



10/07/15

Technical Report for

Diamond Operating Inc.

Pow Wow Skim Pit Closure

Accutest Job Number: D75665

Sampling Date: 09/28/15

Report to:

**Diamond Operating Inc.
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ATTN: Dave Peterson

Total number of pages in report: 63



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.

A handwritten signature in black ink, appearing to read 'Scott Heideman'.

**Scott Heideman
Laboratory Director**

Client Service contact: Renea Lewis 303-425-6021

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY CO (CO00049), EPA 524.2 Provisional

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Test results relate only to samples analyzed.

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Sample Summary

Diamond Operating Inc.**Job No: D75665****Pow Wow Skim Pit Closure**

Sample Number	Collected			Received	Matrix		Client Sample ID
	Date	Time	By		Code	Type	
D75665-1	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-BASE
D75665-1A	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-BASE
D75665-2	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-SOUTH
D75665-2A	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-SOUTH
D75665-3	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-NORTH
D75665-3A	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-NORTH
D75665-4	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-EAST
D75665-4A	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-EAST
D75665-5	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-WEST
D75665-5A	09/28/15	09:00	SG	09/29/15	SO	Soil	POW WOW-WEST

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

Summary of Hits

Job Number: D75665
Account: Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure
Collected: 09/28/15

Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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D75665-1 POW WOW-BASE

TPH-DRO (C10-C28)	39.5	10	9.2	mg/kg	SW846-8015B
Specific Conductivity	690	1.0		umhos/cm	SM 2510B-2011 MOD
pH	8.79			su	SW846 9045D

D75665-1A POW WOW-BASE

Calcium	71.0	2.0		mg/l	SW846 6010C
Magnesium	6.26	1.0		mg/l	SW846 6010C
Sodium	57.8	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^a	1.76			ratio	USDA HANDBOOK 60

D75665-2 POW WOW-SOUTH

TPH-DRO (C10-C28)	9.82 J	10	9.2	mg/kg	SW846-8015B
Specific Conductivity	995	1.0		umhos/cm	SM 2510B-2011 MOD
pH	8.70			su	SW846 9045D

D75665-2A POW WOW-SOUTH

Calcium	99.7	2.0		mg/l	SW846 6010C
Magnesium	9.40	1.0		mg/l	SW846 6010C
Sodium	104	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^a	2.67			ratio	USDA HANDBOOK 60

D75665-3 POW WOW-NORTH

TPH-DRO (C10-C28)	36.8	10	9.2	mg/kg	SW846-8015B
Specific Conductivity	817	1.0		umhos/cm	SM 2510B-2011 MOD
pH	8.60			su	SW846 9045D

D75665-3A POW WOW-NORTH

Calcium	89.6	2.0		mg/l	SW846 6010C
Magnesium	8.60	1.0		mg/l	SW846 6010C
Sodium	68.7	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^a	1.86			ratio	USDA HANDBOOK 60

D75665-4 POW WOW-EAST

TPH-DRO (C10-C28)	31.1	10	9.2	mg/kg	SW846-8015B
Specific Conductivity	4320	1.0		umhos/cm	SM 2510B-2011 MOD
pH	8.87			su	SW846 9045D

Summary of Hits

Page 2 of 2

Job Number: D75665
Account: Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure
Collected: 09/28/15

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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D75665-4A POW WOW-EAST

Calcium	254	2.0		mg/l	SW846 6010C
Magnesium	22.5	1.0		mg/l	SW846 6010C
Sodium	606	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^a	9.77			ratio	USDA HANDBOOK 60

D75665-5 POW WOW-WEST

TPH-DRO (C10-C28)	43.3	10	9.2	mg/kg	SW846-8015B
Specific Conductivity	1510	1.0		umhos/cm	SM 2510B-2011 MOD
pH	8.85			su	SW846 9045D

D75665-5A POW WOW-WEST

Calcium	131	2.0		mg/l	SW846 6010C
Magnesium	12.5	1.0		mg/l	SW846 6010C
Sodium	157	2.0		mg/l	SW846 6010C
Sodium Adsorption Ratio ^a	3.51			ratio	USDA HANDBOOK 60

