimbursement to ensure t Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or car	-			, , , , ,	- , , -	•
Scope of Work and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or care			· · · · · · · · · · · · · · · · · · ·		·	•
supplier or subcontractor to an entity which seeks reimbursement from the Government, REGENESIS does not knowingly present or call	Application bosing	O.IIIC	value	· _ · _ · _ · _ · _ · _ ·		, -
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One Advanced to be Applied IDS 10,120 to be presented any dain for payment to the dovernment.	ORC Advanced to be Applied	IIe -	10.430	''		ent, received a does not knowingly present or caus
	one Advanced to be Applied	IDS	10,120	to be presented any claim for payment to the G	overmient.	



Project	: Info		ORC Advanced® Application Design Summary						
Moberg's	Garage			Moberg's 13.49 lb/ft					
Plur	ne			Field App Instructions					
			Application Method						
			Spacing Within Rows (ft)	8.0					
			Spacing Between Rows (ft)	8.0					
Target Treatment Zone (TTZ) Info	Unit	Value	Application Points	125	Input special application instructions here as				
Treatment Area	ft ²	8,000	Areal Extent (square ft)	8,000	needed.				
Top Treat Depth	ft	11.0	Top Application Depth (ft bgs)	11					
Bot Treat Depth	ft	17.0	Bottom Application Depth (ft bgs)	17					
Vertical Treatment Interval	ft	6.0	ORC Advanced to be Applied (lbs)	10,120	Field Mixing Ratios				
Treatment Zone Volume	ft ³	48,000	ORC Advanced per point (lbs)	81	Water per Pt (gals)				
Treatment Zone Volume	су	1,778	Percent Slurry	25%	29				
Soil Type		sand	Volume Water (gals)	3,638	ORC Advanced per Pt (lbs)				
Porosity	cm ³ /cm ³	0.30	Volume ORC Advanced (gals)	455	81				
Effective Porosity	cm ³ /cm ³	0.25	Total Application Volume (gals)	4,094	Total Volume per Pt (gals)				
Treatment Zone Pore Volume	gals	107,719	Injection Volume per Point (gals)	33	33				
Treatment Zone Effective Pore Volume	gals	89,766	injection volume per i omit (Baile)		33				
Fraction Organic Carbon (foc)	g/g	0.002		Technical Notes/Discussion	1				
Soil Density	g/cm ³	1.7							
Soil Density	lb/ft ³	108							
•	lbs	5.2E+06							
Soil Weight Hydraulic Conductivity	ft/day	15.0							
Hydraulic Conductivity	cm/sec	5.29E-03	Add 3 lbs of RegenOx Part A per in	jection point to the ORC-A and in	ject the two products at the same time.				
Hydraulic Gradient	ft/ft	0.003							
GW Velocity	ft/day	0.003							
GW Velocity	ft/yr	66							
Sources of Oxygen Demand	Unit	Value		Assumptions/Qualification	•				
Dissolved Phase Contaminant Mass	lbs	24		Assumptions/Qualification	5				
Sorbed Phase Contaminant Mass	lbs	102	In generating this preliminary estimate, Regenes	is relied upon professional judgment	and site specific information provided by others.				
Reduced Metals (Fe2+ and Mn2+) Mass	lbs	25	,	·	al and geologic relationships to generate an estimate				
BOD mass equivalent	lbs	241	of the mass of product and subsurface placemer	t required to affect remediation of th	e site.				
COD mass equivalent	lbs	213							
Total Mass Contributing to O ₂ Demand	lbs	605	PEGENESIS dayalaned this Scane of Work in rolis	ance upon the data and professional i	udgments provided by those whom completed the				
Stoichiometric Demand	Unit	Value			cope of Work were generated through REGENESIS'				
Stoichiometric O ₂ Demand	lbs	857	proprietary formulas and thus may not conform	•					
Stoichiometric O ₂ Demand	lbs	5,041	reimbursement directly from any government ag	gency or any governmental reimburse	ment fund (the "Government"). In any circumstanc				
Application Dosing	Unit	Value		· · · · · · · · · · · · · · · · · · ·	eimbursement from the Government for all or part of				
дрисации розні <u>в</u>	Ollit	value	Scope of Work and associated charges are in cor	npliance with and acceptable to the G	y of the entity seeking reimbursement to ensure the sovernment prior to submission. When serving as a ent, REGENESIS does not knowingly present or caus				
ORC Advanced to be Applied	lbs	10,120	to be presented any claim for payment to the Go		3,1				



Value 2,500 11.0 17.0 6.0 15,000 556 sand 0.30 0.25 33,662	Application Method Spacing Within Rows (ft) Spacing Between Rows (ft) Application Points Areal Extent (square ft) Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals) Volume ORC Advanced (gals)	Direct Push 12.5 13.0 15 2,500 11 17 1,840 123 25%	Field App Instructions Input special application instructions here as needed. Field Mixing Ratios Water per Pt (gals)
2,500 11.0 17.0 6.0 15,000 556 sand 0.30 0.25	Spacing Within Rows (ft) Spacing Between Rows (ft) Application Points Areal Extent (square ft) Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	12.5 13.0 15 2,500 11 17 1,840 123 25%	Input special application instructions here as needed. Field Mixing Ratios Water per Pt (gals)
2,500 11.0 17.0 6.0 15,000 556 sand 0.30 0.25	Spacing Within Rows (ft) Spacing Between Rows (ft) Application Points Areal Extent (square ft) Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	12.5 13.0 15 2,500 11 17 1,840 123 25%	Field Mixing Ratios Water per Pt (gals)
2,500 11.0 17.0 6.0 15,000 556 sand 0.30 0.25	Spacing Between Rows (ft) Application Points Areal Extent (square ft) Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	13.0 15 2,500 11 17 1,840 123 25%	Field Mixing Ratios Water per Pt (gals)
2,500 11.0 17.0 6.0 15,000 556 sand 0.30 0.25	Application Points Areal Extent (square ft) Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	15 2,500 11 17 1,840 123 25%	Field Mixing Ratios Water per Pt (gals)
2,500 11.0 17.0 6.0 15,000 556 sand 0.30 0.25	Areal Extent (square ft) Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	2,500 11 17 1,840 123 25 %	Field Mixing Ratios Water per Pt (gals)
11.0 17.0 6.0 15,000 556 sand 0.30 0.25	Top Application Depth (ft bgs) Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	11 17 1,840 123 25 %	Field Mixing Ratios Water per Pt (gals)
17.0 6.0 15,000 556 sand 0.30 0.25	Bottom Application Depth (ft bgs) ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	17 1,840 123 25 %	Water per Pt (gals)
6.0 15,000 556 sand 0.30 0.25 33,662	ORC Advanced to be Applied (lbs) ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	1,840 123 25 %	Water per Pt (gals)
15,000 556 sand 0.30 0.25 33,662	ORC Advanced per point (lbs) Percent Slurry Volume Water (gals)	123 25 %	Water per Pt (gals)
556 sand 0.30 0.25 33,662	Percent Slurry Volume Water (gals)	25%	, ,,
sand 0.30 0.25 33,662	Volume Water (gals)		4.4
0.30 0.25 33,662			44
0.25 33,662	Valuma OBC Advanced (gals)	661	ORC Advanced per Pt (lbs)
33,662	volulile OKC Advaliced (gais)	83	123
·	Total Application Volume (gals)	744	Total Volume per Pt (gals)
22.25	Injection Volume per Point (gals)	50	50
28,052			
0.002		Technical Notes/Discuss	ion
1.7			
108			
1.6E+06			
15.0	For each injection naint add	The of December Dank A to the	ODC A and inject at the same time
5.29E-03	For each injection point add a	z ibs of RegenOx Part A to the	e ORC-A and inject at the same time.
0.003			
0.18			
66			
Value		Assumptions/Qualification	ons
6	In generating this proliminary estimate. Regenesis	rolled upon professional judgme	and site specific information provided by others
25			· · · · · · · · · · · · · · · · · · ·
66	, , ,	· ·	
27	, , , , , , , , , , , , , , , , , , ,		
23			
146	REGENESIS developed this Scope of Work in relian	nce upon the data and profession	al judgments provided by those whom completed the
Value		-	
153			
902	, , , , ,	, , , ,	
Value		· ·	·
	Scope of Work and associated charges are in com	pliance with and acceptable to th	ne Government prior to submission. When serving as a
1,840	to be presented any claim for payment to the Gov	vernment.	
	0.18 66 Value 6 25 66 27 23 146 Value 153 902	0.18 66 Value 6 25 Using this information as input, we performed cal of the mass of product and subsurface placement 27 23 146 REGENESIS developed this Scope of Work in reliar value 153 proprietary formulas and thus may not conform t reimbursement directly from any government age where REGENESIS may serve as a supplier or subcother services performed or products provided by R Scope of Work and associated charges are in com supplier or subcontractor to an entity which seeks	0.18 66 Value Assumptions/Qualificati 6 25 In generating this preliminary estimate, Regenesis relied upon professional judgme Using this information as input, we performed calculations based upon known che of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of product and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass of products and subsurface placement required to affect remediation of the mass o



Projec	t Info		ORC Advanced® Application Design Summary						
Moberg's Gar	age (Texaco)			Texaco 14.6 lbs/ft					
Plur	me				Field App Instructions				
			Application Method	Direct Push					
			Spacing Within Rows (ft)	10.0					
			Spacing Between Rows (ft)	12.0					
Target Treatment Zone (TTZ) Info	Unit	Value	Application Points	21	Input special application instructions here as needed.				
Treatment Area	ft ²	2,500	Areal Extent (square ft)	2,500	needed.				
Top Treat Depth	ft	11.0	Top Application Depth (ft bgs)	11					
Bot Treat Depth	ft	17.0	Bottom Application Depth (ft bgs)	17					
Vertical Treatment Interval	ft	6.0	ORC Advanced to be Applied (lbs)	1,840	Field Mixing Ratios				
Treatment Zone Volume	ft ³	15,000	ORC Advanced per point (lbs)	88	Water per Pt (gals)				
Treatment Zone Volume	су	556	Percent Slurry	25%	31				
Soil Type		sand	Volume Water (gals)	661	ORC Advanced per Pt (lbs)				
Porosity	cm ³ /cm ³	0.30	Volume ORC Advanced (gals)	83	88				
Effective Porosity	cm ³ /cm ³	0.25	Total Application Volume (gals)	744	Total Volume per Pt (gals)				
Treatment Zone Pore Volume	gals	33,662	Injection Volume per Point (gals)	35	35				
Treatment Zone Effective Pore Volume	gals	28,052							
Fraction Organic Carbon (foc)	g/g	0.002		Technical Notes/Discussio	n				
Soil Density	g/cm ³	1.7							
Soil Density	lb/ft ³	108							
Soil Weight	lbs	1.6E+06							
Hydraulic Conductivity	ft/day	15.0	For each injection point add	12 lbs of BosonOv Bort A to the O	DC A and inject at the same time				
Hydraulic Conductivity	cm/sec	5.29E-03	For each injection point add	12 lbs of Regellox Part A to the O	RC-A and inject at the same time.				
Hydraulic Gradient	ft/ft	0.003							
GW Velocity	ft/day	0.18							
GW Velocity	ft/yr	66							
Sources of Oxygen Demand	Unit	Value		Assumptions/Qualification	ıs				
Dissolved Phase Contaminant Mass	lbs	6	la constitue de	-ili-d					
Sorbed Phase Contaminant Mass	lbs	25			and site specific information provided by others. cal and geologic relationships to generate an estimate				
Reduced Metals (Fe2+ and Mn2+) Mass	lbs	66	of the mass of product and subsurface placemer	· ·					
BOD mass equivalent	lbs	27	or the mass of product and subsurface placemen	it required to direct remediation or the	ie siee.				
COD mass equivalent	lbs	23							
Total Mass Contributing to O₂ Demand	lbs	146			judgments provided by those whom completed the				
Stoichiometric Demand	Unit	Value			cope of Work were generated through REGENESIS'				
Stoichiometric O ₂ Demand	lbs	153	proprietary formulas and thus may not conform						
Stoichiometric ORC Advanced Demand	lbs	902	, , , ,		ement fund (the "Government"). In any circumstance eimbursement from the Government for all or part of				
Application Dosing	Unit	Value	7	•	cy of the entity seeking reimbursement to ensure the				
			Scope of Work and associated charges are in cor	mpliance with and acceptable to the o	Government prior to submission. When serving as a				
ODG A down and the land to the					ent, REGENESIS does not knowingly present or cause				
ORC Advanced to be Applied	lbs	1,840	to be presented any claim for payment to the Go	overnment.					



ORC Advanced® Technical Description

ORC Advanced[®] is an engineered, oxygen release compound designed specifically for enhanced, *in situ* aerobic bioremediation of petroleum hydrocarbons in groundwater and saturated soils. Upon contact with groundwater, this calcium oxyhydroxide-based material becomes hydrated producing a controlled release of molecular oxygen (17% by weight) for periods of up to 12 months on a single application.

ORC Advanced decreases time to site closure and accelerates degradation rates up to 100 times faster than natural degradation rates. A single ORC Advanced application can support aerobic biodegradation for up to 12 months with minimal site disturbance, no permanent or emplaced above ground equipment, piping, tanks, power sources, etc are needed. There is no operation or maintenance required. ORC Advanced provides lower costs, greater efficiency and reliability compared to engineered mechanical systems, oxygen emitters and bubblers.



Example of ORC Advanced

ORC Advanced provides remediation practitioners with a significantly faster and highly effective means of treating petroleum contaminated sites. Petroleum hydrocarbon contamination is often associated with retail petroleum service stations resulting from leaking underground storage tanks, piping and dispensers. As a result, ORC Advanced technology and applications have been tailored around the remediation needs of the retail petroleum industry and include: tank pit excavations, amending and mixing with backfill, direct-injection, bore-hole backfill, ORC Advanced Pellets for waterless and dustless application, combined ISCO and bioremediation applications, etc.

For a list of treatable contaminants with the use of ORC Advanced, view the Range of Treatable Contaminants Guide

Chemical Composition

- Calcium hydroxide oxide
- Calcium hydroxide
- Monopotassium phosphate
- Dipotassium phosphate

Properties

Physical state: SolidForm: Powder

• Odor: Odorless

Color: White to pale yellowpH: 12.5 (3% suspension/water)



ORC Advanced® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of direct sunlight

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Keep away from heat

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

Observe good industrial hygiene practices

Take precaution to avoid mixing with combustibles

Keep away from clothing and other combustible materials

Avoid contact with water and moisture

Avoid contact with eyes, skin, and clothing

Avoid prolonged exposure

Wear appropriate personal protective equipment

Applications

- Slurry mixture direct-push injection through hollow rods or direct-placement into boreholes
- In situ or ex situ slurry mixture into contaminated backfill or contaminated soils in general
- Slurry mixture injections in conjunction with chemical oxidants like RegenOx or PersulfOx
- Filter sock applications in groundwater for highly localized treatment
- Ex situ biopiles

Health and Safety

Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection. Please review the <u>ORC Advanced Safety Data Sheet</u> for additional storage, usage, and handling requirements.



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Remedial Design Assumptions and Qualifications

Cost Estimate Disclaimer: The cost listed assumes conditions set forth within the proposed scope of work and assumptions and qualifications. Changes to either could impact the final cost of the project. This may include final shipping arrangements, sales tax or application related tasks such as product storage and handling, access to water, etc. If items listed need to be modified, please contact Regenesis for further evaluation.

Shipping Estimates: Shipping estimates are valid for 30 days. All shipping charges are estimates and actual freight charges are calculated at the time of invoice. Additional freight charges may be assessed for any accessorial requested at the time of delivery. The estimate included within assumes standard shipping.

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Professional Judgement: In generating this estimate, REGENESIS relied upon professional judgment and site specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site.

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Terms and Conditions Products and Services

- **1. PAYMENT TERMS.** Net 30 Days. Accounts outstanding after 30 days will be assessed 1.5% monthly interest. Volume discount pricing will be rescinded on all accounts outstanding over 90 days. An early payment discount of 1.5% Net 10 is available for cash or check payments only. We accept Master Card, Visa and American Express.
- **2. RETURN POLICY.** A 15% re-stocking fee will be charged for all returned goods. All requests to return product must be pre-approved by seller. Returned product must be in original condition and no product will be accepted for return after a period of 90 days.
- **3 FORCE MAJEURE.** Seller shall not be liable for delays in delivery or services or failure to manufacture or deliver due to causes beyond its reasonable control, including but not limited to acts of God, acts of buyer, acts of military or civil authorities, fires, strikes, flood, epidemic, war, riot, delays in transportation or car shortages, or inability to obtain necessary labor, materials, components or services through seller's usual and regular sources at usual and regular prices. In any such event Seller may, without notice to buyer, at any time and from time to time, postpone the delivery or service dates under this contract or make partial delivery or performance or cancel all or any portion of this and any other contract with buyer without further liability to buyer. Cancellation of any part of this order shall not affect Seller's right to payment for any product delivered or service performed hereunder.
- **4. LIMITED WARRANTY.** Seller warrants the product(s) sold and services provided as specified on face of invoice, solely to buyer. Seller makes no other warranty of any kind respecting the product and services, and expressly DISCLAIMS ALL OTHER WARRANTIES OF WHATEVER KIND RESPECTING THE PRODUCT AND SERVICES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND NON-INFRINGEMENT.
- **5. DISCLAIMER.** Where warranties to a person other than buyer may not be disclaimed under law, seller extends to such a person the same warranty seller makes to buyer as set forth herein, subject to all disclaimers, exclusions and limitations of warranties, all limitations of liability and all other provisions set forth in the Terms and Conditions herein. Buyer agrees to transmit a copy of the Terms and Conditions set forth herein to any and all persons to whom buyer sells, or otherwise furnishes the products and/or services provided buyer by seller and buyer agrees to indemnify seller for any liability, loss, costs and attorneys' fees which seller may incur by reason, in whole or in part, of failure by buyer to transmit the Terms and Conditions as provided herein.
- **6. LIMITATION OF SELLER'S LIABILITY AND LIMITATION OF BUYER'S REMEDY.** Seller's liability on any claim of any kind, including negligence, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair or use of any goods or performance of any services covered by or furnished hereunder, shall in no case exceed the lesser of (1) the cost of repairing or replacing goods and repeating the services failing to conform to the forgoing warranty or the price of the goods and/or services or part thereof which gives rise to the claim. IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, OR FOR DAMAGES IN THE NATURE OF PENALTIES.
- **7. INDEMNIFICATION.** Buyer agrees to defend and indemnify seller of and from any and all claims or liabilities asserted against seller in connection with the manufacture, sale, delivery, resale or repair or use of any goods, and performance of any services, covered by or furnished hereunder arising in whole or in part out of or by reason of the failure of buyer, its agents, servants, employees or customers to follow instructions, warnings or recommendations furnished by seller in connection with such goods and services, by reason of the failure of buyer, its agents, servants, employees or customers to comply with all federal, state and local laws applicable to such goods and services, or the use thereof, including the Occupational Safety and Health Act of 1970, or by reason of the negligence or misconduct of buyer, its agents, servants, employees or customers.
- **8. EXPENSES OF ENFORCEMENT.** In the event seller undertakes any action to collect amounts due from buyer, or otherwise enforce its rights hereunder, Buyer agrees to pay and reimburse Seller for all such expenses, including, without limitation, all attorneys and collection fees.
- **9. TAXES.** Liability for all taxes and import or export duties, imposed by any city, state, federal or other governmental authority, shall be assumed and paid by buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or costs incurred by seller in connection therewith.

