

APPENDIX C

DATA VALIDATION REPORT

1 Data Validation

Soil samples were collected as part of supplemental investigation sampling of the truck fill station (TFS), water tank, and northeast corner areas of the DESC Site Norwalk, California project. This sampling program consisted of collection and analysis of sixty-one soil samples. All samples were collected between September 3 and 9, 2009 as part of the DESC Site Norwalk, California project.

Soil samples collected were submitted to CalScience Environmental Laboratories Inc. in Garden Grove, California for the following analyses:

- (1) Volatile Organic Compounds EPA 5035/8260B,
- (2) Total Petroleum Hydrocarbons as Gasoline EPA 5030B/8015B Mod, and
- (3) TPH as JP-5 EPA 3550B/8015 Mod.

The data was reviewed in accordance with the Supplemental Investigation Work Plan For Truck Fill Station, Water Tank, And Northeast Settling Pond Areas.

Results for these samples are summarized in Calscience report numbers **09-09-0447**, **09-09-0479**, **09-09-0575** and **09-09-0809**. Laboratory data were reviewed to evaluate compliance with the method and the quality of the data reported. This data review did not include recalculation or transcription error checking from the raw data. The following areas were covered in this review:

- Data Completeness
- Holding Times and Preservation
- Method and Equipment Rinseate Blanks
- Surrogates
- Laboratory Control Samples
- Matrix Spike/Matrix Spike Duplicates
- Field Duplicates
- Data Anomalies, and
- Case Narrative: if necessary.

Data qualifiers were applied to analytical results during the data validation process, based on adherence to method protocols and QA/QC limits. The following summarizes the results of the review.

1.1 Data completeness

All analyses were performed as requested on the chain-of-custody records (COCs).

1.2 Holding Times and Preservation

All samples were analyzed within the method specified holding times. Sample cooler temperatures were measured at 2.9 to 5.3 °C soil samples upon receipt at the laboratory meeting the required 4±2 °C criteria.

1.3 Method and Equipment Rinseate Blanks

Target compounds were not detected in any method blanks associated with project samples. Method blanks were analyzed at the proper frequency for the number and types of samples analyzed.

1.4 Surrogates

All surrogates for all samples were within the laboratory's statistically determined acceptance ranges with the following exception:

- High surrogate recovery (196%) was reported for TPH as gasoline analysis of DPT-4-20 resulting in qualification of this result for DPT-4-20 as an estimate ("J" flag).
- High surrogate recovery (142%) was reported for TPH as gasoline analysis of DPT-6-20 resulting in qualification of this result for DPT-6-20 as an estimate ("J" flag).
- High surrogate recovery (134%) was reported for TPH as gasoline analysis of DPT-7-20 resulting in qualification of this result for DPT-7-20 as an estimate ("J" flag).
- High surrogate recovery (127%) was reported for TPH as gasoline analysis of DPT-8-15 resulting in qualification of this result for DPT-8-15 as an estimate ("J" flag).
- High surrogate recovery (141%) was reported for TPH as gasoline analysis of DPT-10-15 resulting in qualification of this result for DPT-10-15 as an estimate ("J" flag).
- High surrogate recovery (208%) was reported for TPH as gasoline analysis of DPT-10-20 resulting in qualification of this result for DPT-10-20 as an estimate ("J" flag).
- High surrogate recovery (150%) was reported for TPH as gasoline analysis of DPT-12-15 resulting in qualification of this result for DPT-12-15 as an estimate ("J" flag).
- High surrogate recovery (150%) was reported for TPH as JP-5 analysis of DPT-17-5 resulting in qualification of this result for DPT-17-5 as an estimate ("J" flag).
- High toluene-d8 surrogate recovery (123%) was reported for VOC analysis of DPT-4-25 resulting in qualification of detected results as estimates ("J" flag).
- High toluene-d8 surrogate recovery (115%) was reported for VOC analysis of DPT-5-20 resulting in qualification of detected results as estimates ("J" flag).
- High toluene-d8 surrogate recovery (112%) was reported for VOC analysis of DPT-12-20 resulting in qualification of detected results as estimates ("J" flag).

1.5 Laboratory Control Samples

A LCS/LCSD pair was prepared and analyzed at the proper frequency. The recoveries of all spiked analytes and the relative percent differences (RPDs) between LCS/LCSD recoveries were within the laboratory's statistically determined acceptance ranges with the following exceptions.

- Low LCSD recovery of 1,1-dichloroethene was reported for batch 090912L01 resulting in qualification of 1,1-dichloroethene results reported for DPT-8-20, DPT-10-15, DPT-13-5, DPT-13-10, DPT-14-5, DPT-14-10, DPT-15-5, DPT-15-10, DPT-16-5, DPT-16-10, DPT-17-20, DPT-18-15, DPT-19-15, and DPT-19-20 as estimates ("UJ" flag, non-detect results).

