

### Technical Report for

**D.C. Dozer Service**

**Seal State #1 Pit Reclamation**

**SGS Accutest Job Number: DA691**

**Sampling Date: 12/05/17**

#### Report to:

**D.C. Dozer Service  
1403 Fillmore Street  
Sterling, CO 80751  
troutman0231@msn.com**

**ATTN: Todd Troutman**

**Total number of pages in report: 29**



Test results contained within this data package meet the requirements  
of the National Environmental Laboratory Accreditation Program  
and/or state specific certification programs as applicable.



**Scott Heideman  
Laboratory Director**

**Client Service contact: Jen Jorschumb 303-425-6021**

Certifications: CO (CO00049), ID (CO00049), NE (NE-OS-06-04), ND (R-027), NJ (CO007), OK (D9942)  
UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L)

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Test results relate only to samples analyzed.

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Sample Summary

D.C. Dozer Service

Job No: DA691

Seal State #1 Pit Reclamation

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
DA691-1	12/05/17	13:00 TT	12/07/17	SO	Soil	WP-NW#1
DA691-2	12/05/17	13:30 TT	12/07/17	SO	Soil	WP-SW#1
DA691-3	12/05/17	14:00 TT	12/07/17	SO	Soil	WP-EW#1
DA691-4	12/05/17	14:30 TT	12/07/17	SO	Soil	WP-WW#1
DA691-5	12/05/17	16:00 TT	12/07/17	SO	Soil	WP-B#1

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## Summary of Hits

Page 1 of 1

**Job Number:** DA691  
**Account:** D.C. Dozer Service  
**Project:** Seal State #1 Pit Reclamation  
**Collected:** 12/05/17

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
<b>DA691-1</b>	<b>WP-NW#1</b>					
TPH-DRO (C10-C28)		334	12	11	mg/kg	SW846-8015B
<b>DA691-2</b>	<b>WP-SW#1</b>					
TPH-DRO (C10-C28)		1060	320	290	mg/kg	SW846-8015B
<b>DA691-3</b>	<b>WP-EW#1</b>					
TPH-DRO (C10-C28)		89.8	12	11	mg/kg	SW846-8015B
<b>DA691-4</b>	<b>WP-WW#1</b>					
TPH-GRO (C6-C10)		143 J	270	130	ug/kg	SW846 8260B
TPH-DRO (C10-C28)		553	330	300	mg/kg	SW846-8015B
<b>DA691-5</b>	<b>WP-B#1</b>					
TPH-GRO (C6-C10)		155 J	270	130	ug/kg	SW846 8260B

**Sample Results**

**Report of Analysis**

## Report of Analysis

<b>Client Sample ID:</b>	WP-NW#1		
<b>Lab Sample ID:</b>	DA691-1	<b>Date Sampled:</b>	12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	12/07/17
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b>	81.3
<b>Project:</b>	Seal State #1 Pit Reclamation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V45058.D	1	12/08/17 15:17	MB	n/a	n/a	V5V2473
Run #2							

	Initial Weight	Final Volume
Run #1	5.07 g	5.0 ml
Run #2		

## Purgeable Aromatics+ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.2	0.61	ug/kg	
108-88-3	Toluene	ND	2.4	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	2.4	0.61	ug/kg	
1330-20-7	Xylene (total)	ND	2.7	1.2	ug/kg	
	TPH-GRO (C6-C10)	ND	240	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	102%		65-142%
17060-07-0	1,2-Dichloroethane-D4	107%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WP-NW#1	
<b>Lab Sample ID:</b>	DA691-1	<b>Date Sampled:</b> 12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/07/17
<b>Method:</b>	SW846-8015B SW846 3546	<b>Percent Solids:</b> 81.3
<b>Project:</b>	Seal State #1 Pit Reclamation	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI59943.D	1	12/13/17 13:22	RB	12/12/17	OP15816	GFI2537
Run #2							

	Initial Weight	Final Volume
Run #1	20.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	334	12	11	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	89%		41-134%		

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WP-SW#1	
<b>Lab Sample ID:</b>	DA691-2	<b>Date Sampled:</b> 12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/07/17
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b> 76.6
<b>Project:</b>	Seal State #1 Pit Reclamation	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V45059.D	1	12/08/17 15:41	MB	n/a	n/a	V5V2473
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	5.0 ml
Run #2		