- **10. ASSISTANCE AND ADVICE.** Upon request, seller in its discretion will furnish as an accommodation to buyer such technical advice or assistance as is available in reference to the goods and services. Seller assumes no obligation or liability for the advice or assistance given or results obtained, all such advice or assistance being given and accepted at buyer's risk.
- **11. SITE SAFETY.** Buyer shall provide a safe working environment at the site of services and shall comply with all applicable provisions of federal, state, provincial and municipal safety laws, building codes, and safety regulations to prevent accidents or injuries to persons on, about or adjacent to the site.
- **12. INDEPENDENT CONTRACTOR.** Seller and Buyer are independent contractors and nothing shall be construed to place them in the relationship of partners, principal and agent, employer/employee or joint ventures. Neither party will have the power or right to bind or obligate the other party except as may be expressly agreed and delegated by other party, nor will it hold itself out as having such authority.
- 13. REIMBURSEMENT. Seller shall provide the products and services in reliance upon the data and professional judgments provided by or on behalf of buyer. The fees and charges associated with the products and services thus may not conform to billing guidelines, constraints or other limits on fees. Seller does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where seller may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by seller, it is the sole responsibility of the buyer or other entity seeking reimbursement to ensure the products and services and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, seller does not knowingly present or cause to be presented any claim for payment to the Government.
- **14. APPLICABLE LAW/JURISDICTION AND VENUE**. The rights and duties of the parties shall be governed by, construed, and enforced in accordance with the laws of the State of California (excluding its conflict of laws rules which would refer to and apply the substantive laws of another jurisdiction). Any suit or proceeding hereunder shall be brought exclusively in state or federal courts located in Orange County, California. Each party consents to the personal jurisdiction of said state and federal courts and waives any objection that such courts are an inconvenient forum.
- **15. ENTIRE AGREEMENT.** This agreement constitutes the entire contract between buyer and seller relating to the goods or services identified herein. No modifications hereof shall be binding upon the seller unless in writing and signed by seller's duly authorized representative, and no modification shall be effected by seller's acknowledgment or acceptance of buyer's purchase order forms containing different provisions. Trade usage shall neither be applicable nor relevant to this agreement, nor be used in any manner whatsoever to explain, qualify or supplement any of the provisions hereof. No waiver by either party of default shall be deemed a waiver of any subsequent default.



Remedial Design Assumptions and Qualifications

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- **3 FORCE MAJEURE.** Seller shall not be liable for delays in delivery or services or failure to manufacture or deliver due to causes beyond its reasonable control, including but not limited to acts of God, acts of buyer, acts of military or civil authorities, fires, strikes, flood, epidemic, war, riot, delays in transportation or car shortages, or inability to obtain necessary labor, materials, components or services through seller's usual and regular sources at usual and regular prices. In any such event Seller may, without notice to buyer, at any time and from time to time, postpone the delivery or service dates under this contract or make partial delivery or performance or cancel all or any portion of this and any other contract with buyer without further liability to buyer. Cancellation of any part of this order shall not affect Seller's right to payment for any product delivered or service performed hereunder.
- **4. LIMITED WARRANTY.** Seller warrants the product(s) sold and services provided as specified on face of invoice, solely to buyer. Seller makes no other warranty of any kind respecting the product and services, and expressly DISCLAIMS ALL OTHER WARRANTIES OF WHATEVER KIND RESPECTING THE PRODUCT AND SERVICES, INCLUDING ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE AND NON-INFRINGEMENT.
- **5. DISCLAIMER.** Where warranties to a person other than buyer may not be disclaimed under law, seller extends to such a person the same warranty seller makes to buyer as set forth herein, subject to all disclaimers, exclusions and limitations of warranties, all limitations of liability and all other provisions set forth in the Terms and Conditions herein. Buyer agrees to transmit a copy of the Terms and Conditions set forth herein to any and all persons to whom buyer sells, or otherwise furnishes the products and/or services provided buyer by seller and buyer agrees to indemnify seller for any liability, loss, costs and attorneys' fees which seller may incur by reason, in whole or in part, of failure by buyer to transmit the Terms and Conditions as provided herein.
- **6. LIMITATION OF SELLER'S LIABILITY AND LIMITATION OF BUYER'S REMEDY.** Seller's liability on any claim of any kind, including negligence, for any loss or damage arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair or use of any goods or performance of any services covered by or furnished hereunder, shall in no case exceed the lesser of (1) the cost of repairing or replacing goods and repeating the services failing to conform to the forgoing warranty or the price of the goods and/or services or part thereof which gives rise to the claim. IN NO EVENT SHALL SELLER BE LIABLE FOR SPECIAL INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOST PROFITS, OR FOR DAMAGES IN THE NATURE OF PENALTIES.
- **7. INDEMNIFICATION.** Buyer agrees to defend and indemnify seller of and from any and all claims or liabilities asserted against seller in connection with the manufacture, sale, delivery, resale or repair or use of any goods, and performance of any services, covered by or furnished hereunder arising in whole or in part out of or by reason of the failure of buyer, its agents, servants, employees or customers to follow instructions, warnings or recommendations furnished by seller in connection with such goods and services, by reason of the failure of buyer, its agents, servants, employees or customers to comply with all federal, state and local laws applicable to such goods and services, or the use thereof, including the Occupational Safety and Health Act of 1970, or by reason of the negligence or misconduct of buyer, its agents, servants, employees or customers.
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- **9. TAXES.** Liability for all taxes and import or export duties, imposed by any city, state, federal or other governmental authority, shall be assumed and paid by buyer. Buyer further agrees to defend and indemnify seller against any and all liabilities for such taxes or duties and legal fees or costs incurred by seller in connection therewith.

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- **11. SITE SAFETY.** Buyer shall provide a safe working environment at the site of services and shall comply with all applicable provisions of federal, state, provincial and municipal safety laws, building codes, and safety regulations to prevent accidents or injuries to persons on, about or adjacent to the site.
- **12. INDEPENDENT CONTRACTOR.** Seller and Buyer are independent contractors and nothing shall be construed to place them in the relationship of partners, principal and agent, employer/employee or joint ventures. Neither party will have the power or right to bind or obligate the other party except as may be expressly agreed and delegated by other party, nor will it hold itself out as having such authority.
- 13. REIMBURSEMENT. Seller shall provide the products and services in reliance upon the data and professional judgments provided by or on behalf of buyer. The fees and charges associated with the products and services thus may not conform to billing guidelines, constraints or other limits on fees. Seller does not seek reimbursement directly from any government agency or any governmental reimbursement fund (the "Government"). In any circumstance where seller may serve as a supplier or subcontractor to an entity which seeks reimbursement from the Government for all or part of the services performed or products provided by seller, it is the sole responsibility of the buyer or other entity seeking reimbursement to ensure the products and services and associated charges are in compliance with and acceptable to the Government prior to submission. When serving as a supplier or subcontractor to an entity which seeks reimbursement from the Government, seller does not knowingly present or cause to be presented any claim for payment to the Government.
- **14. APPLICABLE LAW/JURISDICTION AND VENUE**. The rights and duties of the parties shall be governed by, construed, and enforced in accordance with the laws of the State of California (excluding its conflict of laws rules which would refer to and apply the substantive laws of another jurisdiction). Any suit or proceeding hereunder shall be brought exclusively in state or federal courts located in Orange County, California. Each party consents to the personal jurisdiction of said state and federal courts and waives any objection that such courts are an inconvenient forum.
- **15. ENTIRE AGREEMENT.** This agreement constitutes the entire contract between buyer and seller relating to the goods or services identified herein. No modifications hereof shall be binding upon the seller unless in writing and signed by seller's duly authorized representative, and no modification shall be effected by seller's acknowledgment or acceptance of buyer's purchase order forms containing different provisions. Trade usage shall neither be applicable nor relevant to this agreement, nor be used in any manner whatsoever to explain, qualify or supplement any of the provisions hereof. No waiver by either party of default shall be deemed a waiver of any subsequent default.

APPENDIX C CALCULATIONS

CALCULATION 1. DESIGN GROUNDWATER AND SOIL CONCENTRATIONS - NORTHERN "MOBERG'S" HOT SPOT MOBERG'S GARAGE AND TEXACO STATION WATROUS, NEW MEXICO

REPORTED GROUNDWATER CONCENTRATIONS, 10/22/2019										
Well ID	DRO	MRO	GRO	TPH	В	T	E	X	N	BTEXN
Units	mg/L	mg/L	mg/L	mg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
BMW-1	9.1	< 5.0	19	28.1	130	93	2,000	1,300	130	3,653
BMW-2	11	< 5.0	14	25.0	730	55	850	670	420	2,725
BMW-3	9.1	< 5.0	7	16.3	140	10	380	41	40	611
BMW-5R	6.8	< 5.0	20	26.8	13.0	5.0	820	450	77	1,365
Average Aqueous Concentration		C water		24.05	253	41	1,013	615	167	2,089
TPH: BTEXN				11.5						

CALCULATION OF SOIL CONCENTRATIONS BASED ON GROUNDWATER PARTITIONING										
Default Soil Organic Carbon/Water Partition Coefficient ¹	K _{oc}	cm ³ /g			146	234	446	383	1,540	
Default Fraction Organic Carbon ¹	f_{oc}	%			0.15%	0.15%	0.15%	0.15%	0.15%	
Soil-water partitioning coefficient, Table B-2 1	K_d	cm ³ /g			0.219	0.351	0.669	0.575	2.31	
Average Soil Concentration	C_{soil}	mg/kg		17.1	0.055	0.014	0.677	0.353	0.385	1.486

Formulas: $K_d = K_{oc} \cdot f_{oc}$ $C_{soil} = C_{water} \cdot K_d$

Abbreviations

Reference: "NMED Risk Assessment Guidelines for Site Investigation and Remediation. February 2019."

μg/L micrograms per liter

B Benzene

BTEXN Benzene, toluene, ethylbenzene, xylenes, naphthalenes

cm³/g cubic centimeter per gram DRO Diesel range organics

E Ethylbenzene

GRO Gasoline range organics mg/L milligrams per liter MRO Motor range organics

T Toluene

TPH Total Petroleum Hydrocarbons

X Xylenes

CALCULATION 2. DESIGN GROUNDWATER AND SOIL CONCENTRATIONS - SOUTHERN "TEXACO" HOT SPOT MOBERG'S GARAGE AND TEXACO STATION WATROUS, NEW MEXICO

REPORTED GROUNDWATER CONCENTRATIONS, 10/22/2019										
Well ID	DRO	MRO	GRO	TPH	В	T	E	X	N	BTEXN
Units	mg/L	mg/L	mg/L	mg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
W-1	3.6	< 5.0	9.1	12.7	1	1	770	2	95	869
W-3	7.2	< 5.0	17	24.2	19	21	1,700	980	450	3,170
Average Aqueous Concentration	C_{water}			18.45	10	11	1,235	491	273	2,019
TPH: BTEXN				9.14						

CALCULATION OF SOIL CONCENTRATIONS BASED ON GROUNDWATER PARTITIONING										
Default Soil Organic Carbon/Water Partition Coefficient ¹	K _{oc}	cm ³ /g			146	234	446	383	1540	
Default Fraction Organic Carbon ¹	f_{oc}	%			0.15%	0.15%	0.15%	0.15%	0.15%	
Soil-water partitioning coefficient, Table B-2 1	K_d	cm ³ /g			0.219	0.351	0.669	0.575	2.31	
Average Soil Concentration	C_{soil}	mg/kg		15.9	0.002	0.004	0.826	0.282	0.629	1.74

Formulas: $K_d = K_{oc} \cdot f_{oc}$ $C_{soil} = C_{water} \cdot K_d$

Abbreviations

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μg/L micrograms per liter

B Benzene

BTEXN Benzene, toluene, ethylbenzene, xylenes, naphthalenes

 $\begin{array}{ccc} cm^3/g & cubic centimeter per gram \\ DRO & Diesel range organics \\ E & Ethylbenzene \end{array}$

GRO Gasoline range organics mg/L milligrams per liter MRO Motor range organics

T Toluene

TPH Total Petroleum Hydrocarbons

X Xylenes

APPENDIX D MANUFACTURER CUT SHEETS



ORC Advanced® Technical Description

ORC Advanced[®] is an engineered, oxygen release compound designed specifically for enhanced, *in situ* aerobic bioremediation of petroleum hydrocarbons in groundwater and saturated soils. Upon contact with groundwater, this calcium oxyhydroxide-based material becomes hydrated producing a controlled release of molecular oxygen (17% by weight) for periods of up to 12 months on a single application.

ORC Advanced decreases time to site closure and accelerates degradation rates up to 100 times faster than natural degradation rates. A single ORC Advanced application can support aerobic biodegradation for up to 12 months with minimal site disturbance, no permanent or emplaced above ground equipment, piping, tanks, power sources, etc are needed. There is no operation or maintenance required. ORC Advanced provides lower costs, greater efficiency and reliability compared to engineered mechanical systems, oxygen emitters and bubblers.



Example of ORC Advanced

ORC Advanced provides remediation practitioners with a significantly faster and highly effective means of treating petroleum contaminated sites. Petroleum hydrocarbon contamination is often associated with retail petroleum service stations resulting from leaking underground storage tanks, piping and dispensers. As a result, ORC Advanced technology and applications have been tailored around the remediation needs of the retail petroleum industry and include: tank pit excavations, amending and mixing with backfill, direct-injection, bore-hole backfill, ORC Advanced Pellets for waterless and dustless application, combined ISCO and bioremediation applications, etc.

For a list of treatable contaminants with the use of ORC Advanced, view the Range of Treatable Contaminants Guide

Chemical Composition

- Calcium hydroxide oxide
- Calcium hydroxide
- Monopotassium phosphate
- Dipotassium phosphate

Properties

Physical state: SolidForm: Powder

• Odor: Odorless

Color: White to pale yellowpH: 12.5 (3% suspension/water)



ORC Advanced® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of direct sunlight

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Keep away from heat

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

Observe good industrial hygiene practices

Take precaution to avoid mixing with combustibles

Keep away from clothing and other combustible materials

Avoid contact with water and moisture

Avoid contact with eyes, skin, and clothing

Avoid prolonged exposure

Wear appropriate personal protective equipment

Applications

- Slurry mixture direct-push injection through hollow rods or direct-placement into boreholes
- In situ or ex situ slurry mixture into contaminated backfill or contaminated soils in general
- Slurry mixture injections in conjunction with chemical oxidants like RegenOx or PersulfOx
- Filter sock applications in groundwater for highly localized treatment
- Ex situ biopiles

Health and Safety

Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection. Please review the <u>ORC Advanced Safety Data Sheet</u> for additional storage, usage, and handling requirements.



www.regenesis.com 1011 Calle Sombra, San Clemente CA 92673 949.366.8000



Oxygen Release Compound (ORC®) Installation Instructions: Direct-Injection Slurry Application

Safety

Pure ORC® is shipped to you as a fine powder rated at -325 mesh (passes through a 44 micron screen). It is considered to be a mild oxidizer and as such should be handled with care while in the field. Field personnel should take precautions while applying the pure ORC. Typically, the operator should work upwind of the product as well as use appropriate safety equipment. These would include eye and respiratory protection, and gloves as deemed appropriate by exposure duration and field conditions.

Personnel operating the field equipment utilized during the installation process should have appropriate training, supervision and experience.

General Guidelines

ORC may be installed in the contaminated saturated zone in the ground utilizing hand augered holes, Geoprobe® type hydraulic punch equipment, or hollow stem augers. This set of instructions is specific for Geoprobe equipment. Alternate instructions may be obtained from the REGENESIS® Technical Support Department.

For optimum results the ORC slurry installation should span the entire vertical contaminated saturated thickness, including the capillary fringe and "smear zone".

Two general installation approaches are available. The first is to backfill only the probe hole with slurry. This is a simple approach, in that it is easy, straightforward, and the location of the ORC slurry is precisely known after installation. However, this method requires significantly more probe holes than the alternative, and may take more time for the completion of the remediation process. A separate set of instructions for this method utilizing Geoprobe equipment is available from REGENESIS.