- Low LCSD recovery of 1,1-dichloroethene was reported for batch 090912L02 resulting in qualification of 1,1-dichloroethene results reported for DPT-17-5, DPT-17-10, DPT-17-15, and DPT-17-25 as estimates (“UJ” flag, non-detect results).

1.6 Matrix Spike/Matrix Spike Duplicate

Recoveries of all spiked analytes and the relative percent differences (RPDs) between MS/MSD recoveries were within the laboratory’s acceptance criteria

LCS/LCSD pairs were analyzed in lieu of MS/MSD pair for TPH as gasoline and VOC analyses. See section 1.5 for discussion of these results.

1.7 Data Anomalies

The sample chromatographic pattern of TPH-gasoline for project samples DPT-4-5, DOT-4-20, DPT-4-25, DPT-5-20, DPT-6-20, DPT-6-25, DPT-7-15, DPT-7-20, DPT-7-25, DPT-8-10, DPT-8-15, DPT-8-20, DPT-8-25, DPT-9-10, DPT-9-15, DPT-9-20, DPT-10-15, DPT-10-20, DPT-10-25, DPT-11-20, DPT-11-25, DPT-12-10, DPT-12-15, DPT-12-20, DPT-12-25, DPT-17-5, DPT-17-10, DPT-17-15, DPT-17-20, DPT-17-25, DPT-18-15, DPT-18-20, DPT-19-10, DPT-19-15, DPT-19-20, and GMW-66-5 does not match the chromatographic pattern of the gasoline standard. Quantification of the unknown hydrocarbons in DPT-4-5, DOT-4-20, DPT-4-25, DPT-5-20, DPT-6-20, DPT-6-25, DPT-7-15, DPT-7-20, DPT-7-25, DPT-8-10, DPT-8-15, DPT-8-20, DPT-8-25, DPT-9-10, DPT-9-15, DPT-9-20, DPT-10-15, DPT-10-20, DPT-10-25, DPT-11-20, DPT-11-25, DPT-12-10, DPT-12-15, DPT-12-20, DPT-12-25, DPT-17-5, DPT-17-10, DPT-17-15, DPT-17-20, DPT-17-25, DPT-18-15, DPT-18-20, DPT-19-10, DPT-19-15, DPT-19-20, and GMW-66-5 was based on the gasoline standard.

The sample chromatographic pattern of TPH as JP-5 for project samples DPT-4-5 and DPT-4-10 do not match the chromatographic pattern of the JP-5 standard. Quantification of the unknown hydrocarbons in DPT-4-5 and DPT-4-10 are based on the JP-5 standard.

The VOC analysis of DPT-4-5 and DPT-12-10 were diluted due to matrix interference resulting in several target compounds reported non-detect at elevated reporting limits.

The follow project samples were diluted for VOC (method 8260B) analysis resulting in reporting of several target compounds as non-detect at elevated reporting limits (lowest dilution in noted in parenthesis next to the sample name): DPT-4-20 (82x), DPT-4-25 (90.1x), DPT-5-20 (79.9x), DPT-7-20 (438x), DPT-9-20 (104x), DPT-9-25 (2050x), DPT-6-20 (104x), DPT-6-25 (87x), DPT-8-10 (110x), DPT-8-15 (108x), DPT-10-20 (417x), DPT-10-25 (114x), DPT-11-20 (85.9x), DPT-12-15 (96.2x), DPT-17-5 (1010x), DPT-17-10 (97.3x), DPT-17-15 (1100x), DPT-17-25 (95.2x), DPT-18-20 (85.5x), DPT-19-10 (86.4x).

2 Overall Assessment of Data

All data were reviewed and found acceptable based on compliance of quality control procedures as reported. Data may be used for project purposes with the addition of data qualifiers discussed above.