## Purgeable Aromatics+ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.3	0.65	ug/kg	
108-88-3	Toluene	ND	2.6	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.6	0.65	ug/kg	
1330-20-7	Xylene (total)	ND	2.8	1.3	ug/kg	
	TPH-GRO (C6-C10)	ND	260	130	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	96%		70-130%
460-00-4	4-Bromofluorobenzene	105%		65-142%
17060-07-0	1,2-Dichloroethane-D4	99%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

<b>Client Sample ID:</b>	WP-SW#1	
<b>Lab Sample ID:</b>	DA691-2	<b>Date Sampled:</b> 12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/07/17
<b>Method:</b>	SW846-8015B SW846 3546	<b>Percent Solids:</b> 76.6
<b>Project:</b>	Seal State #1 Pit Reclamation	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI59902.D	25	12/12/17 13:59	RB	12/12/17	OP15816	GFI2536
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	1060	320	290	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	60%		41-134%		

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WP-EW#1	
<b>Lab Sample ID:</b>	DA691-3	<b>Date Sampled:</b> 12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/07/17
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b> 80.5
<b>Project:</b>	Seal State #1 Pit Reclamation	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V45060.D	1	12/08/17 16:07	MB	n/a	n/a	V5V2473
Run #2							

	Initial Weight	Final Volume
Run #1	5.00 g	5.0 ml
Run #2		

## Purgeable Aromatics+ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.2	0.62	ug/kg	
108-88-3	Toluene	ND	2.5	1.2	ug/kg	
100-41-4	Ethylbenzene	ND	2.5	0.62	ug/kg	
1330-20-7	Xylene (total)	ND	2.7	1.2	ug/kg	
	TPH-GRO (C6-C10)	ND	250	120	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	98%		65-142%
17060-07-0	1,2-Dichloroethane-D4	94%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WP-EW#1		
<b>Lab Sample ID:</b>	DA691-3	<b>Date Sampled:</b>	12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	12/07/17
<b>Method:</b>	SW846-8015B SW846 3546	<b>Percent Solids:</b>	80.5
<b>Project:</b>	Seal State #1 Pit Reclamation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI59956.D	1	12/14/17 12:51	RB	12/12/17	OP15816	GFI2540
Run #2							

	Initial Weight	Final Volume
Run #1	20.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	89.8	12	11	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	86%		41-134%		

ND = Not detected      MDL = Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WP-WW#1		
<b>Lab Sample ID:</b>	DA691-4	<b>Date Sampled:</b>	12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	12/07/17
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b>	73.6
<b>Project:</b>	Seal State #1 Pit Reclamation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V45061.D	1	12/08/17 16:32	MB	n/a	n/a	V5V2473
Run #2							

	Initial Weight	Final Volume
Run #1	5.04 g	5.0 ml
Run #2		

## Purgeable Aromatics+ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.3	0.67	ug/kg	
108-88-3	Toluene	ND	2.7	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.7	0.67	ug/kg	
1330-20-7	Xylene (total)	ND	3.0	1.3	ug/kg	
	TPH-GRO (C6-C10)	143	270	130	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-130%
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	102%		65-142%
17060-07-0	1,2-Dichloroethane-D4	94%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	WP-WW#1	
<b>Lab Sample ID:</b>	DA691-4	<b>Date Sampled:</b> 12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/07/17
<b>Method:</b>	SW846-8015B SW846 3546	<b>Percent Solids:</b> 73.6
<b>Project:</b>	Seal State #1 Pit Reclamation	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI59906.D	25	12/12/17 15:20	RB	12/12/17	OP15816	GFI2536
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	553	330	300	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	85%		41-134%		

ND = Not detected

MDL = Method Detection Limit

J = Indicates an estimated value

RL = Reporting Limit

B = Indicates analyte found in associated method blank

E = Indicates value exceeds calibration range

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	WP-B#1		
<b>Lab Sample ID:</b>	DA691-5	<b>Date Sampled:</b>	12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b>	12/07/17
<b>Method:</b>	SW846 8260B	<b>Percent Solids:</b>	73.5
<b>Project:</b>	Seal State #1 Pit Reclamation		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V45062.D	1	12/08/17 16:56	MB	n/a	n/a	V5V2473
Run #2							

	Initial Weight	Final Volume
Run #1	5.07 g	5.0 ml
Run #2		

## Purgeable Aromatics+ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.3	0.67	ug/kg	
108-88-3	Toluene	ND	2.7	1.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.7	0.67	ug/kg	
1330-20-7	Xylene (total)	ND	3.0	1.3	ug/kg	
	TPH-GRO (C6-C10)	155	270	130	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-130%
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	101%		65-142%
17060-07-0	1,2-Dichloroethane-D4	107%		70-130%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

