

STATE OF COLORADO

Dedicated to protecting and improving the health and environment of the people of Colorado

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 Denver, Colorado 80230-6928
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MAY 07 2012

WATER QUALITY CONTROL DIVISION



Colorado Department
 of Public Health
 and Environment

DIVISION USE ONLY
WQCD Division Initiated
Modification

Requested by _____

Date requested _____

Date entered _____

MODIFICATION APPLICATION

Please print or type all information. All items must be filled out completely and correctly. If the form is not complete, it will be returned. All modification dates are established by the Division. This form is for modifying an established permit or certification. Terminations, Change of Contacts, Transfer of Permit, and Withdrawal of Permit Application and/or modification requests must be submitted on the appropriate form:

MAIL ORIGINAL FORM WITH INK SIGNATURES TO THE FOLLOWING ADDRESS:

Colorado Dept of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Dr South WQCD-P-B2
Denver, CO 80246-1530

FAXED or EMAILED FORMS WILL NOT BE ACCEPTED.

- PART A. IDENTIFICATION OF PERMIT** Please write the permit number to be modified

PERMIT NUMBER COG 840005

- PART B. PERMITEE INFORMATION** (application must be signed by the legal contact listed here)

Company Name Diamond Operating, Inc.

Mailing Address 6666 Gunpark Drive, Suite 200

City BOULDER State CO Zipcode 80301

Legal Contact Name David C. Peterson Phone Number 303-494-4420

Title President Email davep@flatironenergy.com

- PART C. FACILITY/PROJECT INFORMATION**

Facility/Project Name Ward Unit

Location (address) SE 1/4 SE 1/4 Section 3 - T2S - R54W

City 5.5 mi. north of Lindon, CO County Washington

Local Contact Name as above Phone Number _____

Title _____ Email _____

COLORADO WATER QUALITY CONTROL DIVISION MODIFICATION APPLICATIONwww.coloradowaterpermits.com• **PART D. DESCRIPTION OF MODIFICATION REQUESTED:****#1) REQUEST ELIMINATION OF THE REQUIREMENT TO PERFORM QUARTERLY WET TESTING –**

Attached is a location map and photographs from three locations down gradient from the Ward discharge point. These photographs show there is no standing water immediately down gradient from the discharge point. The first standing water from the discharge point is a seasonal stock watering pond located about .6 miles down gradient. Water from the Ward discharge as well as surface run-off from an area of roughly 700 acres flows into the stock pond. The stock pond dries up during the summer and fall months of the year.

In that there is no standing water immediately down gradient from the discharge point and that the stock pond located .6 miles down gradient includes a combination of discharge water and normal run-off from rainfall and snow melt, we are requesting the wet testing requirement be eliminated from the monitoring requirement.

#2) REQUEST REQUIREMENT FOR MONITORING OF TSS, TDS, PH, AND ALL METALS BE DECREASED TO QUARTERLY FREQUENCY –

The water produced in association with the oil from the Ward wells originates from the Cretaceous "J" Sandstone formation at a depth of approximately 4800'. Each day we produce roughly the same amount of total fluid from the same rock formation. There is no variation in the source of the water that makes its way from the wells through the surface equipment and eventually to the Ward discharge point. There is no chance that the character of the produced water at the Ward Unit will vary to any significant degree.

Years of monthly testing for TSS, TDS, and pH has shown very little variation in the testing results. Recent metals tests, a copy of which is attached, shows all the test results fell below the reporting limit (RL).

In light of this information, we would like to request that the monitoring frequency of the testing for TSS, TDS, pH, and all the metals be uniformly decreased to a once per quarter basis.

• **PART E. CERTIFICATION Required Signatures**

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

"I understand that submittal of this application is for coverage under the State of Colorado Discharge Permit System until such time as the application is amended or the certification is transferred, inactivated, or expired."



Signature of Legally Responsible Party

5/3/2012

Date Signed

David C. Peterson

Name (printed)

President

Title

Attachment to Modification Application
Ward Unit Discharge COG: 840005
Topographic map with photo locations

Seasonal Stock Watering Pond
[drys up during summer & fall]

Headwaters Tributary to Antelope Creek

Location # 3
1000' down gradient
39.90252°, 103.40588°

Location # 2
500' down gradient
39.90150°, 103.40535°

Location # 1
250' down gradient
39.90095°, 103.40479°

Surface Discharge Outlet

Ward Production Facility

Oil Well

Ward Surface Discharge Outlet



Location #1
250' down gradient from discharge

Location #2
500' down gradient from discharge



Location #2
Looking towards discharge point

Discharge



Location #3
1000' down gradient from discharge



Location #3
Looking down gradient





04/26/12

Technical Report for

Diamond Operating Inc.