(a) Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	POW WOW-BASE	Date Sampled:	09/28/15
Lab Sample ID:	D75665-1	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.9
Method:	SW846 8015B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA29429.D	1	10/05/15	KN	n/a	n/a	GGA1569
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%		

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

Client Sample ID:	POW WOW-BASE	Date Sampled:	09/28/15
Lab Sample ID:	D75665-1	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.9
Method:	SW846 8021B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA29459.D	1	10/06/15	KN	n/a	n/a	GTA1570
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	52	26	ug/kg	
108-88-3	Toluene	ND	100	52	ug/kg	
100-41-4	Ethylbenzene	ND	100	52	ug/kg	
1330-20-7	Xylenes (total)	ND	100	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

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

Client Sample ID: POW WOW-BASE
Lab Sample ID: D75665-1
Matrix: SO - Soil
Method: SW846-8015B SW846 3546
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29611.D	1	10/01/15	GN	10/01/15	OP12450	GFI1441
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)	39.5	10	9.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	97%		20-130%		

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

Client Sample ID: POW WOW-BASE
Lab Sample ID: D75665-1
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.9

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	97.9		%	1	09/29/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	690	1.0	umhos/cm	1	10/01/15	TJ	SM 2510B-2011 MOD
pH	8.79		su	1	10/01/15 15:00	AK	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID: POW WOW-BASE
Lab Sample ID: D75665-1A
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.9

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	71.0	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	6.26	1.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Sodium	57.8	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA6595

(2) Prep QC Batch: MP17078

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-BASE	Date Sampled:	09/28/15
Lab Sample ID:	D75665-1A	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.9
Project:	Pow Wow Skim Pit Closure		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	1.76		ratio	1	10/02/15 15:43	LH	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-SOUTH	
Lab Sample ID:	D75665-2	Date Sampled: 09/28/15
Matrix:	SO - Soil	Date Received: 09/29/15
Method:	SW846 8015B	Percent Solids: 97.5
Project:	Pow Wow Skim Pit Closure	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA29432.D	1	10/05/15	KN	n/a	n/a	GGA1569
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%		

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

Client Sample ID:	POW WOW-SOUTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-2	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.5
Method:	SW846 8021B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA29462.D	1	10/06/15	KN	n/a	n/a	GTA1570
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.1 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	52	26	ug/kg	
108-88-3	Toluene	ND	100	52	ug/kg	
100-41-4	Ethylbenzene	ND	100	52	ug/kg	
1330-20-7	Xylenes (total)	ND	100	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	115%		60-140%

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

Client Sample ID:	POW WOW-SOUTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-2	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.5
Method:	SW846-8015B SW846 3546		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29613.D	1	10/01/15	GN	10/01/15	OP12450	GF11441
Run #2							

Run #	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)	9.82	10	9.2	mg/kg	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	96%		20-130%		

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

Client Sample ID: POW WOW-SOUTH
Lab Sample ID: D75665-2
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.5

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids Solids, Percent	97.5		%	1	09/29/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	995	1.0	umhos/cm	1	10/01/15	TJ	SM 2510B-2011 MOD
pH	8.70		su	1	10/01/15 15:00	AK	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-SOUTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-2A	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.5
Project:	Pow Wow Skim Pit Closure		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	99.7	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	9.40	1.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Sodium	104	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²

- (1) Instrument QC Batch: MA6595
(2) Prep QC Batch: MP17078

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-SOUTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-2A	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.5
Project:	Pow Wow Skim Pit Closure		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	2.67		ratio	1	10/02/15 16:11	LH	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-NORTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-3	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Method:	SW846 8015B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA29433.D	1	10/05/15	KN	n/a	n/a	GGA1569
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	99%		60-140%		

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

Client Sample ID:	POW WOW-NORTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-3	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Method:	SW846 8021B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA29463.D	1	10/06/15	KN	n/a	n/a	GTA1570
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	52	26	ug/kg	
108-88-3	Toluene	ND	100	52	ug/kg	
100-41-4	Ethylbenzene	ND	100	52	ug/kg	
1330-20-7	Xylenes (total)	ND	100	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

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

Client Sample ID:	POW WOW-NORTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-3	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Method:	SW846-8015B SW846 3546		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29615.D	1	10/01/15	GN	10/01/15	OP12450	GFI1441
Run #2							

