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Data Usability Summary

Date: November 6, 2016
To: Ryan Carroll /Houston
From: Paula DiMattei/Chelmsford
Subject: Data Validation
Yosemite Project
TestAmerica Job IDs: 490-112164, 490-112314, 490-112609, 490-112627, 490-112673, and 490-112674

Distribution: R.Kennedy/Chelmsford

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SUMMARY

Introduction

Limited validation was performed on the analytical data for the samples tabulated below. The samples were collected on September 20-24, 2016 and September 27, 2016 at the Yosemite site located in Gregory, TX. The samples were submitted to TestAmerica in Nashville, TN. Some analyses were subsequently performed in the TestAmerica Denver, Colorado or TestAmerica Corpus Christi, Texas facilities. The data were processed and reported in Job IDs: 490-112164, 490-112314, 490-112609, 490-112627, 490-112673, and 490-112674.

Job ID	Sample ID
490-112164	EW-1-0-2
	EW-2-0-2
	EW-3-0-2
	EW-4-0-2
	EW-5-0-2
	EW-6-0-2
	EW-9-0-2
	TB-1
490-112314*	EW-7-0-2
	EW-8-0-2
	EW-10-0-2
	TRIP BLANK
	EW-11-0-2
	EB-20-0-2

Job ID	Sample ID
490-112314*	EB-2-0-2
	EB-24-0-2
	EB-25-0-2
	EB-23-0-2
	EB-21-0-2
	EB-22-0-2
	EW-4-16-17
	EB-26-0-2
	EB-27-0-2
	EB-9-0-2
	TB-2 (Trip blank)
	EB-1-0-2
	EB-4-0-2
	EB-3-0-2
	EB-19-0-2
	EB-8-0-2
	EB-18-0-2
	EB-17-0-2
	EB-16-0-2
	EB-10-0-2
	EB-7-0-2
	EB-5-0-2
	EB-6-0-2
EB-14-0-2	
EW-8-17-18	
EW-5-16-17	
EW-6-16-17	
490-112609	EW10GWFS109242016
	EW2-GWFS109242016 JB
	EW3-GWFS109242016 JB
	EW8-GWFS109242016 JB
	EW9GWFS109242016 BW
490-112627	EW-1_GWFS109232016JB
	EW-11_GWFS109232016JB
	EW-4_GWFS109232016JB
	EW-5_GWFS109232016JB
	EW-6_GWFS109232016JB
	EW-7_GWFS109232016JB
	TRIP BLANK-092316

Job ID	Sample ID
490-112673	EW-9-17-18
	EW-10-16-20
	EW-7-8-12
	EB-13-0-2
	EB-11-0-2
	TB-1 (Trip blank)
490-112674	EB-12-0-2
	EB-15-0-2
	EW-11-16-17
	EW-1-15-20
	EW-2-14-15
	EW-3-17-18
	TB-3-092316 (Trip blank)
	EB-12-0-2
	EB-15-0-2
*The pdf is identified as 490-112314. It should be noted that the lab sample IDs for 490-112318, 490-112415, 490-112417 and 490-112506 are also reported in this pdf.	

One or more of the following methods were applicable to the samples in this data set:

Analyte	Primary Method Reference
BTEX	SW-846 Method 8021B
TPH	TX 1005
Pesticides	SW-846 8081B
Project- specific Herbicides	SW-846 Methods 8151A/8321A
RCRA Metals	SW-846 Methods 6010C/7470A/7471
Total Dissolved Solids	Standard Method 2540C
pH (including temperature)	SW-846 Method 9040
BTEX – Benzene, toluene, ethylbenzene, total xylenes TPH – Total petroleum hydrocarbons RCRA – Resource Conservation and Recovery Act	

Data validation activities were conducted with reference to:

- Commission on Environmental Quality (TCEQ), TCEQ Regulatory Guidance, remediation Division, *Review and Reporting of COC Concentration Data under TRPP (RG-366/TRPP-13), Texas Risk Reduction Program (TRRP)*, (May 2010);
- laboratory quality control (QC) limits.

A limited validation was performed on the data using the project electronic data deliverables (EDD) to scan for specific quality control (QC) element nonconformances. The QC nonconformances were evaluated using data validation criteria to determine if the associated sample data would require qualification. This validation assumes that the EDD was complete and accurate as reported from the laboratory. In the absence of method-specific information, laboratory quality control (QC) limits or project-specific requirements, AECOM professional judgment was used as appropriate.

The data were evaluated based on the following parameters (where applicable to the method):

- ✓ Data completeness (chain-of-custody [COC])/sample integrity
- ✗ Holding times and sample preservation
- ✓ Laboratory blanks/field blanks/trip blanks
- ✗ Surrogate spike recoveries
- ✗ Matrix spike (MS)/matrix spike duplicate (MSD) and/or laboratory duplicate results
- ✗ Laboratory control sample (LCS)/laboratory control sample duplicate (LCSD) results
- NA Field duplicate results
- ✓ Sample results/reporting issues

The symbol (✓) indicates that no results were qualified based on this parameter. An “NA” indicates that the parameter was not included as part of this data set or was not applicable to this validation and therefore not reviewed. The symbol (✗) indicates that a quality control (QC) nonconformance resulted in the qualification of data. Any QC nonconformance that resulted in the qualification of data is discussed below. In addition, nonconformances or other issues that were noted during validation, but did not result in qualification of data, may be discussed for informational purposes only.

