

Appendix D

Data Usability Summary

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1. Introduction

A Jacobs Engineering Group Inc. (Jacobs) project chemist reviewed 11 data packages from SGS Laboratories of Houston, Texas for the analysis of groundwater samples collected from April 16 to October 18, 2019 at the Charlie Burch Pits site in Spring, Texas (site). Data were reviewed for conformance to the requirements of the Texas Commission on Environmental Quality (TCEQ) guidance document, *Review and Reporting of COC Concentration Data Under TRRP* (RG-366/Texas Risk Reduction Program [TRRP]-13; TCEQ 2010) and adherence to project objectives.

Jacobs asserts that at the time the laboratory data were generated for the project, the laboratory was accredited by the National Environmental Laboratory Accreditation Conference under the Texas Laboratory Accreditation Program for the matrices, analytes, and methods of analyses requested on the chain-of-custody documentation. Attachment D-1 contains a copy of the National Environmental Laboratory Accreditation Program certificates applicable to the period during which the laboratories generated the data in this report.

Intended Use of Data: The laboratory data included in this report provide information on concentrations of the constituents of concern (COCs) in site groundwater to support preparation of the annual groundwater monitoring report for 2019.

The following analyses were performed:

- SW-846 5030/8260C: Volatile organic compounds (VOCs) by gas chromatography/mass spectrometry (GC/MS)
- SW-846 3510C/8270D: Semivolatile organic compounds (SVOCs) by GC/MS

Data were reviewed and validated as described in *Review and Reporting of COC Concentration Data Under TRRP* (RG-366/TRRP-13; TCEQ 2010). This data usability summary discusses the review and validation results. The following laboratory submittals were examined:

- Reportable data
- Laboratory review checklists (LRCs) and associated exception reports (ERs)
- Observations regarding sampling procedures, and preservation procedures before shipping the samples to the laboratory

The supporting quality control (QC) analyses results were summarized in the LRCs, ERs, and case narratives. Attachment D-1 contains the LRCs, associated ERs, and reportable data included in this review.

2. Samples

Seventy groundwater samples were analyzed for VOCs, and five groundwater samples were analyzed for SVOCs. Additionally, field QC samples analyzed included nine field duplicates, eleven trip blanks, and four equipment rinsate blanks. Table D-1 lists the sample identifications cross-referenced to laboratory identifications.

2.1 Project Measurement Quality Objectives

Organic Analytes:

- Recovery 60% to 140% or laboratory control limits
- Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) relative percent difference (RPD) less than or equal to 20% or laboratory control limits
- Matrix spike (MS)/matrix spike duplicate (MSD) RPD less than or equal to 30% or laboratory control limits

- Sample and field duplicate RPD less than or equal to 30% percent or ± 2 times the method quantitation limit (MQL) if concentrations are less than 5 times MQL
- Completeness 95%

3. Data Review and Validation Results

3.1 Analytical Results

Nondetected results are reported as less than the sample detection limit as defined by the Texas Risk Reduction Program Rule. No data were qualified during the data validation process.

3.2 Preservation and Holding Times

Samples were evaluated for agreement with the chain-of-custody documentation. Samples were received in the appropriate containers and in good condition with proper completion of the chain-of-custody documentation.

Sample receipt temperatures were within the acceptance criteria of 4 ± 2 degrees Celsius ($^{\circ}\text{C}$) except for coolers that arrived at temperature below 2°C but did not exhibit any impact to samples and thus did not require data qualification. Samples were preserved as specified in SW-846 Tables 2-40(A) and 2-40(B). Samples were prepared and analyzed within holding times specified in SW-846 Tables 2-40(A) and 2-40(B).

3.3 Calibrations and Tunes

According to the LRCs and case narratives, initial and continuing calibration data met Method SW-846 requirements. The LRCs also document satisfactory instrument performance calibrations (GC/MS tunes) for the GC/MS analyses (VOCs and SVOCs).

3.4 Blanks

No target analytes were detected in any laboratory blank, trip blank, or equipment rinsate blank at any concentration that required data qualification.