Run #	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)	36.8	10	9.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	85%		20-130%		

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

Client Sample ID: POW WOW-NORTH
Lab Sample ID: D75665-3
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.7

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	97.7		%	1	09/29/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	817	1.0	umhos/cm	1	10/01/15	TJ	SM 2510B-2011 MOD
pH	8.60		su	1	10/01/15 15:00	AK	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID: POW WOW-NORTH
Lab Sample ID: D75665-3A
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.7

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	89.6	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	8.60	1.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Sodium	68.7	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA6595

(2) Prep QC Batch: MP17078

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-NORTH	Date Sampled:	09/28/15
Lab Sample ID:	D75665-3A	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Project:	Pow Wow Skim Pit Closure		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	1.86		ratio	1	10/02/15 16:40	LH	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-EAST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-4	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.6
Method:	SW846 8015B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA29434.D	1	10/05/15	KN	n/a	n/a	GGA1569
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	93%		60-140%		

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

Client Sample ID:	POW WOW-EAST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-4	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.6
Method:	SW846 8021B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA29464.D	1	10/06/15	KN	n/a	n/a	GTA1570
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	52	26	ug/kg	
108-88-3	Toluene	ND	100	52	ug/kg	
100-41-4	Ethylbenzene	ND	100	52	ug/kg	
1330-20-7	Xylenes (total)	ND	100	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	111%		60-140%

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

Client Sample ID:	POW WOW-EAST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-4	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.6
Method:	SW846-8015B SW846 3546		
Project:	Pow Wow Skim Pit Closure		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29617.D	1	10/01/15	GN	10/01/15	OP12450	GFI1441
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)	31.1	10	9.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	93%		20-130%		

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

Client Sample ID: POW WOW-EAST

Lab Sample ID: D75665-4

Matrix: SO - Soil

Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15

Date Received: 09/29/15

Percent Solids: 97.6

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	97.6		%	1	09/29/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	4320	1.0	umhos/cm	1	10/01/15	TJ	SM 2510B-2011 MOD
pH	8.87		su	1	10/01/15 15:00	AK	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID: POW WOW-EAST
Lab Sample ID: D75665-4A
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.6

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	254	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	22.5	1.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Sodium	606	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA6595

(2) Prep QC Batch: MP17078

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-EAST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-4A	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.6
Project:	Pow Wow Skim Pit Closure		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	9.77		ratio	1	10/02/15 16:47	LH	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-WEST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-5	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Method:	SW846 8015B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA29435.D	1	10/05/15	KN	n/a	n/a	GGA1569
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	94%		60-140%		

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

Client Sample ID:	POW WOW-WEST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-5	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Method:	SW846 8021B		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TA29465.D	1	10/06/15	KN	n/a	n/a	GTA1570
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	52	26	ug/kg	
108-88-3	Toluene	ND	100	52	ug/kg	
100-41-4	Ethylbenzene	ND	100	52	ug/kg	
1330-20-7	Xylenes (total)	ND	100	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	114%		60-140%

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

Client Sample ID:	POW WOW-WEST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-5	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Method:	SW846-8015B SW846 3546		
Project:	Pow Wow Skim Pit Closure		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FI29619.D	1	10/01/15	GN	10/01/15	OP12450	GFI1441
Run #2							

Run #	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)	43.3	10	9.2	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	75%		20-130%		

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

Client Sample ID: POW WOW-WEST
Lab Sample ID: D75665-5
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.7

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
%solids							
Solids, Percent	97.7		%	1	09/29/15	SWT	SM2540G-2011 M
prep: DEPT.OF AG, BOOK N9							
Specific Conductivity	1510	1.0	umhos/cm	1	10/01/15	TJ	SM 2510B-2011 MOD
pH	8.85		su	1	10/01/15 15:00	AK	SW846 9045D

RL = Reporting Limit

Report of Analysis

Client Sample ID: POW WOW-WEST
Lab Sample ID: D75665-5A
Matrix: SO - Soil
Project: Pow Wow Skim Pit Closure

Date Sampled: 09/28/15
Date Received: 09/29/15
Percent Solids: 97.7

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	131	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Magnesium	12.5	1.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²
Sodium	157	2.0	mg/l	1	10/01/15	10/02/15 LH	SW846 6010C ¹	SW846 3010A/M ²