The second method is to inject the slurry through the probe holes into the contaminated saturated zone. This method requires fewer probe holes, is less disruptive to the site, and aids the spread of oxygen by spreading the ORC source material. However, it may be difficult to know the exact, final disposition of the ORC installed with this method. This is the method described in these instructions.

Note: It is important that the installation method and specific ORC slurry point location be established prior to field installation. It is also important that the ORC slurry volume and solids content for each drive point be predetermined.

The REGENESIS Technical Service Department is available to discuss these issues, and Helpful Hints at the end of these instructions offers relevant information. REGENESIS also has available Technical Bulletins covering source treatments with ORC.



Specific Installation Procedures

- 1. Identify the location of all underground structures, including utilities, tanks, distribution piping, sewers, drains, and landscape irrigation systems.
- 2. Identify surface and aerial impediments.
- 3. Adjust planned installation locations for all impediments and obstacles.
- 4. Pre-mark the installation grid point locations, noting any that have special depth requirements.
- 5. Set up the Geoprobe unit over each specific point, following manufacturer recommended procedures. Care should be taken to assure approximate vertical probe holes.
- 6. Penetrate surface pavement, if necessary, following standard Geoprobe procedures.
- 7. Drive the 1 1/2" (one-and-one-half inch) pre-probe (part #AT-148B) with the expendable tip (part #AT142B) to the desired maximum depth. Standard 1" (one inch) drive rods (part AT104B) should be used, after the pre-probe. (Hint: Pre-counted drive rods should be positioned prior to the installation driving procedure to assure the desired depth is reached.)
- 8. Disconnect the drive rods from the expendable tip, following standard Geoprobe procedures.
- 9. Mix the appropriate quantity of ORC slurry for the current drive point. (See separate "Directions for ORC® Slurry Mixing" and Helpful Hints). Note: Do not mix more slurry than will be used within a 30 minute period.
- 10. Set up and operate an appropriate slurry pump according to manufacturer's directions. Based on our experience, a Geoprobe model GS-1000 pump is recommended. Connect the pump to the probe grout pull cap (GS-1054) via a 1 inch diameter delivery hose. The hose is then attached to the 1" drive rod with its quick connector fitting. Upon confirmation of all connections add the ORC slurry to the pump hopper/tank.
- 11. Withdraw the pre-probe and drive stem 4' (four feet). (Also note Helpful Hints Operations at end of instructions.)
- 12. Optional pretreatment step. (See Helpful Hints Operations at end of instructions). Pump one to two gallons of tap water into the aquifer to enhance dispersion pathways from the probe hole.
- 13. Pump the predetermined quantity of ORC slurry for the depth interval being injected. Observe pump pressure levels for indications of slurry dispersion or refusal into the aquifer. (Increasing pressure indicates reduced acceptance of material by the aquifer).
- 14. Remove one 4' section of the 1" drive rod. The drive rod will contain slurry. This slurry should be returned to the ORC bucket for reuse.
- 15. Repeat steps 11, 13, and 14 until treatment of the entire affected thickness has been achieved. It is generally recommended that the procedure extend to the top of the capillary fringe/smear zone.
- 16. Install an appropriate seal, such as bentonite, above the ORC slurry through the entire vadose zone. This helps assure that the slurry stays in place and prevents contaminant migration from the surface. Depending on soil conditions and local regulations, a bentonite seal can be pumped through the slurry pump or added via chips or pellets after probe removal.
- 17. Remove and decontaminate the drive rods and pre-probe.
- 18. Finish the probe hole at surface as appropriate (concrete or asphalt cap, if necessary).
- 19. Move to the next probe point, repeating steps 5 through 18.



A. Physical Characteristics

A1. Slurry

The ORC slurry is made using the dry ORC powder (rated at -325 mesh). It makes a smooth slurry, with a consistency that depends on the amount of water used.

A thick, but pumpable, slurry that approaches a paste can be made by using 65-67% solids. This material would normally be used for back-filling a bore or probe hole. It is especially useful where maximum density is desired such as where ground water is present in the hole or there are heaving sands.

Thinner slurries can be made by using more water. Typical solids for the thinner slurries content will range from 35% to 62%. Such slurries are useful for injecting through a probe or bore hole into the saturated aquifer.

As a rule, it is best to mix the first batch of slurry at the maximum solids content one would expect to use. It can then be thinned by adding additional water in small increments. By monitoring this process, the appropriate quantities of water for subsequent batches can be determined.

The slurry should be mixed at about the time it is expected to be used. It is best to not hold it for more than 30 minutes. Thinner slurries, especially, can experience a separation upon standing. All ORC slurries have a tendency to form cements when left standing. If a slurry begins to thicken too much, it should be mixed again and additional water added if necessary.

Care should be taken with slurry that may be left standing in a grout pump or hose. Problems can generally be avoided by periodically re-circulating the slurry through the pump and hose back into the pump's mixing or holding tank.

A2. Equipment

Most geotechnical grout pumping equipment has a holding tank with a capacity sufficient for injection. When applying measured volumes of ORC slurry to probe holes, it is sometimes useful to know the volumes and content of the delivery system lines. The following information may be useful in this regard.

Geoprobe Pump

At the end of a pump stroke virtually no deliverable slurry remains in the pump.

5/8" O.D. connecting hose (10 feet long):

O.2 gallons (26 fluid ounces)

Four foot (4') length of 1" drive rod:

O.4 gallons (5 fluid ounces)

Three foot (3') length of 1 1/2" pre-probe:

O.5 gallons (4 fluid ounces)



Cleaning and Maintenance

Pumping equipment and drive rods can be lightly cleaned by circulating clear water through them. Further cleaning and decontamination (if necessary due to subsurface conditions) should be performed according to the equipment supplier's standard procedures and local regulatory requirements.

B. Operating Characteristics

B1. Operations - General

Judgment will be needed in the field when injecting ORC slurries. In general, it is relatively easy to inject ORC slurries into sandy soils, and this can usually be accomplished at very moderate pressures. Silts and clays require more pressure, and may accept less slurry.

Careful observation of pressure during slurry pumping is the best indication of the effectiveness of the slurry injection. To test the soil's ability to accept the slurry and to "precondition" the injection point for the slurry, it is sometimes useful to inject a small volume of plain water prior to the slurry. Normally, one-half (0.5) gallons to two (2) gallons would be appropriate.

During injection, increasing pressure and decreasing flow rate are signs of refusal by the soil matrix to accept the slurry. The site geologist should determine whether to increase pressure, and possibly fracture ("frac") the soil matrix to achieve ORC slurry installation in a tight site that has refused the slurry at lower pressures.

B2. Fill Volumes

Probe hole back-filling

Probe Hole Capacities Per 10' (Ten Foot) Length

Theoretical (Gallons/Fluid Ounces/Cubic Inches) Sand, Silts & Clay

Operating Volume (Gallons/Fluid Ounces) Sand, Silts & Clay

1" Diameter	.41 gal/52 fl. oz./94.2 cu. in.	.61 gal/78 fl. oz.	.51 gal/65 fl. oz.
1 1/2" Diameter	.92 gal/117 fl. oz./212.0 cu. in.	1.38 gal/176 fl. oz.	1.15 gal/146 fl. oz.
2" Diameter	1.63 gal/209 fl. oz./376.8 cu. in.	2.44 gal/313 fl. oz.	2.04 gal/261 fl. oz.
2 1/4" Diameter	2.06 gal/264 fl. oz./476.9 cu. in	3.09 gal/396 fl. oz.	2.57 gal/330 fl. oz.

Note that the operating volumes include a 50% excess above the theoretical volume in sands and 25% in clays and silts. This is important to successful treatment. The additional material allows for a small degree of infiltration of the slurry into the surrounding soil and fractures, as well as hole diameter variability. It is important to assure that the entire contaminated saturated zone is treated (including the capillary fringe), since this is often the area of highest pollution concentration. Failure to treat this area due to improper installation can undermine an otherwise successful remediation effort.

For direct assistance or answers to any questions you may have regarding these instructions, contact REGENESIS Technical Services at 949.366.8000.



Oxygen Release Compound (ORC®) Installation Instructions: Slurry Mixing

- 1. Open 5 gallon bucket and remove pre-measured bag of ORC®
- 2. Measure and pour water into the 5-gallon bucket according to the following desired consistency:

65% Solids Slurry Mix .63 gallons of water per 10 pounds of ORC powder

Example: Mix 20 pounds of ORC with 1.26 gallons of water Example: Mix 30 pounds of ORC with 1.89 gallons of water

60% Solids Slurry Mix .79 gallons of water per 10 pounds of ORC powder

Example: Mix 20 pounds of ORC with 1.58 gallons of water Example: Mix 30 pounds of ORC with 2.37 gallons of water

50% Solids Slurry Mix 1.19 gallons of water per 10 pounds of ORC powder

Example: Mix 20 pounds of ORC with 2.38 gallons of water Example: Mix 30 pounds of ORC with 3.57 gallons of water

25% Solids Slurry Mix 3.57 gallons of water per 10 pounds of ORC powder

Example: Mix 10 pounds of ORC with 3.57gallons of water

3. Add the appropriate ORC quantity to the water

Check weight of each bucket (see label). The 5 gallon shipping bucket weighs 2 pounds. An additional 4 pounds of ORC would require one additional quart of water, at the 65% solids level.

4. Use an appropriate mixing device to thoroughly mix ORC and water

A hand held drill with a "jiffy mixer" or a stucco mixer on it may be used in conjunction with a small paddle to scrape the bottom and sides of the container. Standard environmental slurry mixers may also be used, following the equipment instructions for operation. For small quantities a usable slurry can be mixed by hand, if care is taken to blend all lumps into the mixture thoroughly.

CAUTION: ORC MAY SETTLE OUT OF SLURRY IF LEFT STANDING. ALSO, ORC EVENTUALLY HARDENS INTO A CEMENT-LIKE COMPOUND, AND CANNOT BE REMIXED AFTER THAT HAS HAPPENED. Mix immediately before using. Do not let stand more than 30 minutes, and re-mix immediately before use, to be sure the mixture has not settled out. If a mechanical slurry mixer attached to a pump is being used, the material may be cycled back through the mixer to maintain slurry suspension and consistency.

5. Check slurry consistency for pourability. Add water if necessary (in 1 cup increments) to achieve correct consistency.

For direct assistance or answers to any questions you may have regarding these instructions, contact REGENESIS Technical Services at 949.366.8000.



RegenOx® Technical Description

RegenOx is an advanced chemical oxidation technology that destroys contaminants through powerful, yet controlled chemical reactions. This product maximizes *in situ* chemical oxidation (ISCO) performance through use of a two-part product system; a sodium percarbonate oxidizer complex activated by a patented surface catalyst system. The technology degrades pollutants through direct oxidation, as well as through the generation of a suite of free radical compounds which in turn oxidize recalcitrant contaminants. RegenOX rapidly and effectively destroys a range of target contaminants including petroleum hydrocarbons and chlorinated compounds.

RegenOx is especially effective in destroying target contaminants present in high concentration source areas within the saturated and vadose zones. For petroleum hydrocarbon treatment, RegenOx produces oxygen as a result of its reactions, providing seamless transition from ISCO to enhanced aerobic bioremediation.



Close up of RegenOx

RegenOx produces minimal heat when applied, and continues to destroy contaminants for up to 30 days on a single application. RegenOx is safe for use in direct contact with underground utilities, since it is non-corrosive to concrete and most metals.

```
C_2Cl_4 + 4/3 Na_2CO_3 \cdot 2H_2O_2 + 4NaOH \rightarrow 2CO_2 + 4NaCI + 4H_2O + 4/3 Na_2CO_3
```

- . Free Radical Oxidation via production of:
 - Perhydroxyl Radical (HO₂ •) Hydroxyl Radical (OH •) Superoxide Radical (O₂ •)

For a list of treatable contaminants with the use of RegenOx, view the Range of Treatable Contaminants Guide

Chemical Composition - Part A Oxidant

- Sodium Percarbonate CAS #15630-89-4
- Sodium Carbonate Monohydrate CAS #5968-11-6
- Silicic Acid CAS #7699-11-6
- Silica Gel CAS #63231

Chemical Composition - Part B Activator Complex

- Silicic Acid, Sodium Salt, Sodium Silicate CAS#1344-09-08
- Silica Gel CAS #63231
- Ferrous Sulfate CAS #7720-78-7
- Water CAS#7732-18-5

Properties

- Bulk Density Part A 0.9-1.2 g/cm3; Part B 1.39 g/cm3
- pH 10-11 per recommended mixing ratios (3-5% oxidant in solution)
- Solubility Oxidant 14.5 g/100 g water; Activator miscible in water
- Appearance Brown to orange-brown when mixed with water
- Odor Not detectable
- Vapor Pressure None
- Non-hazardous



RegenOx® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of heat/direct sunlight Store at temperatures not to exceed 40°C/104°F

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Protect from contamination

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Observe good industrial hygiene practices

Keep away from clothing and combustible materials

Take any precaution to avoid mixing with combustibles

Avoid contact with eyes

Do not taste or swallow

Do not eat, drink or smoke nearby

Wear appropriate personal protective equipment

Wash hands thoroughly after handling

Avoid release to the environment

Applications

RegenOx is applied using direct-injection techniques or wells. The application process enables the two-part product to be combined, then pressure-injected into the zone of contamination and moved out into the aquifer media. Application instructions for this product are contained in the RegenOx Application Instructions Guide.

Health and Safety

Material is relatively safe to handle; however, we recommend avoiding contact with eyes, skin and clothing. OSHA Level D personal protection equipment including vinyl or rubber gloves, eye protection and dust mask are recommended when handling this product. Please review the Material Safety Data Sheet for additional storage, packaging, usage, and handling requirements here: RegenOx Part A SDS and RegenOx Part B SDS.





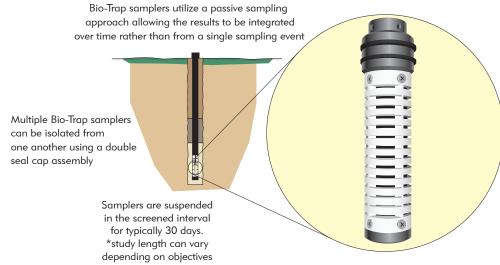


What are Bio-Trap® Samplers?

Bio-Trap® Samplers are passive sampling tools that collect microbes over time for the purpose of better understanding biodegradation potential. The key to the Bio-Trap® approach is a unique sampling matrix, Bio-Sep® beads. The beads are 2-3 mm in diameter and are engineered from a composite of Nomex® and powdered activated carbon (PAC). When a Bio-Trap® Sampler is deployed in a monitoring well, the Bio-Sep® beads adsorb contaminants and nutrients present in the aquifer essentially becoming an in situ microcosm with an incredibly large surface area ($\sim 600 \text{ m}^2/\text{g}$) which is colonized by subsurface microorganisms. Once recovered from a monitoring well (30-60 days after deployment), DNA, RNA, or PLFA can be extracted from the beads for CENSUS® or PLFA assays to evaluate the microbial community.



A modern approach to microbial sampling



Sampling Matrix: Bio-Sep® Beads

A key to this sampling approach is the use of Bio-Sep® beads as the sampling matrix. The unique properties of these beads allow them to mimic environmental conditions very well.



Exterior of Bio-Sep bead

Interior of Bio-Sep bead

Bio-Sep® beads provide a large surface area within the bead for microbial attachment. Most microbes prefer to be attached to a surface rather than be free floating.



Bio-Sep® bead

Fishin' for microbes! "Baited" Bio-Trap® samplers can be used to evaluate the microbial response to a wide range of amendments (electron donors and acceptors, etc.).

*see reverse for more details

Samplers can be analyzed using a wide variety of analyses including: Molecular Biological Tools

- CENSUS® (qPCR)
- PLFA
- DGGE
- SIP

Chemical Analysis Geochemical Parameters And more!





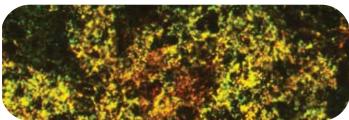
What types of samplers are available?

Bio-Trap samplers are available in a wide variety of configurations that can be tailored to answer your site-specific auestions.

Standard: Basic Bio-Trap® Samplers in the simplest terms are a replacement for collecting groundwater samples using a conventional approach. Most microbes prefer to be attached to a surface rather than free floating and this passive sampler provides a large surface area for the microbes to colonize. Results generated using this approach have been shown to minimize the variability associated with traditional sampling approaches. Bio-Traps biofilms have also been shown to directly reflect spatial and temporal changes in aguifer microbial community structure plume which could not be determined from groundwater analysis. Standard Bio-Trap® Samplers are primarily used during site characterization and routine monitoring activities to:

- Quantify specific microbes or contaminant degrading bacteria (e.g. Dehalococcoides)
- Evaluate monitored natural attenuation (MNA)
- Compare microbial populations from different sampling points
- Monitor shifts within microbial communities following biostimulation

Standard Bio-Trap® Samplers are designed for microbial analyses using a variety of molecular biological tools but can also be configured for some chemical and geochemical analyses.

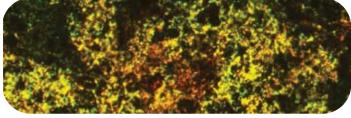


Baited: As the name suggests, Bio-Trap[®] Samplers can be "baited" with various amendments or compounds to answer site-specific questions. In the past, project managers have been forced to turn to laboratory microcosms or small-scale pilot studies to evaluate bioremediation as a treatment alternative. While microcosm experiments with native site materials can show biodegradation in the laboratory, duplication of *in-situ* conditions is difficult and the results may not extrapolate to the field. Pilot studies are performed on site but are often prohibitively expensive as an investigative tool. Baited Bio-Trap® Samplers are designed to create discrete in situ microcosms that can be used to:

- Evaluate monitored natural attenuation versus enhanced bioremediation
- Compare effectiveness of different amendments (e.g. HRC®, EOS®, sodium lactate, molasses, etc.) designed to stimulate bioremediation
- Prove that biodegradation is occurring (13C-labeled compounds - Stable Isotope Probing)
- Estimate relative rates of degradation for a specific contaminant (i.e. MTBE, TBA etc.)
- Address specific questions such as:
 - Is benzene being degraded at my site?
 - Will sulfate amendments stimulate bioremediation?
 - Will sodium lactate increase the concentration of known dechlorinating bacteria?