3.5 Surrogate Recoveries and Internal Standard Recoveries

Surrogate recoveries for VOC and SVOC analyses were within acceptance criteria. According to the LRCs and case narratives, internal standards were within Method SW-846 acceptance criteria.

3.6 Laboratory Control Samples

LCSs and LCSDs were spiked with target analytes of interest for the analytical methods. LCS/LCSD recoveries and RPDs were within acceptance criteria.

3.7 Matrix Spike and Matrix Spike Duplicates

MS/MSDs were spiked with target analytes of interest for the analytical methods. MS/MSD recoveries and RPDs were within acceptance criteria.

3.8 Field Precision

Table D-2 summarizes field duplicate precision calculations. Field duplicate precision was not calculated for results where both the normal and field duplicate results were reported as not detected (U). Based on the RPD between the concentrations detected and the proximity of the concentrations to the MQL, field duplicate precision was within the project acceptance criteria.

3.9 Field Procedures

Samples were collected following standard operating procedures detailed in the project sampling instructions. No anomalies were observed during sampling.

4. Summary

Overall, the quality of the analytical data was found to be within the QC limits established by the project data quality objectives, analytical methods, and review criteria presented in *Review and Reporting of COC Concentration Data Under TRRP* (RG-366/TRRP-13; TCEQ 2010).

The following data quality indicators were within project acceptance criteria and did not require data qualification:

- Sample receipt conditions
- Sample preservation
- Holding times
- Initial calibrations
- Continuing calibration verification
- Instrument performance calibrations
- Blanks
- Internal standard recoveries
- Surrogate recoveries
- LCS/LCSD recoveries and RPDs
- MS/MSD recoveries and RPDs
- Field duplicate RPDs

No results were rejected or otherwise qualified, giving the data set a 100% completeness. Analytical results may be used to support project decisions.

5. Reference

Texas Commission on Environmental Quality (TCEQ). 2010. *Regulatory Guidance: Review and Reporting of COC Concentration Data Under TRRP, RG-366/TRRP-13*. TCEQ Remediation Division. September 17, 1999; Revised May 2010.

Tables

Table D-1. Cross-Referenced Field Sample Identifications and Laboratory Identifications
2019 Annual Groundwater Monitoring Report, Data Usability Summary
Rohm and Haas, Charlie Burch Pits Site, Spring, Texas

Field Identification	Laboratory Identification	Matrix	Date Collected
RDP-3-20190416-HS	TD37784-1	Water	4/16/2019
RDP-5-20190416-HS	TD37784-2	Water	4/16/2019
MW-CB-26A-20190416-HS	TD37784-3	Water	4/16/2019
MW-CB-12AS-20190416-HS	TD37784-4	Water	4/16/2019
TRW-CB-1-20190416-HS	TD37784-5	Water	4/16/2019
TRW-CB-2-20190416-HS	TD37784-6	Water	4/16/2019
MW-CB-39-20190416-HS	TD37784-7	Water	4/16/2019
MW-CB-40-20190416-HS	TD37784-8	Water	4/16/2019
MW-CB-45-20190416-HS	TD37784-9	Water	4/16/2019
ERB-01-20190416-HS	TD37784-10	Water	4/16/2019
DUP-01-20190416-HS	TD37784-11	Water	4/16/2019
TRIP BLANK	TD37784-12	Water	4/16/2019
MW-CB-45-20190417	TD37790-1	Water	4/17/2019
MW-CB-40-20190417	TD37790-2	Water	4/17/2019
MW-CB-39-20190417	TD37790-3	Water	4/17/2019
TRW-CB-2-20190417	TD37790-4	Water	4/17/2019
TRW-CB-1-20190417	TD37790-5	Water	4/17/2019
TRIP BLANK	TD37790-6	Water	4/17/2019
TRIP BLANK	TD37793-1	Water	4/18/2019
MW-CB-12AS-20190418	TD37793-2	Water	4/18/2019
MW-CB-26A-20190418	TD37793-3	Water	4/18/2019
RDP-3-20190418	TD37793-4	Water	4/18/2019
RDP-5-20190418	TD37793-5	Water	4/18/2019
DUP-01-20190418	TD37793-6	Water	4/18/2019
MW-CB-44-20190613	TD40648-1	Water	6/13/2019
MW-CB-48-20190613	TD40648-2	Water	6/13/2019
TRIP BLANK	TD40648-3	Water	6/13/2019
DUP-01-20190613	TD40648-4	Water	6/13/2019
MW-CB-11AS-20191001	TD45673-1	Water	10/1/2019
MW-CB-12AD-20191001	TD45673-2	Water	10/1/2019
MW-CB-12AS-20191001	TD45673-3	Water	10/1/2019
MW-CB-24AS-20191001	TD45673-4	Water	10/1/2019
MW-CB-8AD-20191001	TD45673-5	Water	10/1/2019
MW-CB-16AS-20191001	TD45673-6	Water	10/1/2019