The data appear valid as reported and may be used for decision making purposes. Select data points were qualified as estimated or rejected due to nonconformances of certain QC criteria (see discussion below).

QUALIFICATIONS

Holding Times and Sample Preservation

Job ID: 490-112609 and 490-112627

The holding time for pH is listed as “samples should be analyzed as soon as possible”. The pH determination for samples EW3-GWFS109242016 JB and EW9GWFS109242016 BW (in Job ID 490-112609) and for EW-5_GWFS109232016JB (in Job ID: 490-112627) was performed six or seven days after sample collection. Professional judgment was applied to qualify the pH results for these samples as estimated (J).

Laboratory Method blanks/Field Blanks/Trip Blanks

Job ID: 490-112627

The target analytes C12-C28 and C6-C35 were detected in the method blank associated with the Trip blank. These target analytes were not detected in the Trip blank; therefore, qualification of the data was not required.

Surrogate Spike Recoveries

Job ID: 490-112417 and 490-112673

The percent recovery (%R) for the VOC surrogate compound a,a,a-trifluorotoluene fell below the QC acceptance criteria but was >10%R in the analysis of soil samples EB-16-0-2 (in Job ID 490-112417) and EW-10-16-20 (in Job ID 490-112673). All nondetect VOC results in this sample were qualified as estimated and potentially biased low (UJL).

Job ID: 490-112506 (found in the pdf 490-112314)

The %R for the herbicide surrogate compound dichloroacetic acid fell below the QC acceptance criteria and was <10%R in the analysis of soil sample EB-6-0-2. The nondetect results for 2,4,5-TP, 2,4,5-T and 2,4-D in this sample were qualified as rejected (R) and are not usable for project decisions.

Job ID: 490-112609

The %R for the herbicide surrogate compound dichloroacetic acid exceeded the QC acceptance criteria in the analysis of aqueous sample EW10GWFS109242016. All herbicide compounds were not detected in this sample; therefore, qualification of the data was not required.

Job ID: 490-112609 and 490-112627

The %R for the herbicide surrogate Diuron-d6 fell below the QC acceptance criteria but was >10% in the analysis of aqueous samples EW10GWFS109242016 and EW9GWFS109242016 BW (in Job ID 490-112609) and EW-4_GWFS109232016JB (in Job ID: 490-112627). The nondetect results for Diuron in these samples were qualified as estimated and potentially biased low (UJL).

MS/MSD Results

Job ID: 490-112164, 490-112314, 490-112318 (found in the pdf 490-112314), and 490-112417(found in the pdf 490-112314)

The %R for silver in the MS/MSD analysis performed on sample EW-1-0-2 fell below the QC acceptance criteria but were >30%R. The nondetect results for silver in the associated samples, tabulated below were qualified as estimated and potentially biased low (UJL).

Job ID	Sample IDs
490-112164	EW-1-0-2, EW-2-0-2, EW-3-0-2, EW-4-0-2, EW-5-0-2, EW-6-0-2 and EW-9-0-2
490-112314	EW-10-0-2, EW-11-0-2, EW-7-0-2 and EW-8-0-2
490-112318 (found in the pdf 490-112314)	EB-23-0-2
490-112417 (found in the pdf 490-112314)	EB-16-0-2, EB-19-0-2 and EB-8-0-2

LCS/LCSD Results

Job ID: 490-112314, 490-112417-8 (found in the pdf 490-112314) and 490-112673

The %R for benzene and toluene exceeded the QC acceptance criteria in the LCS/LCSD analyses associated with the following soil samples: [(in Job ID: 490-112314): EB-20-0-2, EB-2-0-2, EB-24-0-2, EB-25-0-2, EW-10-0-2, EW-11-0-2, EW-7-0-2, EW-8-0-2; and (in Job ID: 490-112417: EB-16-0-2)]. Benzene and toluene were not detected in these samples; therefore, qualification of the data was not required.

The %R for benzene exceeded the QC acceptance criteria and the %R for toluene fell below the QC acceptance criteria in the LCS/LCSD analyses associated with soil sample EB-11-0-2 (in Job ID 490-112673). Additionally, the relative percent difference (RPD) for toluene exceeded the QC acceptance criteria. Benzene was not detected in this sample; therefore, qualification of the data was not required. The nondetect result for toluene was qualified as estimated (UJ).

Job ID: 490-112609 and 490-112627

The %R for Diuron fell below the QC acceptance criteria but was >10% in the LCS analysis associated with aqueous samples EW10GWFS109242016 and EW9GWFS109242016 BW (in Job ID 490-112609)

and EW-1_GWFS109232016JB (in Job ID 490-112627). The nondetect results for Diuron in these samples were qualified as estimated and potentially biased low (UJL).

The %R for dissolved silver and dissolved chromium exceeded the QC acceptance criteria in the LCS/LCSD analyses associated with the following aqueous samples: [EW10GWFS109242016, EW8-GWFS109242016 JB and EW9GWFS109242016 BW (in Job ID: 490-112609) and EW-1_GWFS109232016JB, EW-4_GWFS109232016JB, EW-6_GWFS109232016JB and EW-7_GWFS109232016JB (in Job ID: 490-112627)]. Dissolved silver and dissolved chromium were not detected in these samples; therefore, qualification of the data was not required.

Job ID: 490-112627

The RPD for Dinoseb exceeded the QC acceptance criteria in the LCS/LCSD analyses associated with aqueous sample EW-4_GWFS109232016JB. The nondetect result for Dinoseb in this sample was qualified as estimated (J).