Baited Bio-Trap® Samplers can be amended with a number of compounds including:

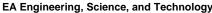
- Sodium acetate
- Sodium lactate
- Potassium lactate
- HRC®
- Molasses
- Vegetable oil
- EOS®
- Sodium phosphate
- Sulfate
- Nitrate
- Ammonium chloride
- Elemental sulfur
- Calcium carbonate
- Iron (III)
- 13C-labeled contaminants
 - Benzene
 - Toluene
 - Xylene
 - MTBE
 - TBA
 - Chlorobenzene
 - TCE
 - DCF
 - VC
- Fluorinated surrogates for tracing chlorinated compounds
 - TCE
 - DCE
- And more!



APPENDIX E FIELD FORMS

INJECTION FORM MOBERG'S GARAGE AND FORMER TEXACO STATION, WATROUS, NM

Date and Time:						6350901
EA Personnel:						
Subcontractor Personne	el and Equipment:					
Project Engineer: Vene						505-296-1070; vmustafin@eaest.com
Project Manager: Mike	McVey					505-235-9037; mmcvey@eaest.com
			Batch	Mix Recipe		
Mass of ORC-A, lbs						
Mass of Regenox Part-A	A, Ibs					
Volume of Water, gal						
			In	jection		
Borehole ID	Time	Interval, ft bgs	Pressure, psi	Flowrate, gpm	Slurry Volume, gal	Notes
Notes:						





EA Engineering, Science, and Technology 320 Gold Avenue SW, Suite 1210 Albuquerque, NM 87102 Phone: (505) 224-9013

MONITOR WELL SAMPLING FIELD FORM

		FLUII	D LEVEL DATA			
Well ID		-	Date gauged			
Site		-	Time gauged		D-Tranklas	
Depth to PSH	Feet	Well diameter	Inches		r Bailing NAP	
Depth to water	Feet	Height of fluid column	Feet	Depth to PSH Depth to water		
Total depth	Feet	volume in well	Gallons	NAPL thickness		reet
NAPL thickness	Feet					Gallons
		(3 well volumes	s = gallons)			
		GROUNDWA	TER SAMPLING DATA			
Time/date purged		P	Purge Method			
Time	Purge Volume (gal)	Temp (°C)	SpC (µs/cm)	рН	ORP (mV)	DO (mg/L)
Actual purge volume	gal.		Field measurements stabilized	within ± 10%?		
Time/date sampled		-	Purged/sampled by			
Sample method						
Requested analyses						
Comments/observation						
Comments/Observation						

APPENDIX F HEALTH AND SAFETY PLAN



Site Name: Moberg's Garage/Texaco Station	NMED PSTB		Telephone: N/A			
Location: Watrous, NM	Susan von Gonten		Telephone: 505-476-4389 (office)			
EPA I.D. No.: N/A	Prepared By:	Vener Mustafin		Date: Mar	rch 11, 2020	
Project No. 6350901.02/6350902.02	Date of Propos	ed Activities: 2020-2021				
Objectives:		Site Type: Check as man	y as applicable.			
All personnel working on this site are trained in ac 29 CFR 1910.120 and are currently active in a me		_ Active	☐ Industrial V	Waste	☐ Well field	
monitoring program to perform work on a hazarde. The objective of this health and safety plan (HSP)		Landfill		☐ Underground storage tank		
site-specific hazards and the hazards controls to be	used to ensure	Secure	Confined s	-		
worker safety for the following activities:		Unsecure	(must use long	g form)	Unknown (must use long form)	
 Groundwater Sampling 		Onsecure	Uncontrol	led Waste	(must use long form)	
			(must use long		Other (Active Business)	
Site Description/History and Site Activities:						
• The Moberg's Garage and Texaco Station State Lead Sites are located on the west side of New Mexico Highway 161 (NM 161) in Watrous, New Mexico. The Gallegos residence and Concord Street are located between the two sites, which are approximately 200 feet apart. Moberg's Garage remains an active automobile repair facility and the former Texaco Station is now the Moberg residence. Adjacent properties are primarily residential to the north, west, and south; Burlington Northern Santa Fe (BNSF) railroad right-of-way (ROW) abuts NM 161 to the eas The Watrous Mutual Domestic Water Consumers' Association (MDWCA) North Supply Well is located approximately 500 feet east of the Moberg's Garage Site at the base of the sandstone bluff. The MDWCA south supply well is located approximately 1,200 feet to the southwest. Site activities include injection of Regenesis ORC-A® and baseline groundwater monitoring.						

Note: A site map, definitions, and additional information about this form are provided on the last three pages of this form.



Waste Management Practices:				
Spills and surfacing will be contained and cleaned. Purge groundwater will be discharge onto surface.				
Waste Types:	uid	⊠ Solid		⊠ Slurry ☐ Gas
Waste / Chemical Cor Characteristics:	rosive	⊠ Oxidi	izer	∑ Flammable
∑ Toxic	olosive	✓ Volat	tile	☐ Radioactive
Reactive Iner	t			Other (specify)
Chemical / Health Hazards of Co	oncern:			
Explosion or fire hazard - combustible gas meter	- monitor with	Inorg	anic che	emicals (nitrate and chloride)
Oxygen deficiency – mor	nitor with oxygen	Orgai	nic chem	micals (PCP)
meter Landfill gases – monitor hydrogen sulfide meter	with methane and	Z Petro	leum Hy	ydrocarbons (as TPH DRO)
Surface tanks		Unde	erground	l storage tanks
☐ Potential inhalation or skin absorption hazard ☐ Other (specify) Regenesis ORC-A® that is immediately dangerous to life and health (IDLH) – must use long form				
Explosion or Fire Potential:	High	Medium	1	



Radiological Hazard Ionizing radi (must use long f	ation (Radioactive materials, X-ray)		Non-ionizing radiation (ultraviolet, lasers)
•	oncern: (Based on anticipated clean-up		
operations)			
Heavy Equip	ment	\boxtimes	Buried utilities
☐ Pinch points			Overhead utilities
☐ Energized an	d rotating equipment (drill rig)		Suspended loads
Steam cleani	ng equipment		Buried drums
Excavations			Work over or near water
☐ Welding or t	orch cutting (Hot work)		Work from elevated platforms
Sharp Object	s	\boxtimes	Manual Lifting
🛚 Hazardous ei	nergy sources (electrical, hydraulic)		
∨ehicle Traf	fic (traffic control)		
Physical Hazards of	Concern:	\boxtimes	Vibration
Heat stress		\boxtimes	Noise
☐ Cold stress			Solar (sunburn)
Slips, trips, f	alls		Unstable or steep terrain
Illumination			Other (specify)
Biological Hazards o	f Concern:	\boxtimes	Snakes (rattlesnakes)
Poisonous pl	ants (poison ivy, poison oak)		Stinging insects (bees, wasps)
Spiders (blace	k widow or brown recluse spiders)	\boxtimes	Animals (feral dogs, mountain lions, etc.)
☐ Medical was	te		Blood or other body fluids
Unexploded Ordnan	ce:		Unexploded Ordnance (UXO) (must use long form)
Chemical W	arfare Materials (CWM) (must use long form)		Explosive ordnance waste (OEW) (must use long form)
Chemical W	arfare Materials (CWM) (must use long form)		



Chemical Products EA Engineering Will Use or Store On Site: (Attach a Material Safety Data Sheet [MSDS] for each item.)
Hydrochloric acid (HCl)
☐ Nitric Acid (HNO ₃)
Sodium hydroxide (NaOH)
☐ Sulfuric Acid (H ₂ SO ₄)
Other (specify) Mercuric Chloride
☐ Other (specify) Regenesis ORC-A®
Other (specify) Regenox Part-A®
Other (specify)
Other (specify)
Other (specify)



Chemicals Present at Site	Highest Observed Concentration (µg/L, groundwater)	PEL/TLV (specify ppm or mg/m ³)	IDLH Level (specify ppm or mg/m³)	Symptoms and Effects of Acute Exposure	Photo- ionization Potential (eV)
Benzene	26,000	1 ppm (PEL)	500 ppm CARC	Severe irritant (skin, eye); reproductive toxin; CNS narcotic	9.24
Toluene	46,000	100 ppm	500 ppm	Severe irritant (skin, eye); reproductive toxin; CNS narcotic; fatigue, weakness, dizziness; headache	8.82
Ethylbenzene	11,000	100 ppm	800 ppm	Severe irritant (skin, eye, mucous membranes); headache; narcosis	8.76
Xylenes (o, m, and p)	31,000	100 ppm	900 ppm	Irritant (skin, eye, throat); reproductive toxin, CNS narcotic	8.44 – 8.56
Diesel Fuel	Unknown	NA	NA	Irritant (respiratory tract); possible carcinogen; possible mutagen	NA
Gasoline	Unknown	300 ppm	CARC	Irritant (skin, eye, mucous membrane); CNS narcotic	NA

Notes: NIOSH Pocket Guide to Chemical Hazards, September 2005

CARC = GW = Ground water NA = Not available ppm = Part per million
Carcinogenic IDLH = Immediately dangerous to life or eV = Electron volt health PEL = Permissible exposure limit value

mg/L = Milligram per liter

 $mg/m^3 = Milligram$ per cubic meter



Field Activities Covered Under This Plan:	Field Activities Covered Under This Plan:						
				Level of F	1		
Task Description	T	Type	Pri	mary	Conti	ngency	Date of Activities
1. Injection of ORC-A®		□ C	\boxtimes D	\Box C	\square D	2020	
		☐ Nonintrusive					
2. Groundwater monitoring		☐ Intrusive	□ C	\boxtimes D	□ C	\Box D	2020-2021
<u>C</u>		Nonintrusive					
Site Personnel and Responsibilities (include subcontraction)	ctors):		•		1		
Employee Name and Office Code	Task			Respo	onsibilities	S	
Mike McVey	1		or (SSC) a	ware of per	tinent proj	ect develop	ivities, makes site oments and plans,
To be determined	1	equipment (PPE personnel, suspe	t) is available of the condition investigation and report	ble, enforce tigative wor an immediants any obser	s proper unk if he or stee health he	tilization of she believes azard, impl tions from a	s that site personnel ements the health anticipated
To be determined	1	Field Personnel: team leader, and the EA Enginee	SSC and	follow all p	rocedures		n manager, field nes established in



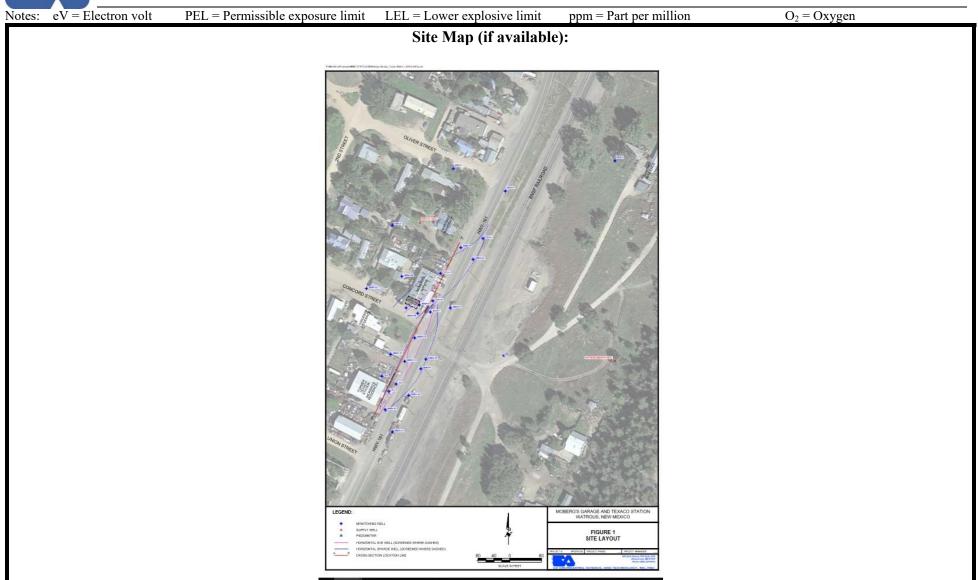
	te type or material as necessary for each ta	ask; attach additional sheets as necessary)
Task: 🛛 1	≥ 2≥ D	
Level: C	\boxtimes D	
□ Primary □	Contingency	
RESPIRATORY	PROTECTIVE CLOTHING	
Not needed		
☐ APR:	Tyvek® coveralls:	
Cartridge:	Saranex® coveralls:	
	Coveralls:	
Other:		
HEAD AND EYE	GLOVES	
Not needed	Not needed	
Safety glasses:		
Face shield:		
Goggles:		
Hard hat: For Task 1		
Other:		
FIRST AID EQUIPMENT	BOOTS	
Not needed	Not needed	
Standard First Aid kit	Work boots: Steel Toed	
Portable eyewash	Overboots:	
OTHER		
(specify):		
(specify).		
	·	-



Note: APR = Air purifying respirator

Monitoring Equipme	nt: (Sp	pecify instruments needed for	each task; attach additional sheets as necessary)	
Instrument	Task	Instrument Reading	Action Guideline	Comments
Combustible gas indicator model:	1	0 to 10% LEL	No explosion hazard	
		10 to 25% LEL	Potential explosion hazard; notify SSC	
		> 25% LEL	Explosion hazard; interrupt task; evacuate site, notify SSC	1
O2 meter model:	1	> 23.5% O2	Potential fire hazard; evacuate site	
		23.5 to 19.5% O2	Oxygen level normal	
		< 19.5% O2	Oxygen deficiency; interrupt task; evacuate site; notify SSC	1
Photoionization detector model:	1	>0 to 5 ppm above background	Level D	
☐ 11.7 eV ☐ 10.6 eV		>5 to 50 ppm above background	Level C	
☐ 9.8 eV ☐eV		>50 ppm above background	Evacuate site; notify SSC	·
Flame ionization detector model:	<u> </u>	>0 to 5 ppm above background	Level D	
		>5 to 50 ppm above background	Level C	
		>50 ppm above background	Evacuate site; notify SSC	
Detector tubes models:	<u> </u>	Specify:	Specify:	Note: This action level for Not needed upgrading the level of protection is one-half of the contaminant's PEL. If the PEL is reached, evacuate the site and notify the SSC.
Respirable dust monitor model:	<u> </u>	Specify:	Specify:	Not needed Not needed
Other: (specify):	1	Specify:	Specify:	⊠ Not needed

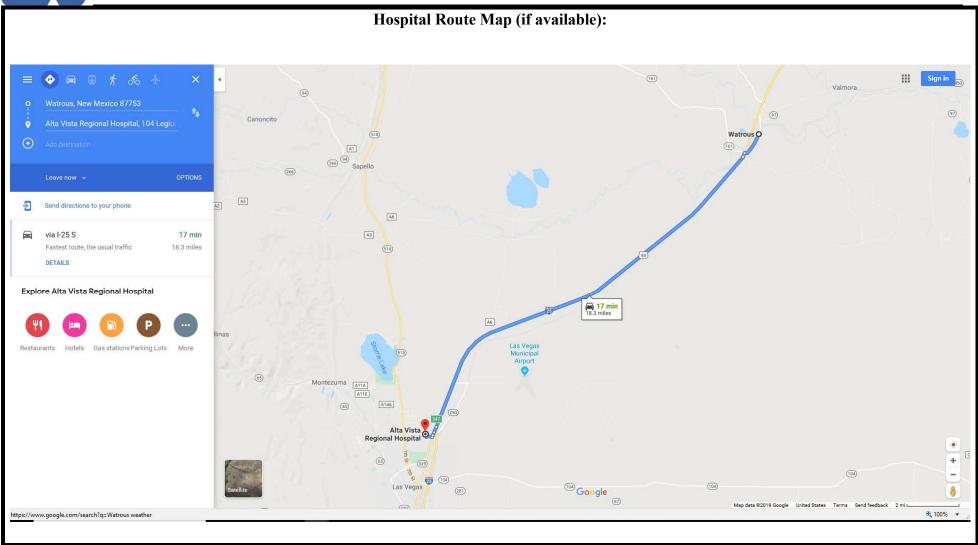






Additional Comments:	Emergency Contacts:		Telephone
EA Engineering site workers will contain and absorb any chemicals used or	U.S. Coast Guard Nationa	al Response Center	800/424-8802
transferred on site.	InfoTrac		800/535-5053
	Fire department		911
	Police department		911
	EA Engineering Personne		410/504 5000
		esource Manager: Michele	410/584-7000
	Bailey	C-f-t-M D-t- C	410/700 (220
		Safety Manager: Pete Garger ety Coordinator: Teri McMillan	410/790-6338 505/259-6779
	Program Manager: N		505/235-9037
	Site Safety Coordinate		303/233-903/
	<u> </u>	tor. EA reisonner	
Personnel Decontamination and Disposal Method:	Medical Emergency:		
Personnel will follow the U.S. Environmental Protection Agency's "Standard	Hospital Name:	Alta Vista Regional Hospital	
Operating Safety Guides" for decontamination procedures for Level D personal			
protection. The following decontamination stations should be set up in each			
decontamination zone:	Hospital Address:	104 Legion Dr	
		Las Vegas, NM 87701	
All equipment will be decontaminated in a designated area			
A11 11	Hospital Telephone:	Emergency – 911	
All disposable equipment and gloves will be double-bagged or containerized in an		General – (505) 426-3500	
acceptable manner and disposed of in accordance with local regulations.		(606) .20 6600	
	Ambulance	911	
	Telephone:)11	
	i ciopiione.		