Sample ID	Date Sampled	Matrix	Report Number	Laboratory Sample ID
DPT-1-10	09-3-09	Soil	09-09-0447	09-09-0447-2
DPT-1-20	09-3-09	Soil	09-09-0447	09-09-0447-4
DPT-1-25	09-3-09	Soil	09-09-0447	09-09-0447-5
DPT-2-15	09-3-09	Soil	09-09-0447	09-09-0447-9
DPT-2-20	09-3-09	Soil	09-09-0447	09-09-0447-10
DPT-2-25	09-3-09	Soil	09-09-0447	09-09-0447-11
DPT-3-15	09-3-09	Soil	09-09-0447	09-09-0447-15
DPT-3-20	09-3-09	Soil	09-09-0447	09-09-0447-16
DPT-3-25	09-3-09	Soil	09-09-0447	09-09-0447-17
DPT-4-5	09-3-09	Soil	09-09-0447	09-09-0447-18
DPT-4-10	09-3-09	Soil	09-09-0447	09-09-0447-19
DPT-4-15	09-3-09	Soil	09-09-0447	09-09-0447-20
DPT-4-20	09-3-09	Soil	09-09-0447	09-09-0447-21
DPT-4-25	09-3-09	Soil	09-09-0447	09-09-0447-22
DPT-5-10	09-3-09	Soil	09-09-0447	09-09-0447-24
DPT-5-15	09-3-09	Soil	09-09-0447	09-09-0447-25
DPT-5-20	09-3-09	Soil	09-09-0447	09-09-0447-26
DPT-7-15	09-4-09	Soil	09-09-0479	09-09-0479-3
DPT-7-20	09-4-09	Soil	09-09-0479	09-09-0479-4
DPT-7-25	09-4-09	Soil	09-09-0479	09-09-0479-5
DPT-9-10	09-4-09	Soil	09-09-0479	09-09-0479-7
DPT-9-15	09-4-09	Soil	09-09-0479	09-09-0479-8
DPT-9-20	09-4-09	Soil	09-09-0479	09-09-0479-9
DPT-9-25	09-4-09	Soil	09-09-0479	09-09-0479-10
DPT-6-15	09-4-09	Soil	09-09-0479	09-09-0479-13
DPT-6-20	09-4-09	Soil	09-09-0479	09-09-0479-14
DPT-6-25	09-4-09	Soil	09-09-0479	09-09-0479-15
DPT-8-10	09-4-09	Soil	09-09-0479	09-09-0479-17
DPT-8-15	09-4-09	Soil	09-09-0479	09-09-0479-18

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Sample ID	Date Sampled	Matrix	Report Number	Laboratory Sample ID
DPT-8-20	09-4-09	Soil	09-09-0479	09-09-0479-19
DPT-8-25	09-4-09	Soil	09-09-0479	09-09-0479-20
DPT-10-15	09-4-09	Soil	09-09-0479	09-09-0479-23
DPT-10-20	09-4-09	Soil	09-09-0479	09-09-0479-24
DPT-10-25	09-4-09	Soil	09-09-0479	09-09-0479-25
DPT-11-15	09-4-09	Soil	09-09-0479	09-09-0479-28
DPT-11-20	09-4-09	Soil	09-09-0479	09-09-0479-29
DPT-11-25	09-4-09	Soil	09-09-0479	09-09-0479-30
DPT-12-10	09-4-09	Soil	09-09-0479	09-09-0479-32
DPT-12-15	09-4-09	Soil	09-09-0479	09-09-0479-33
DPT-12-20	09-4-09	Soil	09-09-0479	09-09-0479-34
DPT-12-25	09-4-09	Soil	09-09-0479	09-09-0479-35
GMW-66-5	09-8-09	Soil	09-09-0575	09-09-0575-1
GMW-66-10	09-8-09	Soil	09-09-0575	09-09-0575-2
DPT-13-5	09-10-09	Soil	09-09-0575	09-09-0575-1
DPT-13-10	09-10-09	Soil	09-09-0575	09-09-0575-2
DPT-14-5	09-10-09	Soil	09-09-0575	09-09-0575-6
DPT-14-10	09-10-09	Soil	09-09-0575	09-09-0575-7
DPT-15-5	09-10-09	Soil	09-09-0575	09-09-0575-11
DPT-15-10	09-10-09	Soil	09-09-0575	09-09-0575-12
DPT-16-5	09-10-09	Soil	09-09-0575	09-09-0575-16
DPT-16-10	09-10-09	Soil	09-09-0575	09-09-0575-17
DPT-17-5	09-10-09	Soil	09-09-0575	09-09-0575-21
DPT-17-10	09-10-09	Soil	09-09-0575	09-09-0575-22
DPT-17-15	09-10-09	Soil	09-09-0575	09-09-0575-23
DPT-17-20	09-10-09	Soil	09-09-0575	09-09-0575-24
DPT-17-25	09-10-09	Soil	09-09-0575	09-09-0575-25
DPT-18-15	09-10-09	Soil	09-09-0575	09-09-0575-28
DPT-18-20	09-10-09	Soil	09-09-0575	09-09-0575-29

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Sample ID	Date Sampled	Matrix	Report Number	Laboratory Sample ID
DPT-19-10	09-10-09	Soil	09-09-0575	09-09-0575-32
DPT-19-15	09-10-09	Soil	09-09-0575	09-09-0575-33
DPT-19-20	09-10-09	Soil	09-09-0575	09-09-0575-34