Table D-1. Cross-Referenced Field Sample Identifications and Laboratory Identifications
2019 Annual Groundwater Monitoring Report, Data Usability Summary
Rohm and Haas, Charlie Burch Pits Site, Spring, Texas

Field Identification	Laboratory Identification	Matrix	Date Collected
OW-2-20191001	TD45673-7	Water	10/1/2019
MW-CB-2A-20191001	TD45673-8	Water	10/1/2019
MW-CB-2B-20191001	TD45673-9	Water	10/1/2019
RDP-5-20191001	TD45673-10	Water	10/1/2019
EB-01-20191001	TD45673-11	Water	10/1/2019
DUP-01-20191001	TD45673-12	Water	10/1/2019
TB-01-20191001	TD45673-13	Water	10/1/2019
TB-02-20191001	TD45674-1	Water	10/1/2019
MW-CB-43-20191001	TD45674-2	Water	10/1/2019
MW-CB-44-20191001	TD45674-3	Water	10/1/2019
MW-CB-45-20191001	TD45674-4	Water	10/1/2019
MW-CB-46S-20191001	TD45674-5	Water	10/1/2019
MW-CB-47S-20191001	TD45674-6	Water	10/1/2019
MW-CB-48-20191001	TD45674-7	Water	10/1/2019
OBS-1-20191001	TD45674-8	Water	10/1/2019
TB-02-20191002	TD45774-1	Water	10/2/2019
OBS-2-20191002	TD45774-2	Water	10/2/2019
MW-CB-41S-20191002	TD45774-3	Water	10/2/2019
MW-CB-41D-20191002	TD45774-4	Water	10/2/2019
MW-CB-42-20191002	TD45774-5	Water	10/2/2019
MW-CB-40-20191002	TD45774-6	Water	10/2/2019
MW-CB-39-20191002	TD45774-7	Water	10/2/2019
MW-CB-37S-20191002	TD45774-8	Water	10/2/2019
MW-CB-38-20191002	TD45774-9	Water	10/2/2019
DUP-5-20191002	TD45774-10	Water	10/2/2019
MW-CB-4-20191002	TD45775-1	Water	10/2/2019
RDP-3-20191002	TD45775-2	Water	10/2/2019
RW-CB-3D-20191002	TD45775-3	Water	10/2/2019
MW-CB-1B-20191002	TD45775-4	Water	10/2/2019
MW-CB-1BS-20191002	TD45775-5	Water	10/2/2019
MW-CB-1A-20191002	TD45775-6	Water	10/2/2019
MW-CB-6B-20191002	TD45775-7	Water	10/2/2019
MW-CB-7B-20191002	TD45775-8	Water	10/2/2019
DUP-02-20191002	TD45775-9	Water	10/2/2019

Table D-1. Cross-Referenced Field Sample Identifications and Laboratory Identifications
2019 Annual Groundwater Monitoring Report, Data Usability Summary
Rohm and Haas, Charlie Burch Pits Site, Spring, Texas