(1) Instrument QC Batch: MA6595

(2) Prep QC Batch: MP17078

RL = Reporting Limit

Report of Analysis

Client Sample ID:	POW WOW-WEST	Date Sampled:	09/28/15
Lab Sample ID:	D75665-5A	Date Received:	09/29/15
Matrix:	SO - Soil	Percent Solids:	97.7
Project:	Pow Wow Skim Pit Closure		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	3.51		ratio	1	10/02/15 16:54	LH	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, CO 80033
TEL: 303-425-6021 877-737-4521
FAX: 303-425-6021

FED EX Tracking #	Buttle Order Control #
Accutest Quote #	Accutest Job # D75665

Client / Reporting Information			Project Information			Requested Analysis (see TEST CODE sheet)												Matrix Codes																																																
Company Name DIAMOND OPERATING, INC.			Project Name Pow Wow Skimp Pit closure																																																															
Site Address 6666 GUNPARK DRIVE, SUITE 200			Street:																																																															
City, State, Zip BOULDER, CO 80501			Billing Information (if different from Report to)																																																															
Project Contact Dave Peterson			E-mail davep@diamondenergy.com																																																															
Phone # 303-494-4420			Fax # 303-494-3931																																																															
Sample(s) Name(s) Scat Gibson			Phone # 970.608.1835																																																															
Client PO#			Street Address																																																															
City			City																																																															
State			State																																																															
Zip			Zip																																																															
Attention:			PO#																																																															
Accutest Sample #	Field ID / Point of Collection	MEQ(DI) Vol #	Date	Time	Sampled by	Matrix	# of bottles	ICL	NaOH	HNO3	H2SO4	NONE	DYKOR	MECH	ENCORE	Blindfold	LAB USE ONLY																																																	
1	Pow Wow - base		9/28/15	9 AM	SB	SO											01																																																	
2	Pow Wow - south		"	"	SB	SO											02																																																	
3	Pow Wow - north		"	"	SB	SO											03																																																	
4	Pow Wow - east		"	"	SB	SO											04																																																	
5	Pow Wow - west		"	"	SB	SO											05																																																	
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<p>Turnaround Time (Business days)</p> <p><input type="checkbox"/> Std. 10 Business Days</p> <p><input type="checkbox"/> Std. 5 Business Days (By Contract only)</p> <p><input checked="" type="checkbox"/> 5 Day R/SH</p> <p><input type="checkbox"/> 3 Day EMERGENCY</p> <p><input type="checkbox"/> 2 Day EMERGENCY</p> <p><input type="checkbox"/> 1 Day EMERGENCY</p> <p>Emergency & Rush TIA data available VIA Lablink</p> <p>Approved By (Accutest PM) / Date:</p> <p>Commercial "A" (Level 1) <input type="checkbox"/> State Forms</p> <p>Commercial "B" (Level 2) <input type="checkbox"/> EDD Format</p> <p>Commercial "B" Narrative <input type="checkbox"/> PDF</p> <p>FULLT1 (Level 3+4) <input type="checkbox"/></p> <p>Commercial "A" = Results Only</p> <p>Commercial "B" = Results + QC Summary</p> <p>Comments / Special Instructions</p>																																																																		
<p>Sample Custody must be documented below each time samples change possession, including courier delivery.</p> <table border="1"> <tr> <td>Relinquished to Sampled</td> <td>Date/Time</td> <td>Received By</td> <td>Relinquished to Sampled</td> <td>Date/Time</td> <td>Received By</td> </tr> <tr> <td>1 Scat Gibson</td> <td>9/28 4 PM</td> <td>1 Dave Peterson</td> <td>2 Scat Gibson</td> <td>9/28 9 PM</td> <td>2 Scat Gibson</td> </tr> <tr> <td>Relinquished by Sampled</td> <td>Date/Time</td> <td>Received By</td> <td>Relinquished by Sampled</td> <td>Date/Time</td> <td>Received By</td> </tr> <tr> <td>3</td> <td></td> <td>3</td> <td>4</td> <td></td> <td>4</td> </tr> <tr> <td>Relinquished by:</td> <td>Date/Time</td> <td>Received By:</td> <td>Custody Seal #</td> <td>Intact</td> <td>Preserved where applicable</td> </tr> <tr> <td>5</td> <td></td> <td>5</td> <td>H12</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>On Ice</td> <td>Cooler Temp. 23.1</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>FD 60</td> </tr> </table>																			Relinquished to Sampled	Date/Time	Received By	Relinquished to Sampled	Date/Time	Received By	1 Scat Gibson	9/28 4 PM	1 Dave Peterson	2 Scat Gibson	9/28 9 PM	2 Scat Gibson	Relinquished by Sampled	Date/Time	Received By	Relinquished by Sampled	Date/Time	Received By	3		3	4		4	Relinquished by:	Date/Time	Received By:	Custody Seal #	Intact	Preserved where applicable	5		5	H12	<input checked="" type="checkbox"/>	<input type="checkbox"/>					On Ice	Cooler Temp. 23.1						FD 60
Relinquished to Sampled	Date/Time	Received By	Relinquished to Sampled	Date/Time	Received By																																																													
1 Scat Gibson	9/28 4 PM	1 Dave Peterson	2 Scat Gibson	9/28 9 PM	2 Scat Gibson																																																													
Relinquished by Sampled	Date/Time	Received By	Relinquished by Sampled	Date/Time	Received By																																																													
3		3	4		4																																																													
Relinquished by:	Date/Time	Received By:	Custody Seal #	Intact	Preserved where applicable																																																													
5		5	H12	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																																													
				On Ice	Cooler Temp. 23.1																																																													
					FD 60																																																													