<b>Client Sample ID:</b>	WP-B#1	
<b>Lab Sample ID:</b>	DA691-5	<b>Date Sampled:</b> 12/05/17
<b>Matrix:</b>	SO - Soil	<b>Date Received:</b> 12/07/17
<b>Method:</b>	SW846-8015B SW846 3546	<b>Percent Solids:</b> 73.5
<b>Project:</b>	Seal State #1 Pit Reclamation	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI59908.D	1	12/12/17 16:00	RB	12/12/17	OP15816	GFI2536
Run #2							

	Initial Weight	Final Volume
Run #1	20.8 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	12	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	74%		41-134%		

ND = Not detected      MDL = Method Detection Limit      J = Indicates an estimated value  
RL = Reporting Limit      B = Indicates analyte found in associated method blank  
E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

## Misc. Forms

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody



## CHAIN OF CUSTODY

4036 Youngfield Street, Wheat Ridge, CO 80033  
TEL: 303-425-6021 FAX: 303-425-6854  
[www.accufest.com](http://www.accufest.com)

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[illegible]

## DA691: Chain of Custody

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## SGS Accutest Sample Receipt Summary

Job Number: DA691

Client: DC DOZIER

Project: SEAL STATE #1

Date / Time Received: 12/7/2017 9:50:00 AM

Delivery Method:

Airbill #'s: HD

Cooler Temps (Initial/Adjusted): #1: (3.7/3.7); #2: (4/4);

### Cooler Security

Y or N

- |                           |                                     |                          |                       |                                     |                          |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### Cooler Temperature

Y or N

- |                              |                                     |                          |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | IR Gun; IR Gun;                     |                          |
| 3. Cooler media:             | Ice (Bag)                           |                          |
| 4. No. Coolers:              | 2                                   |                          |

### Quality Control Preservation

Y or N

N/A

- |                                 |                                     |                          |                                     |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC:    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                     |
| 4. VOCs headspace free:         | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

### Sample Integrity - Documentation

Y or N

- |  |                                     |                          |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete:        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### Sample Integrity - Condition

Y or N

- |                                  |                                     |                          |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample:          | Intact                              |                          |

### Sample Integrity - Instructions

Y or N

N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear:           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Bottles received for unspecified tests | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 3. Sufficient volume recvd for analysis:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Compositing instructions clear:        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear:          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

DA691: Chain of Custody

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## MS Volatiles

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## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

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**Job Number:** DA691

**Account:** DCDSCOS D.C. Dozer Service

**Project:** Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2473-MB	5V45051.D	1	12/08/17	MB	n/a	n/a	V5V2473

The QC reported here applies to the following samples:

Method: SW846 8260B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	100	25	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	110	50	ug/kg	
	TPH-GRO (C6-C10)	ND	10000	5000	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	87% 70-130%
2037-26-5	Toluene-D8	97% 70-130%
460-00-4	4-Bromofluorobenzene	97% 65-142%
17060-07-0	1,2-Dichloroethane-D4	109% 70-130%

## Method Blank Summary

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**Job Number:** DA691

**Account:** DCDSCOS D.C. Dozer Service

**Project:** Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2473-MB	5V45052.D	1	12/08/17	MB	n/a	n/a	V5V2473

The QC reported here applies to the following samples:

Method: SW846 8260B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.50	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/kg	
108-88-3	Toluene	ND	2.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	2.2	1.0	ug/kg	
	TPH-GRO (C6-C10)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	94% 70-130%
2037-26-5	Toluene-D8	93% 70-130%
460-00-4	4-Bromofluorobenzene	94% 65-142%
17060-07-0	1,2-Dichloroethane-D4	99% 70-130%

## Blank Spike Summary

Page 1 of 1

**Job Number:** DA691

**Account:** DCDSCOS D.C. Dozer Service

**Project:** Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2473-BS	5V45049.D	1	12/08/17	MB	n/a	n/a	V5V2473

The QC reported here applies to the following samples:

Method: SW846 8260B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	42.7	85	70-130
100-41-4	Ethylbenzene	50	44.4	89	70-130
108-88-3	Toluene	50	43.6	87	70-130
1330-20-7	Xylene (total)	150	134	89	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	96%	65-142%
17060-07-0	1,2-Dichloroethane-D4	84%	70-130%

\* = Outside of Control Limits.