Field Identification	Laboratory Identification	Matrix	Date Collected
DUP-03-20191002	TD45775-10	Water	10/2/2019
DUP-04-20191002	TD45775-11	Water	10/2/2019
EB-02-20191002	TD45775-12	Water	10/2/2019
TB-01-20191002	TD45775-13	Water	10/2/2019
TRW-CB-1-20191003	TD45772-1	Water	10/3/2019
TRW-CB-2-20191003	TD45772-2	Water	10/3/2019
EAB-MW-3-20191003	TD45772-3	Water	10/3/2019
EAB-MW-2-20191003	TD45772-4	Water	10/3/2019
MW-CB-36-20191003	TD45772-5	Water	10/3/2019
MW-CB-33A-20191003	TD45772-6	Water	10/3/2019
TRW-CB-3-20191003	TD45772-7	Water	10/3/2019
TRW-CB-4-20191003	TD45772-8	Water	10/3/2019
MW-CB-14AS-20191003	TD45772-9	Water	10/3/2019
MW-CB-15AS-20191003	TD45772-10	Water	10/3/2019
MW-CB-13AS-20191003	TD45772-11	Water	10/3/2019
DUP-06-20191003	TD45772-12	Water	10/3/2019
EB-03-20191003	TD45772-13	Water	10/3/2019
TB-02-20191003	TD45772-14	Water	10/3/2019
RW-CB-2-20191003	TD45773-1	Water	10/3/2019
RW-CB-4-20191003	TD45773-2	Water	10/3/2019
TB01-20191003	TD45773-3	Water	10/3/2019
RW-CB-2R-20191018	TD46497-1	Water	10/18/2019
RW-CB-3R-20191018	TD46497-2	Water	10/18/2019
RW-CB-5R-20191018	TD46497-3	Water	10/18/2019
RW-CB-4R-20191018	TD46497-4	Water	10/18/2019
TRIP BLANK	TD46497-5	Water	10/18/2019

Table D-2. Field Precision

2019 Annual Groundwater Monitoring Report
 Rohm and Haas, Charlie Burch Pits Site, Spring, Texas

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
MW-CB-26A-20190416-HS / DUP-01-20190416-HS	1,2-Dichloroethane	0.0045	0.0041	9.3%	A
MW-CB-26A-20190418 / DUP-01-20190418	1,2-Dichloroethane	0.0043	0.0043	0.0%	A
MW-CB-12AS-20191001 / DUP-01-20191001	1,2-Dichloroethane	0.0029	0.0026	10.9%	A
EAB-MW-3-20191003 / DUP-06-20191003	1,2-Dichloroethane	0.0266	0.0288	7.9%	A
EAB-MW-3-20191003 / DUP-06-20191003	Chloroethane	0.0012	0.00035 U	*109.7%	A
MW-CB-40-20191002 / DUP-5-20191002	1,2-Dichloroethane	0.0203	0.0208	2.4%	A
MW-CB-1B-20191002 / DUP-04-20191002	1,2-Dichloroethane	0.0066	0.0071	7.3%	A
RDP-3-20191002 / DUP-02-20191002	1,2-Dichloroethane	0.0268	0.0275	2.6%	A
RW-CB-3D-20191002 / DUP-03-20191002	1,2-Dichloroethane	0.0067	0.0067	0.0%	A

^a RPD = ((SR - DR)*200)/(SR + DR)

* = RPD outside of criteria but concentrations within ± 2x MQL so precision is acceptable

A = Acceptable data

U = Not detected at reported detection limit

SR = sample result

DR = duplicate result

mg/L = milligrams per liter

MQL = method quantitation limit

RPD = relative percent difference

SDL = sample detection limit

Attachment D-1
National Environmental Laboratory
Accreditation Program Certificates



Texas Commission on Environmental Quality

NELAP-Recognized Laboratory Accreditation is hereby awarded to



SGS North America Inc. – Houston
10165 Harwin Drive, Suite 150
Houston, TX 77036-1622

in accordance with Texas Water Code Chapter 5, Subchapter R, Title 30 Texas Administrative Code Chapter 25, and the National Environmental Laboratory Accreditation Program.

The laboratory's scope of accreditation includes the fields of accreditation that accompany this certificate. Continued accreditation depends upon successful ongoing participation in the program. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current location(s) and accreditation status for particular methods and analyses (www.tceq.texas.gov/goto/lab). Accreditation does not imply that a product, process, system or person is approved by the Texas Commission on Environmental Quality.

Executive Director Texas Commission on
Environmental Quality

Certificate Number: T104704220-19-31
Effective Date: 4/1/2019
Expiration Date: 3/31/2020