Note: This page must be posted on site.



APPROVAL AND SIGN-OFF FORM

Project No. <u>6350901/6350902</u>

I have read, understood, and agree with the information set forth in this Health and Safety Plan and will follow the direction of the Site Safety Coordinator as well as procedures and guidelines established in the EA Engineering Health and Safety Manual. I understand the training and medical requirements for conducting field work and have met these requirements.

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
APPROVALS: (Two Signatures Required)		
Site Safety	Coordinator	Date
Health and Sat	Date	



Intrusive - Work involving excavation to any depth, drilling, opening of monitoring wells, most sampling, and Geoprobe® work

Nonintrusive - Generally refers to site walk-throughs or field reconnaissance

Levels of Protection

Level D - Hard hat, safety boots, and glasses, may include protective clothing such as gloves, boot covers, and Tyvek® or Saranex® coveralls

Level C - Hard hat, safety boots, glasses, and air purifying respirators with appropriate cartridges, PLUS protective clothing such as gloves, boot covers, and Tyvek® or Saranex® coveralls

Emergency Contacts

InfoTrac - For issues related to incidents involving the transportation of hazardous chemicals; this hotline provides accident assistance 24 hours per day, 7 days per week

U.S. Coast Guard National Response Center - For issues related to spill containment, cleanup, and damage assessment; this hotline will direct spill information to the appropriate state or region

Health and Safety Plan Short Form

- Used for field projects of limited duration and with relatively limited activities; may be filled in with handwritten text
- Limitations:
 - No Level B or A work
 - Limited number of tasks
 - No confined space entry
 - No unexploded ordnance work or radiation hazard

Oxygen Release Compound – Advanced Pellets (ORC Advanced® Pellets) MATERIAL SAFETY DATA SHEET (MSDS)

Last Revised: March 22, 2012

Section 1 - Material Identification

Supplier:



1011 Calle Sombra San Clemente, CA 92673

Phone: 949.366.8000 Fax: 949.366.8090

E-mail: <u>info@regenesis.com</u>

Chemical A mixture of Calcium Hydroxide Oxide [CaO(OH)2] and

Description: Calcium Hydroxide [Ca(OH)_{2:}].

Chemical Family: Inorganic Chemical

Advanced Formula Oxygen Release Compound

Trade Name:

(ORC Advanced® Pellets)

Chemical Synonyms

Calcium OxyHydroxide; Calcium Oxide Peroxide

Product Use:

Used to remediate contaminated soil and groundwater

(environmental applications)

Section 2 - Composition

CAS No.	Chemical
682334-66-3	Calcium Hydroxide Oxide [CaO(OH)₂]
1305-62-0	Calcium Hydroxide [Ca(OH) 2]
7758-11-4	Dipotassium Phosphate (HK₂O₄P)
7783-28-0	Ammonium Phosphate Dibasic [(NH4) ₂ HPO ₄]

Section 3 - Physical Data

Form: tablets

Color: White to Pale Yellow

Odorless

Melting Point: 527 °F (275 °C) – Decomposes

Boiling Point: Not Applicable (NA)

Flammability/Flash

Point:

NA

Auto-

Flammability:

NA

Vapor Pressure: NA

Self-Ignition

Temperature:

NA

Thermal

Decomposition:

527 °F (275 °C) – Decomposes

Bulk Density: 0.5 – 0.65 g/ml (Loose Method)

Solubility: 1.65 g/L @ 68° F (20° C) for calcium hydroxide.

Viscosity: NA

pH: 11-13 (saturated solution)

Explosion Limits %

by Volume:

Non-explosive

Hazardous

Decomposition

Oxygen, Hydrogen Peroxide, Steam, and Heat

Products:

Hazardous

Reactions:

Section 4 - Reactivity Data

Stability: Stable under certain conditions (see below).

Conditions

Avoid:

to Heat and moisture.

Incompatibility: Acids, bases, salts of heavy metals, reducing agents,

and flammable substances.

Hazardous

Polymerization:

Does not occur.

Section 5 – Regulations

TSCA Inventory

List:

Listed

CERCLA Hazardous Substance (40 CFR Part 302)

Listed Substance: No.

Unlisted

Substance:

Yes

Reportable

Quantity (RQ):

100 pounds

Characteristic(s): Ignitibility

RCRA Waste

Number:

D001

No

SARA, Title III, Sections 302/303 (40 CFR Part 355 – Emergency Planning and Notification)

Extremely

Hazardous

Substance:

SARA, Title III, Sections 311/312 (40 CFR Part 370 – Hazardous Chemical Reporting: Community Right-To-Know

Immediate Health Hazard

Hazard Category:

Fire Hazard

Regenesis - ORC Advanced® Pellets MSDS

Threshold

Planning Quantity:

10,000 pounds

Section 5 – Regulations (cont)

SARA, Title III, Section 313 (40 CFR Part 372 – Toxic Chemical Release Reporting: Community Right-To-Know

Extremely Hazardous

Substance:

No

WHMIS Oxidizing Material

Classification:

C Poisonous and Infectious

Material

Material Causing Other

D Toxic Effects –

Eye and Skin Irritant

Canadian Domestic Substance List:

Not Listed

Section 6 - Protective Measures, Storage and Handling

Technical Protective Measures

Storage: Keep in tightly closed container. Store in dry area,

protected from heat sources and direct sunlight.

Clean and dry processing pipes and equipment before operation. Never return unused product to the storage

Handling: container. Keep away from incompatible products. Containers and equipment used to handle this product

should be used exclusively for this material. Avoid

contact with water or humidity.

Section 6 – Protective Measures, Storage and Handling (cont)

Personal Protective Equipment (PPE)

Calcium Hydroxide

ACGIH® TLV® (2000)

 $5 \text{ mg/m}^3 \text{ TWA}$

OSHA PEL

Engineering Controls:

Total dust–15 mg/m³ TWA

Respirable fraction—

 $5 \text{ mg/m}^3 \text{ TWA}$

NIOSH REL (1994)

 5 mg/m^3

Respiratory **Protection:**

For many conditions, no respiratory protection may be needed; however, in dusty or unknown atmospheres

use a NIOSH approved dust respirator.

Hand Protection:

Impervious protective gloves made of nitrile, natural

rubbber or neoprene.

Eye Protection:

Use chemical safety goggles (dust proof).

Skin Protection:

For brief contact, few precautions other than clean clothing are needed. Full body clothing impervious to this material should be used during prolonged

exposure.

Other:

Safety shower and eyewash stations should be present. Consultation with an industrial hygienist or safety manager for the selection of PPE suitable for

working conditions is suggested.

Industrial Hygiene:

Avoid contact with skin and eyes.

Protection Against

Fire & Explosion:

NA

Section 7 - Hazards Identification

Emergency Overview:

Oxidizer – Contact with combustibles may cause a fire. This material decomposes and releases oxygen in a fire. The additional oxygen may intensify the fire.

Regenesis - ORC Advanced® Pellets MSDS

Potential Effects:

Irritating to the mucous membrane and eyes. If the product splashes in ones face and eyes, treat the eyes **Health** first. Do not dry soiled clothing close to an open flame or heat source. Any clothing that has been contaminated with this product should be submerged in water prior to drying.

Inhalation:

High concentrations may cause slight nose and throat irritation with a cough. There is risk of sore throat and nose bleeds if one is exposed to this material for an extended period of time.

Eye Contact:

Severe eye irritation with watering and redness. There is also the risk of serious and/or permanent eye lesions.

Skin Contact:

Irritation may occur if one is exposed to this material for extended periods.

Ingestion:

Irritation of the mouth and throat with nausea and

vomiting.

Section 8 - Measures in Case of Accidents and Fire

After

Spillage/Leakage/Gas

Leakage:

Collect in suitable containers. Wash remainder with

copious quantities of water.

Extinguishing Media: See next.

Suitable:

Large quantities of water or water spray. In case of fire in close proximity, all means of extinguishing are acceptable.

Self contained breathing apparatus or approved gas mask should be worn due to small particle size. Use extinguishing media appropriate for surrounding fire. Apply cooling water to sides of transport or storage vessels that are exposed to flames until the fire is Do not approach hot vessels that extinguished.

contain this product.

After contact with skin, wash immediately with plenty of water and soap. In case of contact with eyes, rinse immediately with plenty of water and seek medical

attention. Consult an opthalmologist in all cases.

Further Information:

First Aid:

Special Precautions:

Specific Hazards:

Section 8 - Measures in Case of Accidents and Fire

Flush eyes with running water for 15 minutes, while **Eye Contact:**

keeping the eyelids wide open. Consult with an

ophthalmologist in all cases.

Remove subject from dusty environment. Consult with Inhalation:

a physician in case of respiratory symptoms.

If the victim is conscious, rinse mouth and admnister Ingestion:

fresh water. DO NOT induce vomiting. Consult a

physician in all cases.

Wash affected skin with running water. Remove and **Skin Contact:**

clean clothing. Consult with a physician in case of

persistent pain or redness.

Evacuate all non-essential personnel. Intervention

should only be done by capable personnel that are trained and aware of the hazards associated with this product. When it is safe, unaffected product should be

moved to safe area.

Oxidizing substance. Oxygen released on exothermic

decomposition may support combustion. spaces and/or containers may be subject to increased

If product comes into contact with

flammables, fire or explosion may occur.

Section 9 – Accidental Release Measures

Avoid materials and products that are incompatible **Precautions:** with product. Immediately notify the appropriate

authorities in case of reportable discharge (> 100 lbs).

Collect the product with a suitable means of avoiding

Observe the protection methods cited in Section 3.

dust formation. All receiving equipment should be clean, vented, dry, labeled and made of material that this product is compatible with. Because of the **Cleanup Methods:** contamination risk, the collected material should be kept in a safe isolated place. Use large quantities of

water to clean the impacted area. See Section 12 for

disposal methods.

Section 10 – Information on Toxicology

Toxicity Data

Oral Route, LD₅₀, rat, > 2,000 mg/kg (powder 50%)

Acute Toxicity: Dermal Route, LD_{50} , rat, > 2,000 mg/kg (powder 50%)

Inhalation, LD_{50} , rat, > 5,000 mg/m³ (powder 35%)

Irritation: Rabbit (eyes), severe irritant

Sensitization: No data

Chronic Toxicity: In vitro, no mutagenic effect (Powder 50%)

Target Organ Effects: Eyes and respiratory passages.

Section 11 – Information on Ecology

Ecology Data

10 mg Ca(OH)₂/L: pH = 9.0

100 mg $Ca(OH)_2/L$: pH = 10.6

Acute Exotoxicity: Fishes, Cyprinus carpio, LC₅₀, 48 hrs, 160 mg/L

Crustaceans, Daphnia sp., EC₅₀, 24 hours, 25.6 mg/L

(Powder 16%)

Mobility: Low Solubility and Mobility

Water – Slow Hydrolysis.

Degradation Products: Calcium Hydroxide

Water/soil – complexation/precipitation.

Abiotic Degradation: Carbonates/sulfates present at environmental

concentrations.

Degradation products: carbonates/sulfates sparingly

soluble

Biotic Degradation: NA (inorganic compound)

Potential for

Bioaccumulation: NA (ionizable inorganic compound)

Section 11 – Information on Ecology (cont)

Observed effects are related to alkaline properties of the product. Hazard for the environment is limited due to the product properties of:

Comments:

No bioaccumulation

 Weak solubility and precipitation as carbonate or sulfate in an aquatic environment.

Diluted product is rapidly neutralized at environmental

pH.

Further Information: NA

Section 12 – Disposal Considerations

Waste Method:

Disposal

Consult current federal, state and local regulations regarding the proper disposal of this material and its emptied containers.

Section 13 - Shipping/Transport Information

D.O.T Shipping Name: Oxidizing Solid, N.O.S [A mixture of Calcium Hydroxide Color of Calcium Hydroxide [Color of C

Oxide [CaO(OH)₂] and Calcium Hydroxide [Ca(OH)₂].

UN Number: 1479

Hazard Class: 5.1

Label(s): 5.1 (Oxidizer)

Packaging Group: II

STCC Number: 4918717

Section 14 – Other Information

HMIS® Rating Health -2 Reactivity -1

Flammability – 0 PPE - Required

HMIS® is a registered trademark of the National Painting and Coating Association.

NFPA® Rating Health – 2 Reactivity – 1

Flammability -0 OX

NFPA® is a registered trademark of the National Fire Protection Association.

Regenesis - ORC Advanced $^{\otimes}$ Pellets MSDS

Reason for Issue:

Update toxicological and ecological data

Section 15 – Further Information

The information contained in this document is the best available to the supplier at the time of writing, but is provided without warranty of any kind. Some possible hazards have been determined by analogy to similar classes of material. The items in this document are subject to change and clarification as more information become available.



ORC Advanced® Pellets Technical Specification

ORC Advanced Pellets are a dust-minimizing, dry application, pelletized form of the widely-used ORC Advanced controlled-release oxygen compound.

They are designed specifically for the treatment of dissolved-phase petroleum hydrocarbons through direct application into excavations, petroleum storage tank pits, trenches and backfill.

Oxygen is released from ORC Advanced for a period of 9 to 12 months in situ.



 $CaO(OH)_2 + H_2O \rightarrow \frac{1}{2}O_2 + Ca(OH)_2 + H_2O$

Example of ORC Advanced Pellets

ORC Advanced is a formulation of calcium oxyhydroxide which, upon hydration, releases oxygen and forms simple calcium hydroxide and water.

For a list of treatable contaminants with the use of ORC Advanced, view the Range of Treatable Contaminants Guide.

Chemical Composition

- Calcium Oxyhydroxide
- Calcium Hydroxide
- Monopotassium Phosphate
- Ammonium Phosphate Dibasic

Properties

- Pellet size: 3-10 mm
- Contains micro-nutrients such as nitrogen, phosphorous, and potassium (N,P,K) which can be beneficial to aerobic biodegradation processes



ORC Advanced® Pellets Technical Specification

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of direct sunlight

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Keep away from heat

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

Observe good industrial hygiene practices

Take precaution to avoid mixing with combustibles

Keep away from clothing and other combustible materials

Avoid contact with water and moisture

Avoid contact with eyes, skin, and clothing

Avoid prolonged exposure

Wear appropriate personal protective equipment

Applications

- In situ or ex situ out of the bag
- Direct application into open excavations, petroleum storage tank pits and trenches
- Direct application to contaminated backfill or contaminated soils
- Ex situ biopile applications (requires a source of hydration)

Health and Safety

Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection. Please review the Material Safety Data Sheet for additional storage, usage, and handling requirements here: <u>ORC Advanced SDS</u>.





ORC Advanced® Technical Description

ORC Advanced[®] is an engineered, oxygen release compound designed specifically for enhanced, *in situ* aerobic bioremediation of petroleum hydrocarbons in groundwater and saturated soils. Upon contact with groundwater, this calcium oxyhydroxide-based material becomes hydrated producing a controlled release of molecular oxygen (17% by weight) for periods of up to 12 months on a single application.

ORC Advanced decreases time to site closure and accelerates degradation rates up to 100 times faster than natural degradation rates. A single ORC Advanced application can support aerobic biodegradation for up to 12 months with minimal site disturbance, no permanent or emplaced above ground equipment, piping, tanks, power sources, etc are needed. There is no operation or maintenance required. ORC Advanced provides lower costs, greater efficiency and reliability compared to engineered mechanical systems, oxygen emitters and bubblers.



Example of ORC Advanced

ORC Advanced provides remediation practitioners with a significantly faster and highly effective means of treating petroleum contaminated sites. Petroleum hydrocarbon contamination is often associated with retail petroleum service stations resulting from leaking underground storage tanks, piping and dispensers. As a result, ORC Advanced technology and applications have been tailored around the remediation needs of the retail petroleum industry and include: tank pit excavations, amending and mixing with backfill, direct-injection, bore-hole backfill, ORC Advanced Pellets for waterless and dustless application, combined ISCO and bioremediation applications, etc.

For a list of treatable contaminants with the use of ORC Advanced, view the Range of Treatable Contaminants Guide

Chemical Composition

- Calcium hydroxide oxide
- Calcium hydroxide
- Monopotassium phosphate
- Dipotassium phosphate

Properties

Physical state: SolidForm: Powder

• Odor: Odorless

• Color: White to pale yellow

• pH: 12.5 (3% suspension/water)



ORC Advanced® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of direct sunlight

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Keep away from heat

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

Observe good industrial hygiene practices

Take precaution to avoid mixing with combustibles

Keep away from clothing and other combustible materials

Avoid contact with water and moisture

Avoid contact with eyes, skin, and clothing

Avoid prolonged exposure

Wear appropriate personal protective equipment

Applications

- Slurry mixture direct-push injection through hollow rods or direct-placement into boreholes
- In situ or ex situ slurry mixture into contaminated backfill or contaminated soils in general
- Slurry mixture injections in conjunction with chemical oxidants like RegenOx or PersulfOx
- Filter sock applications in groundwater for highly localized treatment
- Ex situ biopiles

Health and Safety

Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection. Please review the <u>ORC Advanced Safety Data Sheet</u> for additional storage, usage, and handling requirements.



www.regenesis.com 1011 Calle Sombra, San Clemente CA 92673 949.366.8000



RegenOx® Technical Description

RegenOx is an advanced chemical oxidation technology that destroys contaminants through powerful, yet controlled chemical reactions. This product maximizes *in situ* chemical oxidation (ISCO) performance through use of a two-part product system; a sodium percarbonate oxidizer complex activated by a patented surface catalyst system. The technology degrades pollutants through direct oxidation, as well as through the generation of a suite of free radical compounds which in turn oxidize recalcitrant contaminants. RegenOX rapidly and effectively destroys a range of target contaminants including petroleum hydrocarbons and chlorinated compounds.