Ward Discharge

Accutest Job Number: D33733

Sampling Date: 04/16/12

*April 2012
metals Tests*

Report to:

Diamond Operating Inc.
6666 Gunpark Drive
Suite 200
Boulder, CO 80301

ATTN: Dave Peterson

Total number of pages in report: 25



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

Brad Madadian
Brad Madadian
Laboratory Director

Client Service contact: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

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Sample Summary

Diamond Operating Inc.

Job No: D33733

Ward Discharge

| Sample Number | Collected Date | Time By | Received | Matrix Code Type | Client Sample ID |
|------------------|-------------------|----------|----------|-------------------------|---------------------|
| D33733-1 | 04/16/12 | 18:30 RG | 04/18/12 | AQ Water | WARD LEASE |
| D33733-1F | 04/16/12 | 18:30 RG | 04/18/12 | AQ Potentially Diss. AQ | WARD LEASE |



Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

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2.1
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| | |
|------------------------------|-------------------------|
| Client Sample ID: WARD LEASE | Date Sampled: 04/16/12 |
| Lab Sample ID: D33733-1 | Date Received: 04/18/12 |
| Matrix: AQ - Water | Percent Solids: n/a |
| Project: Ward Discharge | |

Total Recoverable Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-----------|--------|----|-------|----|----------|-------------|------------------------|------------------------|
| Arsenic | < 25 | 25 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Beryllium | < 10 | 10 | ug/l | 1 | 04/18/12 | 04/20/12 JB | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | < 10 | 10 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Chromium | < 10 | 10 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Copper | < 10 | 10 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Lead | < 50 | 50 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Nickel | < 30 | 30 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Selenium | < 50 | 50 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ³ |
| Zinc | < 30 | 30 | ug/l | 1 | 04/18/12 | 04/20/12 JB | EPA 200.7 ² | EPA 200.7 ³ |

(1) Instrument QC Batch: MA2346

(2) Instrument QC Batch: MA2353

(3) Prep QC Batch: MP7318

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

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2.1
2

Client Sample ID: WARD LEASE

Lab Sample ID: D33733-1

Matrix: AQ - Water

Project: Ward Discharge

Date Sampled: 04/16/12

Date Received: 04/18/12

Percent Solids: n/a

General Chemistry

| Analyte | Result | RL | Units | DF | Analyzed | By | Method |
|-----------------------------------|---------|-------|-------|----|----------------|----|--------------------|
| Chromium, Hexavalent ^a | < 0.010 | 0.010 | mg/l | 1 | 04/18/12 11:30 | JK | SM20 3500CR B |
| Chromium, Trivalent ^b | < 0.020 | 0.020 | mg/l | 1 | 04/19/12 10:25 | JB | SW846 6010/7196A M |

(a) Analysis performed past the recommended method holding time as per client instructions.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

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ACCUTEST
D33733 LABORATORIES

Accutest Laboratories

Report of Analysis

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2.2
2

| | |
|--|--------------------------------|
| Client Sample ID: WARD LEASE | Date Sampled: 04/16/12 |
| Lab Sample ID: D33733-1F | Date Received: 04/18/12 |
| Matrix: AQ - Potentially Diss. AQ | Percent Solids: n/a |
| Project: Ward Discharge | |

Potentially Dissolved Metals Analysis

| Analyte | Result | RL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|---------|--------|----|-------|----|----------|-------------|------------------------|------------------------|
| Arsenic | < 25 | 25 | ug/l | 1 | 04/18/12 | 04/19/12 JB | EPA 200.7 ¹ | EPA 200.7 ² |

(1) Instrument QC Batch: MA2346

(2) Prep QC Batch: MP7318

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

[illegible]

D33733: Chain of Custody

Page 1 of 3



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D33733 Client: Dimond Operation Immediate Client Services Action Required: No
 Date / Time Received: 4/18/2012 10 20:00 AM Delivery Method: _____
 Project: Ward Discharge No. Coolers: _____ Airbill #'s: UPS

Cooler Security Y or N Y or N
 1. Custody Seals Present: ☒ ☐ 3. COC Present: ☒ ☐
 2. Custody Seals Intact: ☒ ☐ 4. Smpl Dates/Time OK ☒ ☐

Cooler Temperature Y or N
 1. Temp criteria achieved: ☒ ☐
 2. Cooler temp verification: Infrared gun
 3. Cooler media: Ice (bag)

Quality Control Preservation Y N N/A
 1. Trp Blank present / cooler: ☐ ☐
 2. Trp Blank listed on COC: ☐ ☐
 3. Samples preserved properly: ☒ ☐
 4. VOCs headspace free: ☐ ☐ ☒

Comments

XCR is out of hold

Sample Integrity - Documentation Y or N
 1. Sample labels present on bottles: ☒ ☐
 2. Container labeling complete: ☒ ☐
 3. Sample container label / COC agree: ☒ ☐

Sample Integrity - Condition Y or N
 1. Sample rec'd within HT: ☐ ☒
 2. All containers accounted for: ☒ ☐
 3. Condition of sample: Intact