D75665: Chain of Custody

Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D75665 **Client:** DIAMND OPERATING **Project:** POW WOW SKIM PIT CLOSURE
Date / Time Received: 9/29/2015 9:35:00 AM **Delivery Method:** _____ **Airbill #'s:** hd
Cooler Temps (Initial/Adjusted): #1: (23.1/23.1):

Cooler Security
Y or N

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

Cooler Temperature
Y or N

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

Quality Control Preservation
Y or N
N/A

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

Comments

Sample Integrity - Documentation
Y or N

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

Sample Integrity - Condition
Y or N

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

Sample Integrity - Instructions
Y or N
N/A

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

GC Volatiles

5

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D75665

Account: DIAMOCOB Diamond Operating Inc.

Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA1569-MB	GA29427.D	1	10/05/15	KN	n/a	n/a	GGA1569

The QC reported here applies to the following samples:

Method: SW846 8015B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	9.9	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	104% 60-140%

Method Blank Summary

Page 1 of 1

Job Number: D75665
Account: DIAMOCOB Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA1570-MB	TA29457.D	1	10/06/15	KN	n/a	n/a	GTA1570

The QC reported here applies to the following samples:

Method: SW846 8021B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	25	ug/kg	
100-41-4	Ethylbenzene	ND	99	50	ug/kg	
108-88-3	Toluene	ND	99	50	ug/kg	
1330-20-7	Xylenes (total)	ND	99	99	ug/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	116% 60-140%

Blank Spike Summary

Page 1 of 1

Job Number: D75665

Account: DIAMOCOB Diamond Operating Inc.

Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA1569-BS	GA29428.D	1	10/05/15	KN	n/a	n/a	GGA1569

The QC reported here applies to the following samples:

Method: SW846 8015B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	109	105	96	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	107%	60-140%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: D75665
Account: DIAMOCOB Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTA1570-BS	TA29458.D	1	10/06/15	KN	n/a	n/a	GTA1570

The QC reported here applies to the following samples:

Method: SW846 8021B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	1350	1400	104	70-130
100-41-4	Ethylbenzene	2260	2380	105	70-130
108-88-3	Toluene	10500	10300	98	70-130
1330-20-7	Xylenes (total)	10700	11600	109	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	121%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75665

Account: DIAMOCOB Diamond Operating Inc.

Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D75665-1MS	GA29430.D	1	10/05/15	KN	n/a	n/a	GGA1569
D75665-1MSD	GA29431.D	1	10/05/15	KN	n/a	n/a	GGA1569
D75665-1	GA29429.D	1	10/05/15	KN	n/a	n/a	GGA1569

The QC reported here applies to the following samples:

Method: SW846 8015B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	D75665-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		114	110	96	114	109	95	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D75665-1	Limits
120-82-1	1,2,4-Trichlorobenzene	108%	104%	95%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75665
Account: DIAMOCOB Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D75665-1MS	TA29460.D	1	10/06/15	KN	n/a	n/a	GTA1570
D75665-1MSD	TA29461.D	1	10/06/15	KN	n/a	n/a	GTA1570
D75665-1	TA29459.D	1	10/06/15	KN	n/a	n/a	GTA1570

The QC reported here applies to the following samples:

Method: SW846 8021B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	D75665-1 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	1420	1440	102	1420	1490	105	3	70-130/30
100-41-4	Ethylbenzene	ND	2370	2530	107	2370	2560	108	1	70-130/30
108-88-3	Toluene	ND	11000	10900	99	11000	11000	100	1	70-130/30
1330-20-7	Xylenes (total)	ND	11200	12500	111	11200	12600	112	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D75665-1	Limits
120-82-1	1,2,4-Trichlorobenzene	118%	123%	114%	60-140%

* = Outside of Control Limits.

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Page 1 of 1

Job Number: D75665
Account: DIAMOCOB Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12450-MB	FI29594.D	1	10/01/15	GN	10/01/15	OP12450	GFI1440

The QC reported here applies to the following samples:

Method: SW846-8015B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

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	101% 20-130%

Blank Spike Summary

Page 1 of 1

Job Number: D75665

Account: DIAMOCOB Diamond Operating Inc.

Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12450-BS	FI29596.D	1	10/01/15	GN	10/01/15	OP12450	GFI1440

The QC reported here applies to the following samples:

Method: SW846-8015B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	250	165	66	32-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	94%	20-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D75665

Account: DIAMOCOB Diamond Operating Inc.

Project: Pow Wow Skim Pit Closure

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP12450-MS	FI29598.D	1	10/01/15	GN	10/01/15	OP12450	GFI1440
OP12450-MSD	FI29600.D	1	10/01/15	GN	10/01/15	OP12450	GFI1440
D75762-1	FI29602.D	1	10/01/15	GN	10/01/15	OP12450	GFI1440

The QC reported here applies to the following samples:

Method: SW846-8015B

D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

CAS No.	Compound	D75762-1 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)	250		286	417	58	288	304	19* a	31	20-152/54

CAS No.	Surrogate Recoveries	MS	MSD	D75762-1	Limits
84-15-1	o-Terphenyl	81%	67%	71%	20-130%

(a) Outside control limits due to possible matrix interference.

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75665
Account: DIAMOCOB - Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

QC Batch ID: MP17078
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 10/01/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	55	65		
Antimony	150	11	44		
Arsenic	130	19	60		
Barium	50	1	2		
Beryllium	50	4.5	8		
Boron	250	4	18		
Cadmium	50	1	4		
Calcium	2000	12	50	39.5	<2000
Chromium	50	1.5	3.5		
Cobalt	25	2.5	6		
Copper	50	4	19		
Iron	350	7.5	35		
Lead	250	11	25		
Lithium	25	2	3.5		
Magnesium	1000	34	200	26.0	<1000
Manganese	25	2.5	4.5		
Molybdenum	50	2	18		
Nickel	150	2.5	14		
Phosphorus	500	75	170		
Potassium	5000	500	360		
Selenium	250	36	50		
Silicon	250	24	42		
Silver	150	1.5	3		
Sodium	2000	37	70	-57	<2000
Strontium	25	.05	1.5		
Thallium	50	9	40		
Tin	250	60	60		
Titanium	50	.5	14		
Uranium	250	15	22		
Vanadium	50	2	3		
Zinc	150	2	18		

Associated samples MP17078: D75665-1A, D75665-2A, D75665-3A, D75665-4A, D75665-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D75665
Account: DIAMOCOB - Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

QC Batch ID: MP17078
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 10/01/15

Metal	RL	IDL	MDL	MB raw	final
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(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75665
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Pow Wow Skim Pit Closure

QC Batch ID: MP17078
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 10/01/15