RegenOx is especially effective in destroying target contaminants present in high concentration source areas within the saturated and vadose zones. For petroleum hydrocarbon treatment, RegenOx produces oxygen as a result of its reactions, providing seamless transition from ISCO to enhanced aerobic bioremediation.



Close up of RegenOx

RegenOx produces minimal heat when applied, and continues to destroy contaminants for up to 30 days on a single application. RegenOx is safe for use in direct contact with underground utilities, since it is non-corrosive to concrete and most metals.

```
C_2Cl_4 + 4/3 Na_2CO_3 \cdot 2H_2O_2 + 4NaOH \rightarrow 2CO_2 + 4NaCI + 4H_2O + 4/3 Na_2CO_3
```

- . Free Radical Oxidation via production of:
 - Perhydroxyl Radical (HO₂ •) Hydroxyl Radical (OH •) Superoxide Radical (O₂ •)

For a list of treatable contaminants with the use of RegenOx, view the Range of Treatable Contaminants Guide

Chemical Composition - Part A Oxidant

- Sodium Percarbonate CAS #15630-89-4
- Sodium Carbonate Monohydrate CAS #5968-11-6
- Silicic Acid CAS #7699-11-6
- Silica Gel CAS #63231

Chemical Composition - Part B Activator Complex

- Silicic Acid, Sodium Salt, Sodium Silicate CAS#1344-09-08
- Silica Gel CAS #63231
- Ferrous Sulfate CAS #7720-78-7
- Water CAS#7732-18-5

Properties

- Bulk Density Part A 0.9-1.2 g/cm3; Part B 1.39 g/cm3
- pH 10-11 per recommended mixing ratios (3-5% oxidant in solution)
- Solubility Oxidant 14.5 g/100 g water; Activator miscible in water
- Appearance Brown to orange-brown when mixed with water
- Odor Not detectable
- Vapor Pressure None
- Non-hazardous



RegenOx® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of heat/direct sunlight Store at temperatures not to exceed 40°C/104°F

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Protect from contamination

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Observe good industrial hygiene practices

Keep away from clothing and combustible materials

Take any precaution to avoid mixing with combustibles

Avoid contact with eyes

Do not taste or swallow

Do not eat, drink or smoke nearby

Wear appropriate personal protective equipment

Wash hands thoroughly after handling

Avoid release to the environment

Applications

RegenOx is applied using direct-injection techniques or wells. The application process enables the two-part product to be combined, then pressure-injected into the zone of contamination and moved out into the aquifer media. Application instructions for this product are contained in the RegenOx Application Instructions Guide.

Health and Safety

Material is relatively safe to handle; however, we recommend avoiding contact with eyes, skin and clothing. OSHA Level D personal protection equipment including vinyl or rubber gloves, eye protection and dust mask are recommended when handling this product. Please review the Material Safety Data Sheet for additional storage, packaging, usage, and handling requirements here: RegenOx Part A SDS and RegenOx Part B SDS.



Safety Data Sheet

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

I Identification of the substance/mixture and of the supplier

I.I Product identifier

Trade Name: Alconox

Synonyms:

Product number: 1104-1, 1104, 1125, 1150, 1101, 1103, 1112-1, 1112

1.2 Application of the substance / the mixture : Cleaning material/Detergent

1.3 Details of the supplier of the Safety Data Sheet

Manufacturer

Supplier

Alconox, Inc. 30 Glenn Street White Plains, NY 10603 1-914-948-4040

Emergency telephone number:

ChemTel Inc

North America: 1-800-255-3924 International: 01-813-248-0585

2 Hazards identification

2.1 Classification of the substance or mixture:

In compliance with EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments.

Hazard-determining components of labeling:

Tetrasodium Pyrophosphate

Sodium tripolyphosphate

Sodium Alkylbenzene Sulfonate

2.2 Label elements:

Skin irritation, category 2. Eye irritation, category 2A.

Hazard pictograms:



Signal word: Warning

Hazard statements:

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 If on skin: Wash with soap and water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents and container as instructed in Section 13.

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

Additional information: None.

Hazard description

Hazards Not Otherwise Classified (HNOC): None

Information concerning particular hazards for humans and environment:

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Classification system:

The classification is according to EC regulation No. 1272/2008, 29CFR1910/1200 and GHS Rev. 3 and amendments, and extended by company and literature data. The classification is in accordance with the latest editions of international substances lists, and is supplemented by information from technical literature and by information provided by the company.

3 Composition/information on ingredients

3.1 Chemical characterization: None

3.2 Description: None

3.3 Hazardous components (percentages by weight)

Identification	Chemical Name	Classification	W t. %
CAS number: 7758-29-4	Sodium tripolyphosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	12-28
CAS number: 68081-81-2	Sodium Alkylbenzene Sulfonate	Acute Tox. 4; H303 Skin Irrit. 2; H315 Eye Irrit. 2; H319	8-22
CAS number: 7722-88-5	Tetrasodium Pyrophosphate	Skin Irrit. 2 ; H315 Eye Irrit. 2; H319	2-16

3.4 Additional Information: None.

4 First aid measures

4.1 Description of first aid measures

General information: None.

After inhalation:

Maintain an unobstructed airway.

Loosen clothing as necessary and position individual in a comfortable position.

After skin contact:

Wash affected area with soap and water.

Seek medical attention if symptoms develop or persist.

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.

Remove contact lens(es) if able to do so during rinsing.

Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly.

Seek medical attention if irritation, discomfort, or vomiting persists.

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

4.2 Most important symptoms and effects, both acute and delayed

None

4.3 Indication of any immediate medical attention and special treatment needed:

No additional information.

5 Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

For safety reasons unsuitable extinguishing agents: None

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Advice for firefighters

Protective equipment:

Wear protective eye wear, gloves and clothing.

Refer to Section 8.

5.4 Additional information:

Avoid inhaling gases, fumes, dust, mist, vapor and aerosols.

Avoid contact with skin, eyes and clothing.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

Ensure air handling systems are operational.

6.2 Environmental precautions:

Should not be released into the environment.

Prevent from reaching drains, sewer or waterway.

6.3 Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing.

6.4 Reference to other sections: None

7 Handling and storage

7.1 Precautions for safe handling:

Avoid breathing mist or vapor.

Do not eat, drink, smoke or use personal products when handling chemical substances.

7.2 Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

7.3 Specific end use(s):

No additional information.

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

8 Exposure controls/personal protection





8.1 Control parameters:

- a) 7722-88-5, Tetrasodium Pyrophosphate, OSHA TWA 5 mg/m3
- b) Dusts, non-specific OEL, Irish Code of Practice
 - (i) Total inhalable 10 mg/m3 (8hr)
 - (ii) Respirible 4mg/m3 (8hr)
 - (iii) Tetrasodium Pyrophosphate, OSHA TWA 5 mg/m3, (8hr)

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Respiratory protection:

Not needed under normal use conditions.

Protection of skin:

Select glove material impermeable and resistant to the substance or preparation. Protective gloves recommended to comply with EN 374. Take note of break through times, permeability, and special workplace conditions, such as mechanical strain, duration of contact, etc. Protective gloves should be replaced at the first sign of wear.

Eye protection:

Safety goggles or glasses, or appropriate eye protection. Recommended to comply with ANSI Z87.1 and/or EN 166.

General hygienic measures:

Wash hands before breaks and at the end of work.

Avoid contact with skin, eyes and clothing.

9 Physical and chemical properties

Appearance (physical state, color):	White and cream colored flakes - powder	Explosion limit lower: Explosion limit upper:	Not determined or not available. Not determined or not available.
Odor:	Not determined or not available.	Vapor pressure at 20°C:	Not determined or not available.
Odor threshold:	Not determined or not available.	Vapor density:	Not determined or not available.
pH-value:	9.5 (aqueous solution)	Relative density:	Not determined or not available.
Melting/Freezing point:	Not determined or not available.	Solubilities:	Not determined or not available.
Boiling point/Boiling range:	Not determined or not available.	Partition coefficient (noctanol/water):	Not determined or not available.
Flash point (closed cup):	Not determined or not available.	Auto/Self-ignition temperature:	Not determined or not available.
Evaporation rate:	Not determined or not available.	Decompositio n	Not determined or not available.

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

Flammability (solid, gaseous):	Not determined or not available.	Viscosity [,]	a. Kinematic: Notdetermined or notavailable.b. Dynamic: Notdetermined or notavailable.
Density at 20°C:	Not determined or not available.		

10 Stability and reactivity

10.1 Reactivity: None

10.2 Chemical stability: None

10.3 Possibility hazardous reactions: None

10.4 Conditions to avoid: None

10.5 Incompatible materials: None

10.6 Hazardous decomposition products: None

II Toxicological information

II.I Information on toxicological effects:

Acute Toxicity:

Oral:

: LD50 > 5000 mg/kg oral rat - Product .

Chronic Toxicity: No additional information.

Skin corrosion/irritation:

Sodium Alkylbenzene Sulfonate: Causes skin irritation. .

Serious eye damage/irritation:

Sodium Alkylbenzene Sulfonate: Causes serious eye irritation .

Tetrasodium Pyrophosphate: Rabbit - Risk of serious damage to eyes .

Respiratory or skin sensitization: No additional information.

Carcinogenicity: No additional information.

IARC (International Agency for Research on Cancer): None of the ingredients are listed.

NTP (National Toxicology Program): None of the ingredients are listed.

Germ cell mutagenicity: No additional information. **Reproductive toxicity:** No additional information.

STOT-single and repeated exposure: No additional information.

Additional toxicological information: No additional information.

12 Ecological information

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

12.1 Toxicity:

Sodium Alkylbenzene Sulfonate: Fish, LC50 1.67 mg/l, 96 hours.

Sodium Alkylbenzene Sulfonate: Aquatic invertebrates, EC50 Daphnia 2.4 mg/l, 48 hours. Sodium

Alkylbenzene Sulfonate: Aquatic Plants, EC50 Algae 29 mg/l, 96 hours. Tetrasodium Pyrophosphate: Fish, LC50 - other fish - 1,380 mg/l - 96 h.

Tetrasodium Pyrophosphate: Aquatic invertebrates, EC50 - Daphnia magna (Water flea) - 391 mg/l - 48 h.

- **12.2** Persistence and degradability: No additional information.
- **12.3 Bioaccumulative potential:** No additional information.
- 12.4 Mobility in soil: No additional information.General notes: No additional information.
- 12.5 Results of PBT and vPvB assessment:

PBT: No additional information. **vPvB:** No additional information.

12.6 Other adverse effects: No additional information.

13 Disposal considerations

13.1 Waste treatment methods (consult local, regional and national authorities for proper disposal) Relevant Information:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities. (US 40CFR262.11).

14 Transport information

14.1	UN Number: ADR, ADN, DOT, IMDG, IATA		None
14.2	UN Proper shipping name: ADR, ADN, DOT, IMDG, IATA		None
14.3	Transport hazard classes: ADR, ADN, DOT, IMDG, IATA	Class: Label: LTD.QTY:	None None None
	US DOT Limited Quantity Exception:		None
	Bulk: RQ (if applicable): None Proper shipping Name: None Hazard Class: None Packing Group: None Marine Pollutant (if applicable): Nadditional information.	lo	Non Bulk: RQ (if applicable): None Proper shipping Name: None Hazard Class: None Packing Group: None Marine Pollutant (if applicable): No additional information.

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

	Comments: None	Comments: None		
14.4	Packing group: ADR, ADN, DOT, IMDG, IATA	None		
14.5	Environmental hazards:	None		
14.6	Special precautions for user:	None		
	Danger code (Kemler):	None		
	EMS number:	None		
	Segregation groups:	None		
14.7	14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.14.8 Transport/Additional information:			
	Transport category:	None		
	Tunnel restriction code:	None		
	UN "Model Regulation":	None		

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.

North American

SARA

Section 313 (specific toxic chemical listings): None of the ingredients are listed. **Section 302 (extremely hazardous substances):** None of the ingredients are listed.

CERCLA (Comprehensive Environmental Response, Clean up and Liability Act) Reportable

Spill Quantity: None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

Inventory: All ingredients are listed. **Rules and Orders**: Not applicable.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients are

listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed.

Chemicals known to cause developmental toxicity: None of the ingredients are listed.

Canadian

Canadian Domestic Substances List (DSL):

All ingredients are listed.

ΕU

REACH Article 57 (SVHC): None of the ingredients are listed.

according to 1907/2006/EC (REACH), 1272/2008/EC (CLP), 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.18.2017 **Revision**: 10.18.2017

Trade Name: Alconox

Germany MAK: Not classified.

EC 648/2004 – This is an industrial detergent. Contains >30% phosphate, 15-30% anionic

surfactant, <5% EDTA salts

EC 551/2009 – This is not a laundry or dishwasher detergent

EC 907/2006 – Contains no enzymes, optical brighteners, perfumes, allergenic fragrances, or

preservative agents

Asia Pacific

Australia

Australian Inventory of Chemical Substances (AICS): All ingredients are listed.

China

Inventory of Existing Chemical Substances in China (IECSC): All ingredients are listed.

Japan

Inventory of Existing and New Chemical Substances (ENCS): All ingredients are listed.

Korea

Existing Chemicals List (ECL): All ingredients are listed.

New Zealand

New Zealand Inventory of Chemicals (NZOIC): All ingredients are listed.

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS): All ingredients are listed.

Taiwan

Taiwan Chemical Substance Inventory (TSCI): All ingredients are listed.

16 Other information

Abbreviations and Acronyms: None

Summary of Phrases

Hazard statements: NFPA: 1-0-0 H315 Causes skin irritation. HMIS: 1-0-0

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 If on skin: Wash with soap and water.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P321 Specific treatment (see supplemental first aid instructions on this label).

P332+P313 If skin irritation occurs: Get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P501 Dispose of contents and container as instructed in Section 13.

Manufacturer Statement:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

APPENDIX G GROUNDWATER DISCHARGE PERMIT



EA Engineering, Science, & Technology, Inc., PBC 320 Gold Avenue SW, Suite 1300 Albuquerque, New Mexico 87102 Phone: (505) 224-9013

February 13, 2020

Mr. Jason Herman, Team Leader New Mexico Environment Department Ground Water Quality Bureau Harold Runnels Building 1190 Saint Francis Drive P.O. Box 5469 Santa Fe, NM 87502-5469

RE: Underground Injection Control General Discharge Permit

Moberg's Garage and Texaco Station

New Mexico Highway 161, Watrous, New Mexico

Facility IDs: 29439/1869, Release IDs: 1189/1623, WPIDs: 4086/4091

Deliverable IDs: 4086-2/4091-2

Dear Mr. Herman:

Attached please find the Underground Control General Discharge Permit (UIC DP) for your review and approval. EA Engineering, Science, and Technology, Inc., PBC (EA), on behalf of the New Mexico Environment Department Petroleum Storage Tank Bureau NMED PSTB, is conducting remediation of groundwater and soil at Moberg's Garage and Texaco Station in Watrous New Mexico. Work is conducted under NMED PSTB approved Work Plan IDs 4086 and 4091. Ms. Susan von Gonten is the NMED PSTB project manager and Ms. Katherine MacNeil is the NMED PSTB engineer overseeing the project. NMED PSTB will oversee the activities.

As part of the remediation, EA will inject into subsurface Regenesis Oxygen Release Compound (ORC) Advanced®. Work will be performed in accordance with New Mexico Administrative Code 20.5.119, Corrective Action for Storage Tank System Containing Petroleum Products, and the Final Remediation Plan submitted to the NMED PSTB on February 12, 2020. EA published the notice of submission of the Final Remediation Plan in Las Vegas Optic on February 12, 2020. Second publication is scheduled for February 19, 2020. A copy of the certified notice was also mailed to the adjacent property owner.

A check in the amount of \$100 US dollars for permit review is attached.

If you have any questions or comments, please feel free to contact me at (505) 715-4477 or vmustafin@eaest.com.

Sincerely,

EA Engineering, Science, and Technology, Inc., PBC

Vener Mustafin, P.E. Senior Engineer

Attachment: Underground Injection Control General Discharge Permit

Cc: Ms. Susan von Gonten, NMED PSTB

Ms. Katherine MacNeil, NMED PSTB

File

July V. Mustafin

February 13, 2020 NMED GWQB

UIC DP Moberg's Garage and Texaco Station, Watrous, NM

UNDERGROUND INJECTION CONTROL GENERAL DISCHARGE PERMIT



NEW MEXICO ENVIRONMENT DEPARTMENT GROUND WATER QUALITY BUREAU

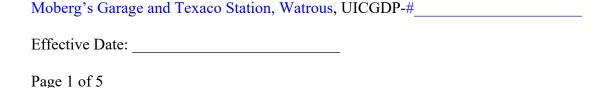
UNDERGROUND INJECTION CONTROL GENERAL DISCHARGE PERMIT



Certified Mail- Return Receipt Requested

Facility Name:	Moberg's Garage/Texaco Station State Lead Site New Mexico Highway 161, Watrous, New Mexico Contract #19 667 3200 0010
Facility Location:	Injection of oxidant is proposed along New Mexico Highway 161 in Watrous (see attached Injection Plan)
Legally Responsible Party:	NMED Petroleum Storage Tank Bureau 2905 Rodeo Park Drive East, Building 1 Santa Fe NM, 87505 Tel (505) 476-4397
	Point of Contact: Mike McVey, P.G. EA Engineering, 320 Gold Avenue Suite 1300 Albuquerque, NM 87102 (505) 224-9013 x1530 mmcvey@eaest.com
Remediation Oversight Agency Contact:	NMED PSTB Attn: Susan von Gonten 505-476-4389
Remediation or Injection Plan Identification:	Moberg's Garage/Texaco Station Final Remediation Plan
Permitting Action:	New
PPS Contact	Jason Herman, 505-827-2713
EFFECTIVE DATE:	TERM ENDS:

Michelle Hunter Chief, Ground Water Quality Bureau



I. UIC GENERAL DISCHARGE PERMIT

The New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) issues this Underground Injection Control General Discharge Permit (UIC Permit) for the subsurface emplacement of additive fluids through a Class V UIC injection wells for the purpose of facilitating remediation of vadose zone and/or ground water. The GWQB issues this UIC Permit to NMED PSTB (Permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

In issuing this UIC Permit, the GWQB has determined that the requirements of Subsection C of 20.6.2.3109 NMAC have been met. The activities authorized by this UIC Permit are principally governed by the Moberg's Garage/Texaco Station Final Remediation Plan (Injection Plan), under the authority of STATUTES/REGULATIONS, with oversight by the Petroleum Storage Tank Bureau Remedial Action Program. Compliance with this UIC Permit requires compliance with the terms, requirements, and conditions of the Injection Plan. The term of this UIC Permit shall be no longer than five years from the effective date of this UIC Permit.