## Blank Spike Summary

Page 1 of 1

**Job Number:** DA691

**Account:** DCDS COS D.C. Dozer Service

**Project:** Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V2473-BS	5V45050.D	1	12/08/17	MB	n/a	n/a	V5V2473

The QC reported here applies to the following samples:

Method: SW846 8260B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
	TPH-GRO (C6-C10)	2000	1760	88	57-138

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	97%	70-130%
460-00-4	4-Bromofluorobenzene	102%	65-142%
17060-07-0	1,2-Dichloroethane-D4	104%	70-130%

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** DA691  
**Account:** DCDS COS D.C. Dozer Service  
**Project:** Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA568-8MS	5V45054.D	1	12/08/17	MB	n/a	n/a	V5V2473
DA568-8MSD	5V45055.D	1	12/08/17	MB	n/a	n/a	V5V2473
DA568-8	5V45053.D	1	12/08/17	MB	n/a	n/a	V5V2473

The QC reported here applies to the following samples:

Method: SW846 8260B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	DA568-8 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	65.5	34.9	53	65	34.4	53	1	43-135/30
100-41-4	Ethylbenzene	ND	65.5	32.8	50	65	32.8	50	0	30-144/30
108-88-3	Toluene	ND	65.5	32.8	50	65	32.3	50	2	27-144/30
1330-20-7	Xylene (total)	ND	196	85.8	44	195	88.2	45	3	13-154/30

CAS No.	Surrogate Recoveries	MS	MSD	DA568-8	Limits
1868-53-7	Dibromofluoromethane	105%	106%	100%	70-130%
2037-26-5	Toluene-D8	114%	110%	114%	70-130%
460-00-4	4-Bromofluorobenzene	115%	109%	115%	65-142%
17060-07-0	1,2-Dichloroethane-D4	102%	118%	106%	70-130%

\* = Outside of Control Limits.



Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA691  
Account: DCDESCOS D.C. Dozer Service  
Project: Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA568-8MS	5V45056.D	1	12/08/17	MB	n/a	n/a	V5V2473
DA568-8MSD	5V45057.D	1	12/08/17	MB	n/a	n/a	V5V2473
DA568-8	5V45053.D	1	12/08/17	MB	n/a	n/a	V5V2473

The QC reported here applies to the following samples: Method: SW846 8260B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	DA568-8 ug/kg	Spike Q ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	2610	1330	51	2620	1170	45	13	10-186/30

CAS No.	Surrogate Recoveries	MS	MSD	DA568-8	Limits
1868-53-7	Dibromofluoromethane	97%	102%	100%	70-130%
2037-26-5	Toluene-D8	113%	113%	114%	70-130%
460-00-4	4-Bromofluorobenzene	121%	126%	115%	65-142%
17060-07-0	1,2-Dichloroethane-D4	97%	106%	106%	70-130%

\* = Outside of Control Limits.

## GC/LC Semi-volatiles

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA691  
Account: DCDSCOS D.C. Dozer Service  
Project: Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15816-MB	FI59901.D	1	12/12/17	RB	12/12/17	OP15816	GFI2535

The QC reported here applies to the following samples: Method: SW846-8015B  
DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	10	9.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	93% 41-134%

## Blank Spike Summary

Page 1 of 1

**Job Number:** DA691

**Account:** DCDSCOS D.C. Dozer Service

**Project:** Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15816-BS	FI59903.D	1	12/12/17	RB	12/12/17	OP15816	GFI2535

The QC reported here applies to the following samples:

Method: SW846-8015B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	250	208	83	35-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	88%	41-134%

\* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA691  
Account: DCDSCOS D.C. Dozer Service  
Project: Seal State #1 Pit Reclamation

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP15816-MS	FI59937.D	1	12/13/17	RB	12/12/17	OP15816	GFI2537
OP15816-MSD	FI59941.D	1	12/13/17	RB	12/12/17	OP15816	GFI2537
DA691-1	FI59943.D	1	12/13/17	RB	12/12/17	OP15816	GFI2537

The QC reported here applies to the following samples: Method: SW846-8015B

DA691-1, DA691-2, DA691-3, DA691-4, DA691-5

CAS No.	Compound	DA691-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	334		306	485	49	306	598	86	21	10-171/30

CAS No.	Surrogate Recoveries	MS	MSD	DA691-1	Limits
84-15-1	o-Terphenyl	71%	87%	89%	41-134%

\* = Outside of Control Limits.