Metal	D75665-1A Original MS		Spikelot ICPAL2	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	71000	205000	125000	107.2	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	6260	135000	125000	103.0	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	57800	188000	125000	104.2	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP17078: D75665-1A, D75665-2A, D75665-3A, D75665-4A, D75665-5A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75665
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Pow Wow Skim Pit Closure

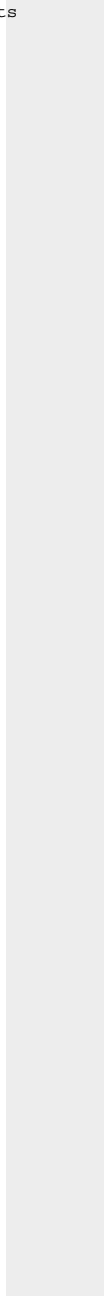
QC Batch ID: MP17078
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 10/01/15

Metal	D75665-1A Original MS	SpikeLot ICPALL2	% Rec	QC Limits
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75665
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Pow Wow Skim Pit Closure

QC Batch ID: MP17078
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 10/01/15

Metal	D75665-1A Original MSD		Spikelot ICPALL2 % Rec		MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium	71000	201000	125000	104.0	2.0	20
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium	6260	134000	125000	102.2	0.7	20
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silicon						
Silver						
Sodium	57800	188000	125000	104.2	0.0	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP17078: D75665-1A, D75665-2A, D75665-3A, D75665-4A, D75665-5A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D75665
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Pow Wow Skim Pit Closure

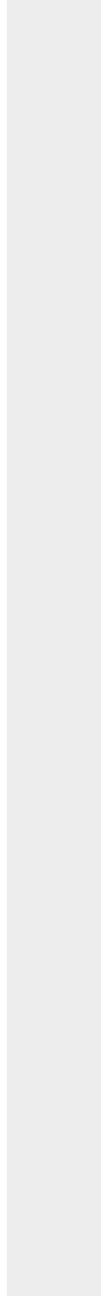
QC Batch ID: MP17078
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 10/01/15

Metal	D75665-1A Original MSD	Spielot ICPALL2 % Rec	MSD RPD	QC Limit
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(N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D75665
Account: DIAMOCOB - Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

QC Batch ID: MP17078
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 10/01/15

Metal	BSP Result	Spikelot ICPALL2	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	126000	125000	100.8	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	129000	125000	103.2	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	126000	125000	100.8	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP17078: D75665-1A, D75665-2A, D75665-3A, D75665-4A, D75665-5A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

Login Number: D75665
Account: DIAMOCOB - Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 10/01/15

Metal	BSP Result	Spikelot ICPALL2 % Rec	QC Limits
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(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D75665
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Pow Wow Skim Pit Closure

QC Batch ID: MP17078
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 10/01/15

Metal	D75665-1A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	14200	14500	2.0	0-10
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	1250	1280	2.2	0-10
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	11600	11600	0.6	0-10
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP17078: D75665-1A, D75665-2A, D75665-3A, D75665-4A, D75665-5A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D75665
Account: DIAMOCOB - Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

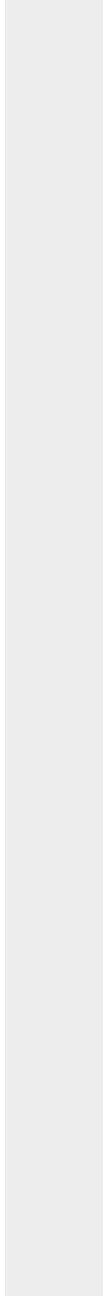
QC Batch ID: MP17078
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60
Units: ug/l

Prep Date: 10/01/15

	D75665-1A		QC
Metal	Original SDL 1:5	%DIF	Limits

(anr) Analyte not requested



7.1.4

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General Chemistry

QC Data Summaries

Includes the following where applicable:

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

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D75665
Account: DIAMOCOB - Diamond Operating Inc.
Project: Pow Wow Skim Pit Closure

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Specific Conductivity	GP16322/GN31773			umhos/cm	998	989	99.1	90-110%
pH	GN31780			su	8.00	7.98	99.7	99.1-100.9%

Associated Samples:

Batch GN31780: D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

Batch GP16322: D75665-1, D75665-2, D75665-3, D75665-4, D75665-5

(*) Outside of QC limits

8.1

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