The injection activities, the location of the injection site, the type of injection and quantities of additives being used are briefly described as follows:

<u>Injection Activities (summary: including injection well type, number of wells, and injection frequency)</u>

Copy of the Injection Plan Attached (required):

The specified amendment is Regenesis® Oxygen Release Compound (ORC) Advanced® (calcium hydroxide oxide, mono- and dipotassium phosphate). The ORC Advanced® will be batch mixed with water to form a slurry and immediately injected via direct push injection tools. A field log of number and volume of batches will be maintained. The batch mixing will be to 25 percent (%) solids by mass, as per Regenesis® specification. This is 10 pounds (lbs) of ORC Advanced to 3.6 gallons (30 lbs) of water. The injection will be through approximately 78 direct push boreholes. The design mass of ORC Advanced is approximately 8,260 lbs, so about 106 lbs of ORC Advanced (17 lbs/ft over the 6-foot vertical treatment thickness) will be injected into each of the 78 boreholes into an approximately 6-foot interval, as shown on Drawings G-2 and C-1. At 25% solids, the total injectate volume per borehole will be about 38 gallons, or ~6 gallons per vertical foot of injection. Subsequent "hot spot" treatments can be performed, if necessary, based on results of groundwater quality monitoring. EA will notify the GWQB 30 days in advance of any such subsequent "hot spot" injections.

Injection Site Information

Depth to Ground Water: 9 to 13 feet

Existing concentration of total dissolved solids (TDS) in ground water: <1,000 mg/L (estimated from specific conductance)

Location: Along NM Highway 161 between Oliver Street and Union Street

Moberg's Garage and Texaco Station, Watrous, UICGDP-#
Effective Date:
Page 2 of 5
County: Mora
Latitude: 35° 47' 26"
Longitude: 104° 58' 55"
Map Showing Area of Injection Sites Attached (required) -:

Additives Being Used (including volumes, manufacturer, and mixing ratios)

REGENESIS ORC Advanced® (calcium hydroxide oxide, calcium hydroxide, mono- and dipotassium phosphate). The batch mixing will be to 25% solids as per Regenesis® specification. This is 10 lbs of ORC Advanced to 3.6 gallons (30 lbs) of water. The injection will be through 78 direct push boreholes. The design demand of ORC Advanced is 8,260 lbs, so about 106 lbs of ORC Advanced (17 lbs/ft over the 6-foot vertical treatment thickness) will be injected into each of the 78 boreholes as shown on Drawings G-2 and C-1. At 25% solids, the total injectate volume per borehole will be about 38 gallons, or ~6 gallons per vertical foot of injection. Safety Data Sheets and Regenesis Technical Specification Sheets for ORC Advanced are attached.

Anticipated Precipitation, Dissolution, Adsorption, and Desorption Products

The ORC Advanced will create aerobic conditions and raise the oxidation reduction potential (ORP) in the groundwater, so we do not expect local dissolution of redox metals such as manganese and ferrous iron. The ORC Advanced will be injected as a solid phase (slurry) that will slowly dissolve in groundwater releasing oxygen to facilitate aerobic biodegradation. We do not anticipate any deleterious reactions or daughter products as a result of this injection.

This UIC Permit consists of the complete and accurate completion of this UIC Permit form as determined by the GWQB.

Issuance of this UIC Permit does not relieve the Permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

Signatures

Signature must be that of the person listed as the legally responsible party on this application.

I, the applicant, attest under penalty of law to the truth of the information and supporting documentation contained in this application for an Underground Injection Control General Discharge Permit.

Applicant's Signature

Signature:	July V. Mustafin	Date: 02/13/2020
------------	------------------	------------------

Moberg's Garag	ge and Texaco Station, Watrous,	UICGDP-#	
Effective Date:		_	
Page 3 of 5			
	Vener Mustafin (for EA E Science, and Technology, Inc. F	Engineering, Title:	Project Engineer

II. FINDINGS

In issuing this UIC Permit, GWQB finds:

- 1. The Permittee is injecting fluids so that such injections will move directly or indirectly into ground water within the meaning of Section 20.6.2.3104 NMAC.
- 2. The Permittee is injecting fluids so that such fluids will move into ground water of the State of New Mexico which has an existing concentration of 10,000 mg/L or less of TDS within the meaning of Subsection A of 20.6.2.3101 NMAC.
- 3. The Permittee is using a Class V UIC well as described in 20.6.2.5002(B)(5)(d)(ii) NMAC for in situ ground water remediation by injecting a fluid that facilitates vadose zone or groundwater remediation.
- 4. The Permittee is injecting fluids into groundwater in order to achieve the remediation goals identified in the Injection Plan.

III. AUTHORIZATION TO DISCHARGE

The Permittee is authorized to inject chemical additives into ground water in accordance with this UIC Permit and the Injection Plan under the oversight of Petroleum Storage Tank Bureau Remedial Action Program.

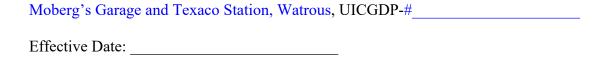
[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

IV. CONDITIONS

The conditions of this UIC Permit shall be complied with by the Permittee and are enforceable by GWQB.

1. The Permittee shall perform remediation activities in accordance with the Injection Plan and shall notify GWQB of any changes prior to making them.

[20.6.2.3107 NMAC]



2. The Permittee shall monitor the injection activities and their effects on ground water quality as required by the Injection Plan and shall provide GWQB with electronic copies of the required reporting and any pertinent documentation of activities at the site.

[20.6.2.3107.A NMAC, 20.6.2.3109.A NMAC]

Page 4 of 5

3. If the GWQB or the Permittee identifies any failure of the Injection Plan or this UIC Permit to comply with 20.6.2 NMAC not specifically noted herein, GWQB may require the Permittee to submit a corrective action plan and a schedule for completion of corrective actions to address the failure.

Additionally, the GWQB may tallow the Permittee to submit a proposed modification to the Injection Plan, this UIC Permit, or both.

[20.6.2.3107.A NMAC, 20.6.2.3109.E NMAC]

4. ADDITIONAL MONITORING REQUIREMENTS – Groundwater quality monitoring will be performed quarterly on the site monitoring wells listed below. Well locations are provided on the attached Injection Plan (Drawing C-1), and surveyed coordinates of site wells are provided in the attached survey report.

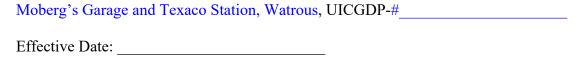
South Injection Area (see Injection Plan): W-1, W-2, W-3, BMW-10, BMW-11, and BMW-16

North Injection Area: BMW-1, BMW-2, BMW-3, BMW-5, BMW-5R, BMW-8, BMW-18, BMW-21, and BMW-22

5. TERMINATION – Within 30 days of completion of activities authorized by this UIC Permit the Permittee shall submit a closure report and a request to terminate the UIC Permit to the GWQB for its approval. The closure report shall identify how the injection well(s) was closed in accordance with the Injection Plan. The Permittee shall provide Petroleum Storage Tank Bureau Remedial Action Program with a copy of this closure report.

[20.6.2.5005 NMAC, 19.27.4 NMAC]

6. INSPECTION and ENTRY – The Permittee shall allow a representative of the NMED to inspect the facility and its operations subject to this UIC Permit and the WQCC regulations. The GWQB representative may, upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which are located any records required to be maintained by regulations of the federal government or the WQCC.



Page 5 of 5

The Permittee shall allow the GWQB representative to have access to, and reproduce for their use, any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this UIC Permit and the WQCC regulations.

Nothing in this UIC Permit shall be construed as limiting in any way the inspection and entry authority of GWQB under the WQA, the WQCC Regulations, or any other local, state or federal regulations.

[20.6.2.3107.D NMAC, NMSA 1978, §§ 74-6-9.B and 74-6-9.E]

7. MODIFICATIONS and/or AMENDMENTS – In the event the Permittee proposes a change to the injection plan that would result in a change in the volume injected; the location of the injections; or the concentration of the additives being injected by the facility, the Permittee shall notify GWQB prior to implementing such changes. The Permittee shall obtain approval (which may require modification of this UIC Permit) by GWQB prior to implementing such changes.

[20.6.2.3107.C NMAC, 20.6.2.3109.E and G NMAC]

8. COMPLIANCE with OTHER LAWS – Nothing in this UIC Permit shall be construed in any way as relieving the Permittee of the obligation to comply with all applicable federal, state, and local laws, regulations, permits or orders.

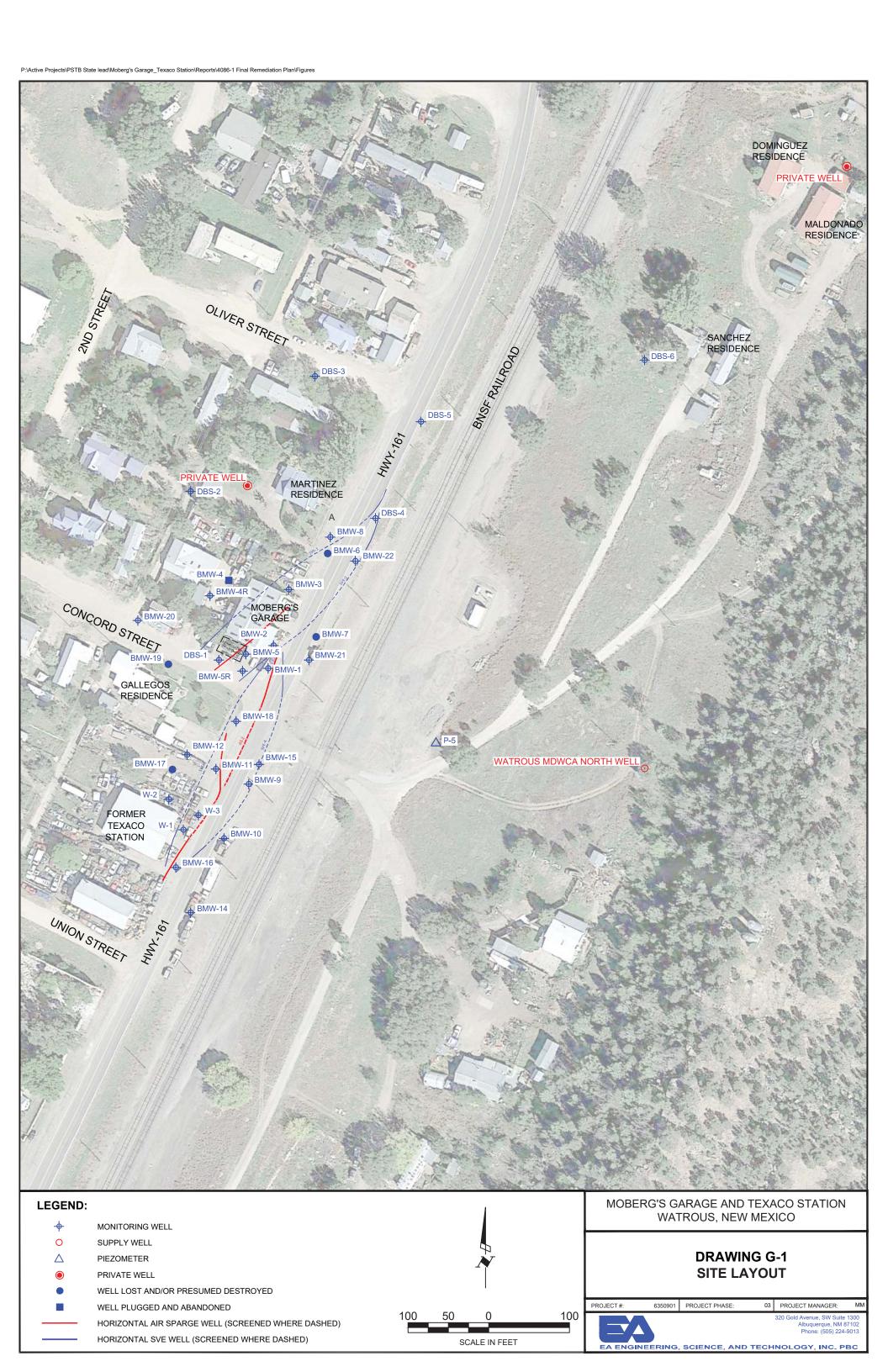
[NMSA 1978, § 74-6-5.L]

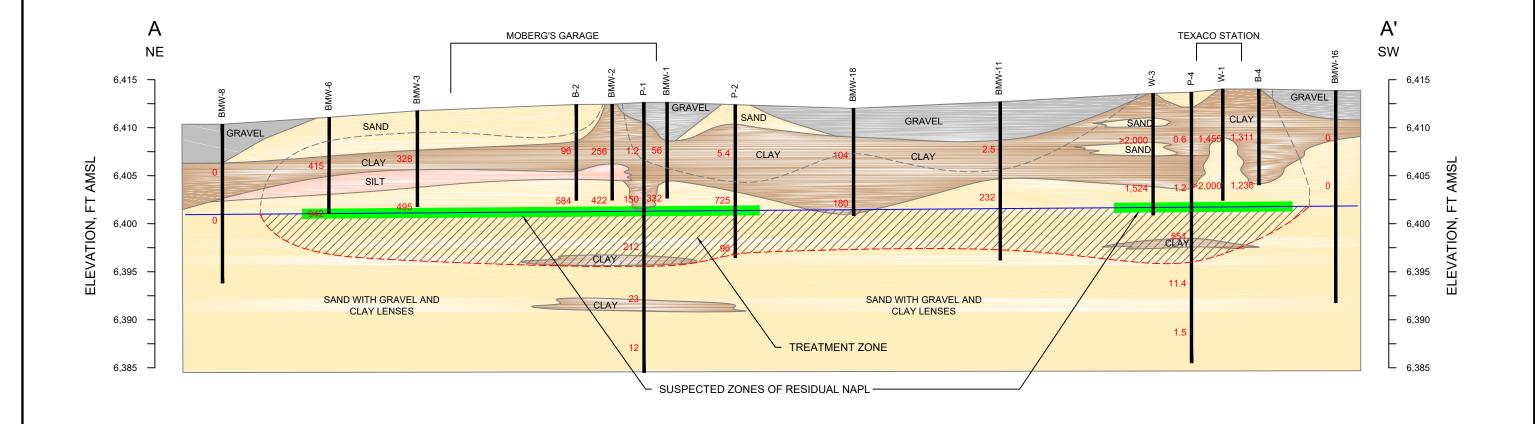
9. PERMIT FEES – Payment of permit fees is due at the time of UIC Permit approval. Permit fees shall be paid in a single payment remitted to GWQB no later than 30 days after the UIC Permit effective date.

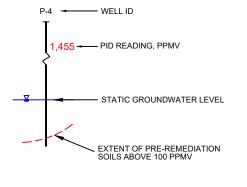
Permit fees are associated with issuance of this UIC Permit. Nothing in this UIC Permit shall be construed as relieving the Permittee of the obligation to pay all permit fees assessed by GWQB. A Permittee that ceases injecting or does not commence injecting during the term of the UIC Permit shall pay all permit fees assessed by GWQB. An approved UIC Permit shall be suspended or terminated if the facility fails to remit a payment by its due date.

[20.6.2.3114.F NMAC, NMSA 1978, § 74-6-5.K]

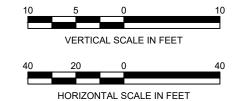
DRAWINGS







PID = PHOTOIONIZATION DETECTOR PPMV = PARTS PER MILLION BY VOLUME FT AMSL = FEET ABOVE MEAN SEA LEVEL NAPL = NON-AQUEOUS PHASE LIQUID



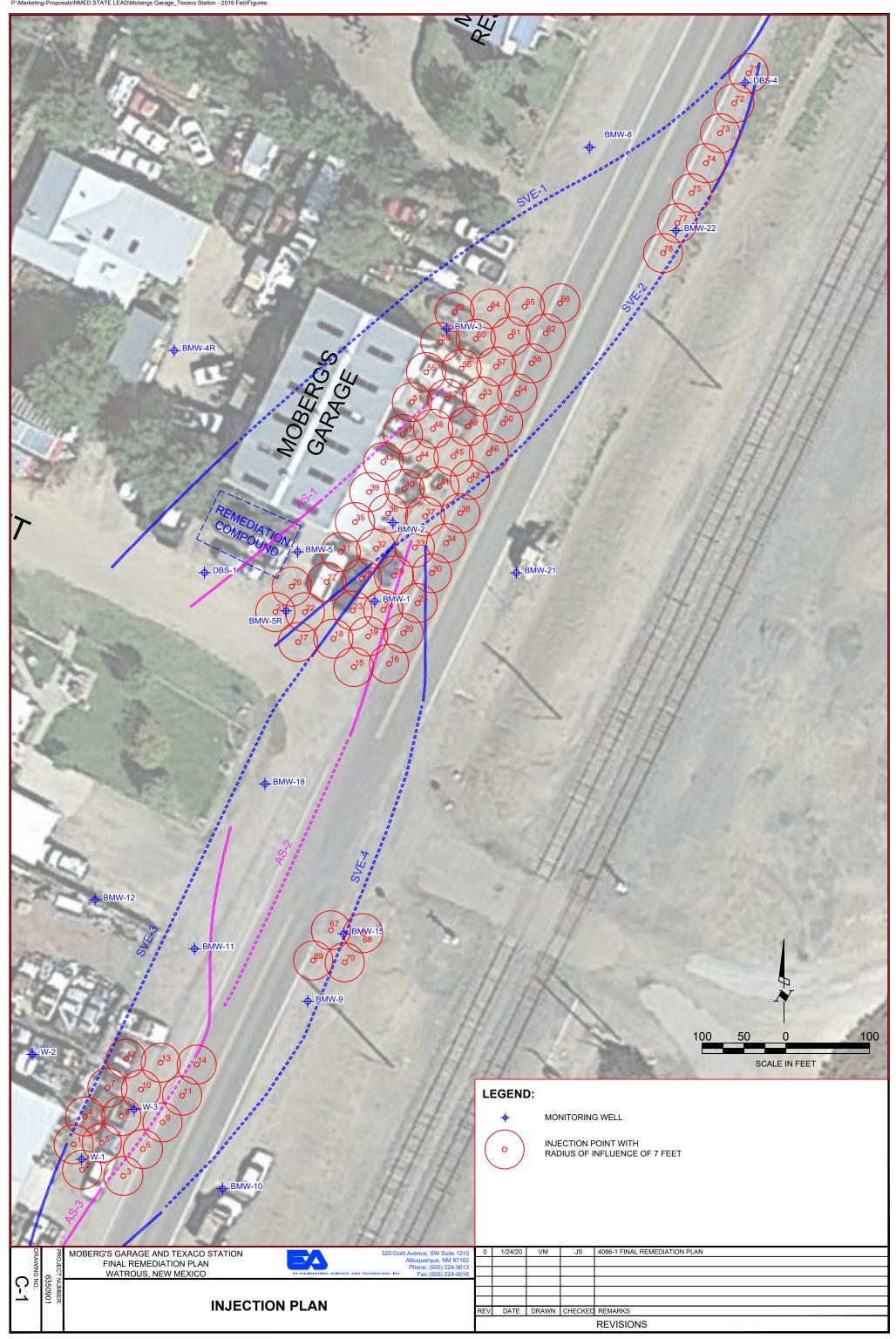
SOURCE: DBS&A

MOBERG'S GARAGE AND TEXACO STATION WATROUS, NEW MEXICO

DRAWING G-2 LONGITUDINAL SECTION SHOWING INJECTION ZONE

PROPOSAL PROJECT PHASE:





February 13, 2020 NMED GWQB	UIC DP Moberg's Garage and Texaco Station, Watrous, NM
	ORC ADVANCED® TECHNICAL DESCRIPTION



ORC Advanced® Technical Description

ORC Advanced[®] is an engineered, oxygen release compound designed specifically for enhanced, *in situ* aerobic bioremediation of petroleum hydrocarbons in groundwater and saturated soils. Upon contact with groundwater, this calcium oxyhydroxide-based material becomes hydrated producing a controlled release of molecular oxygen (17% by weight) for periods of up to 12 months on a single application.

ORC Advanced decreases time to site closure and accelerates degradation rates up to 100 times faster than natural degradation rates. A single ORC Advanced application can support aerobic biodegradation for up to 12 months with minimal site disturbance, no permanent or emplaced above ground equipment, piping, tanks, power sources, etc are needed. There is no operation or maintenance required. ORC Advanced provides lower costs, greater efficiency and reliability compared to engineered mechanical systems, oxygen emitters and bubblers.



Example of ORC Advanced

ORC Advanced provides remediation practitioners with a significantly faster and highly effective means of treating petroleum contaminated sites. Petroleum hydrocarbon contamination is often associated with retail petroleum service stations resulting from leaking underground storage tanks, piping and dispensers. As a result, ORC Advanced technology and applications have been tailored around the remediation needs of the retail petroleum industry and include: tank pit excavations, amending and mixing with backfill, direct-injection, bore-hole backfill, ORC Advanced Pellets for waterless and dustless application, combined ISCO and bioremediation applications, etc.

For a list of treatable contaminants with the use of ORC Advanced, view the Range of Treatable Contaminants Guide

Chemical Composition

- Calcium hydroxide oxide
- Calcium hydroxide
- Monopotassium phosphate
- Dipotassium phosphate

Properties

Physical state: SolidForm: Powder

• Odor: Odorless

Color: White to pale yellowpH: 12.5 (3% suspension/water)



ORC Advanced® Technical Description

Storage and Handling Guidelines

Storage

Store in a cool, dry place out of direct sunlight

Store in original tightly closed container

Store in a well-ventilated place

Do not store near combustible materials

Store away from incompatible materials

Provide appropriate exhaust ventilation in places where dust is formed

Handling

Minimize dust generation and accumulation

Keep away from heat

Routine housekeeping should be instituted to ensure that dust does not accumulate on surfaces

Observe good industrial hygiene practices

Take precaution to avoid mixing with combustibles

Keep away from clothing and other combustible materials

Avoid contact with water and moisture

Avoid contact with eyes, skin, and clothing

Avoid prolonged exposure

Wear appropriate personal protective equipment

Applications

- Slurry mixture direct-push injection through hollow rods or direct-placement into boreholes
- In situ or ex situ slurry mixture into contaminated backfill or contaminated soils in general
- Slurry mixture injections in conjunction with chemical oxidants like RegenOx or PersulfOx
- Filter sock applications in groundwater for highly localized treatment
- Ex situ biopiles

Health and Safety

Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection. Please review the <u>ORC Advanced Safety Data Sheet</u> for additional storage, usage, and handling requirements.



www.regenesis.com 1011 Calle Sombra, San Clemente CA 92673 949.366.8000

February	13,	2020
NMED G	W(ρB

UIC DP Moberg's Garage and Texaco Station, Watrous, NM

WELL SURVEY DATA

SURVEYING CONTROL, INC.

131 Madison St. N.E. Albuquerque, NM 87108 (505) 266-0935 Fax (505) 266-9985

February 26, 2016

Attn: Tom Golden, PE Daniel B. Stephens & Associates, Inc. 6020 Academy Road, N.E. Ste. 100 Albuquerque, NM 87109

Re: Coordinates & Elevations for Monitoring Wells - Moberg's Garage / Texaco Station UST Site at Watrous, New Mexico

Dear Tom:

The following are the coordinates and elevations for the monitoring wells on the above referenced site. The coordinates are New Mexico State Plane Coordinates, East Zone - NAD 83 (1992), and have been adjusted to USC&GS Benchmark / NMDOT GPS Control Point õM 75ö (Coordinates for M 75 taken from NMDOT GPS Control Map for N.M.P. # G2BT3 Las Vegas-Springer prepared by William A. Bowers, NMPS 11765: Y = 1743582.615, X = 349069.137) The elevations are referred to NAVD 88, and have been adjusted to õM 75ö as well (Published Elevation = 6419.55ø). The coordinates & elevations below are expressed in US Survey Feet. The elevations shown below labeled õTop PVC Elev.ö were taken on the black Magic Marker spot on the north edge of the PVC well casing inside the outer cover. The coordinates shown below are to the center of the cap on each well inside the outer cover lid.

Well	Northing	Easting	Top PVC Elev.
DBS-1	1743760.79	348948.14	6416.18
DBS-2	1743948.77	348915.76	6416.40
DBS-3	1744107.31	349071.93	6413.48
DBS-4	1743932.24	349144.56	6414.26
DBS-5	1744050.71	349203.34	6413.73
DBS-6	1744121.28	349480.66	6413.99
W-1	1743552.49	348900.16	6417.66
W-2	1743590.52	348883.30	6418.36
W-3	1743570.11	348918.98	6417.25
BMW-1	1743749.91	349008.85	6416.13
BMW-3	1743846.58	349036.30	6415.41
BMW-4R	1743840.72	348938.71	6415.96
BMW-8	1743910.54	349088.32	6413.80
BMW-9	1743607.20	348981.71	6416.82
BMW-10	1743540.76	348950.03	6417.02
BMW-11	1743626.65	348941.69	6416.38

Moberg's Garage / Texaco Station Monitoring Wells (Cont.-)

Well	Northing	Easting	Top PVC Elev.
BMW-12	1743644.99	348906.73	6416.47
BMW-14	1743449.75	348907.08	6417.14
BMW-15	1743631.15	348995.05	6416.65
BMW-16	1743506.31	348889.70	6417.59
BMW-18	1743685.62	348968.19	6415.57
BMW-20	1743811.64	348848.80	6416.53
BMW-21	1743758.66	349058.96	6415.43
BMW-22	1743880.04	349118.88	6414.09
P-5	1743633.07	349189.04	6417.55

Please do not hesitate to call if you have any questions or if you need any additional information.

Sincerely,

Stephen J. Toler, PS

February 13, 2020 NMED GWQB	UIC DP Moberg's Garage and Texaco Station, Watrous, NM
NOTICE OF SUBMISSION O	F THE FINAL REMEDIATION PLAN

NOTICE OF SUBMISSION OF FINAL REMEDIATION PLAN

Dates of Notice: February 12th, 2020; February 19th, 2020

Notice is hereby given by EA Engineering, Science, and Technology, Inc. PBC of the submission of a Final Remediation Plan to the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB), as follows:

- 1. The Final Remediation Plan proposes actions to remediate a release of petroleum or petroleum products into the environment.
- 2. The release occurred at Moberg's Garage and Texaco Station, Highway 161, Watrous, New Mexico.
- 3. The Final Remediation Plan proposes injection of Regenesis Oxygen Release Compound (ORC) Advanced® to facilitate aerobic biodegradation of residual contamination present in two hot spots that remain at the site.
- 4. A copy of the Final Remediation Plan can be viewed by interested parties at the NMED PSTB office located at 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505 and at the NMED field office located at 2538 Ridgerunner Road, Las Vegas, NM, 87701. In addition, the Final Remediation Plan and all applicable data may be viewed at the following website: https://cloud.env.nm.gov/waste/pages/search.php?search=%21collection2245&k=9b 546b8566. Services may be arranged for translation of documents, for interpreters, and for obtaining services for persons with disabilities by contacting the NMED PSTB Project Manager. TDD or TTY users, please access phone numbers using the New Mexico Relay Network, 1-800-659-1779 (voice) and 1-800-659-8331 (TTY users).
- 5. Comments on the plan may be sent to the NMED PSTB Project Manager by mail at New Mexico Environment Department Petroleum Storage Tank Bureau, Attn: Susan von Gonten, 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505; by telephone at (505) 476-4397; or e-mailed to: susan.vongonten@state.nm.us. Comments must be delivered by March 11, 2020. Comments sent to the project manager must also be mailed to the New Mexico Environment Department Secretary, Attn: Secretary Kenney, PO Box 5469, Santa Fe, NM 87502-5469. Please include the name of the site "Moberg's Garage and Texaco Station, Watrous, New Mexico" to ensure comments are correctly assigned to the site.

END OF PUBLIC NOTICE

AVISO DE PRESENTACIÓN DEL PLAN DE REMEDIACIÓN FINAL

Fechas de aviso: 12 de febrero de 2020; 19 de febrero de 2020

Por el presente aviso, EA Engineering, Science, and Technology, Inc. PBC notifica la presentación de un Plan de Remediación Final a la Oficina de Tanques de Almacenamiento de Petróleo (PSTB, por sus siglas en inglés) del Departamento de Medio Ambiente de Nuevo México (NMED, por sus siglas en inglés), como sigue:

- 1. El Plan de Remediación Final propone acciones para remediar una liberación de petróleo o productos del petróleo al medio ambiente.
- 2. La liberación ocurrió en Moberg's Garage y Texaco Station, Highway 161, Watrous, Nuevo México.
- 3. El Plan de Remediación Final propone la inyección de Regenesis Oxygen Release Compound (ORC, por sus siglas en inglés) Advanced® para facilitar la biodegradación aeróbica de la contaminación residual presente en dos lugares conflictivos que quedan en el sitio.
- 4. Una copia del Plan de Remediación Final puede ser vista por las partes interesadas en la oficina de PSTB del NMED ubicada en 2905 Rodeo Park Drive East, Building 1, Santa Fe, New Mexico, 87505 y en la oficina local del NMED ubicada en 2538 Ridgerunner Road, Las Vegas, NM, 87701. Además, el Plan de Remediación Final y todos los datos aplicables pueden ser vistos en el siguiente sitio web:

 https://cloud.env.nm.gov/waste/pages/search.php?search=%21collection2245&k=9b546b8566. Se pueden organizar servicios para la traducción de documentos,
 - 9b546b8566. Se pueden organizar servicios para la traducción de documentos, para intérpretes, y para obtener servicios para personas con discapacidades comunicándose con la gerente de proyecto de PSTB del NMED. Los usuarios de TDD o TTY, pueden acceder a los números de teléfono usando la Red de Retransmisión de Nuevo México, 1-800-659-1779 (voz) y 1-800-659-8331 (usuarios de TTY).
- 5. Los comentarios sobre el plan pueden enviarse a la gerente de proyecto de PSTB del NMED por correo a la Oficina de Tanques de Almacenamiento de Petróleo del Departamento de Medio Ambiente de Nuevo México, a la atención de: Susan von Gonten, 2905 Rodeo Park Drive East, Building 1, Santa Fe, Nuevo México, 87505; por teléfono al (505) 476-4397; o por correo electrónico a: susan.vongonten@state.nm.us. Los comentarios deben ser entregados a más tardar el 11 de marzo de 2020. Los comentarios enviados a la gerente de proyecto también deben ser enviados por correo al secretario del Departamento de Medio Ambiente de Nuevo México, a la atención del secretario Kenney, P.O. Box 5469,

Santa Fe, NM 87502-5469. Por favor incluya el nombre del sitio "Moberg's Garage and Texaco Station, Watrous, New Mexico" para asegurar que los comentarios sean asignados correctamente al sitio.

FIN DEL AVISO PÚBLICO

APPENDIX H PUBLIC NOTICE

NOTICE OF SUBMISSION OF FINAL REMEDIATION PLAN

Dates of Notice: February 12th, 2020; February 19th, 2020

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END OF PUBLIC NOTICE

AVISO DE PRESENTACIÓN DEL PLAN DE REMEDIACIÓN FINAL

Fechas de aviso: 12 de febrero de 2020; 19 de febrero de 2020

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Santa Fe, NM 87502-5469. Por favor incluya el nombre del sitio "Moberg's Garage and Texaco Station, Watrous, New Mexico" para asegurar que los comentarios sean asignados correctamente al sitio.

FIN DEL AVISO PÚBLICO

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Legal# 20020057 Notice of Submission of Final Remediation Plan

AFFIDAVIT OF PUBLICATION

COUNTY OF SAN MIGUEL	
STATE OF NEW MEXICO Ss.	
Phil Scherer, Being first duly sworn, on oath states that he Vegas Optic, a tri-weekly newspaper of general paid and general circular, New Mexico, entered under the second class postal privilege in county in which the notice hereto attached is required to be published a published in said San Miguel County continuously and uninterruptedly months prior to the first issue thereof containing said notice. That the as published is hereto attached and hereby made a part hereof was published in said newspaper once each week for confollowing dates, to wit:	culation in San Migue n said county, being the and said paper has bee y during a period of si notice of which a cop ublished in the Englis
First Publication on the 12 day of February	, 20 20 .
Second Publication on theday ofFebruary	, 2020
Third Publication on theday of	, 2020
Fourth Publication on theday of	, 2020
Fifth Publication on theday of	, 20 <u></u>
Sixth Publication on theday of	, 2020
That such notice is a legal notice and was published in said newspaper ourpose within the meaning of the provisions of Chapter 167, session Loayment therefor has been made – assessed as Court costs. Editor	aws of 1937, and that
Subscribed and sworn to before me this 24th day of February	ary, 20 20.
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seti-administration of medications. Must have a valid drive's license, Diploma/GED. Starting pay is \$9.50. Anyone interested in this position must pick up an application at Citizens for the Developmentally Disabled, Inc. 2532 Ridge Runner Rd., Las Vegas, NM 87701. CDD is an equal opportunity employer

Direct Support

Professional

Citizens for the Developmentally Disabled, Inc. is now accepting applications for Full Time-Part-Time Direct Support Staff. This position involves assisting the individual in their home with daily living skills, community integration, arranging of

medical appointments and assist with self-administration of medications.

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	APPENDIX I
IMPLEMENTATION	N SCHEDULE

APPENDIX I. IMPLEMENTATION SCHEDULE MOBERG'S GARAGE AND TEXACO STATION, WATROUS, NEW MEXICO

Activity	Description	Task Duration	Total Duration
1	Final FRP Approval	30	30
2	Phase 4 Work Plan Preparation and Approval	30	60
3	Public Notice Period	30	90
4	Vendor and Contractor Procurement	5	95
5	Mobilize to Site	10	105
6	Inject ORC-A	14	119
7	1st Quarterly Sampling	91	210
8	2nd Quarterly Sampling	91	301
9	3rd Quarterly Sampling	91	392
10	Annual Monitoring and Performance Assessment	91	483

Note:

The presented schedule is preliminary and may be adjusted based on regulatory approval, property access, equipment, materials, subcontractor availability, and other factors.