Sample Integrity - Instructions Y N N/A
 1. Analysis requested is clear: ☒ ☐
 2. Bottles received for unspecified tests: ☐ ☒
 3. Sufficient volume rec'd for analysis: ☒ ☐
 4. Compositing instructions clear: ☐ ☐ ☒
 5. Filtering instructions clear: ☐ ☐ ☒

Accutest Laboratories
 V 303 425 6021

4036 Youngfield Street
 F 303 425 6854

Wheat Ridge, CO
 www.accutest.com

D33733: Chain of Custody
 Page 2 of 3



Sample Receipt Summary - Problem Resolution

Accutest Job Number: D33733

CSR: Renea Jackson

Response Date 4/18/2012

Response: Per Dave Peterson, please run and report XCR out of hold. Thank you.

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F 303 425 6854

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D33733: Chain of Custody
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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: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

QC Batch ID: MP7318
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 04/18/12

| Metal | RL | IDL | MDL | MB raw | final |
|------------|------|------|-----|-----------|-------|
| Aluminum | 100 | 5.9 | 9.6 | | |
| Antimony | 30 | 3.1 | 2.3 | | |
| Arsenic | 25 | 5.9 | 4.4 | 1.3 | <25 |
| Barium | 10 | 1.1 | .25 | | |
| Beryllium | 10 | .44 | 1.3 | -0.60 | <10 |
| Boron | 50 | 4.8 | 1 | | |
| Cadmium | 10 | .27 | .59 | -0.10 | <10 |
| Calcium | 400 | 9.6 | 5.4 | | |
| Chromium | 10 | .18 | .29 | 0.0 | <10 |
| Cobalt | 5.0 | .35 | .39 | | |
| Copper | 10 | .85 | 1.2 | -2.0 | <10 |
| Iron | 10 | 3.4 | 4.3 | | |
| Lead | 50 | 1.6 | 2.5 | -0.40 | <50 |
| Lithium | 2.0 | .28 | .51 | | |
| Magnesium | 200 | 5.8 | 6.5 | | |
| Manganese | 5.0 | .053 | 1.2 | | |
| Molybdenum | 10 | .45 | 2.1 | | |
| Nickel | 30 | .43 | 2.6 | 0.10 | <30 |
| Phosphorus | 100 | 11 | 14 | | |
| Potassium | 1000 | 55 | 61 | | |
| Selenium | 50 | 3.8 | 5.4 | -2.9 | <50 |
| Silicon | 50 | 3.8 | 3.2 | | |
| Silver | 30 | .18 | .4 | | |
| Sodium | 400 | 110 | 8.2 | | |
| Strontium | 5.0 | | 1.2 | | |
| Thallium | 10 | 2.9 | 2.9 | | |
| Tin | 50 | 5.5 | 15 | | |
| Titanium | 10 | .11 | 3 | | |
| Uranium | 50 | 1.5 | 2.2 | | |
| Vanadium | 10 | .16 | .35 | | |
| Zinc | 30 | .28 | .5 | 0.60 | <30 |

Associated samples MP7318: D33733-1, D33733-1F

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

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

QC Batch ID: MP7318
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

4.1.1

4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33733
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Ward Discharge

QC Batch ID: MP7318
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 04/18/12

| Metal | D33683-1 Original MS | Spikelot ICPALL2 | % Rec | QC Limits |
|------------|-------------------------|---------------------|-------|-----------------|
| Aluminum | | | | |
| Antimony | | | | |
| Arsenic | 128 | 1210 | 1000 | 108.2 70-130 |
| Barium | | | | |
| Beryllium | 3.0 | 534 | 500 | 106.4 70-130 |
| Boron | | | | |
| Cadmium | 18.7 | 557 | 500 | 107.7 70-130 |
| Calcium | anr | | | |
| Chromium | 5.2 | 523 | 500 | 103.6 70-130 |
| Cobalt | | | | |
| Copper | 44.6 | 605 | 500 | 112.1 70-130 |
| Iron | anr | | | |
| Lead | 0.0 | 1010 | 1000 | 101.0 70-130 |
| Lithium | | | | |
| Magnesium | anr | | | |
| Manganese | | | | |
| Molybdenum | | | | |
| Nickel | 65.6 | 551 | 500 | 97.1 70-130 |
| Phosphorus | anr | | | |
| Potassium | | | | |
| Selenium | 0.0 | 1180 | 1000 | 118.0 70-130 |
| Silicon | | | | |
| Silver | anr | | | |
| Sodium | | | | |
| Strontium | | | | |
| Thallium | | | | |
| Tin | | | | |
| Titanium | | | | |
| Uranium | | | | |
| Vanadium | | | | |
| Zinc | 22300 | 22000 | 500 | -60.0(a) 70-130 |

Associated samples MP7318: D33733-1, D33733-1F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33733
Account DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

QC Batch ID: MP7318
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

4.1.2
4

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33733
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Ward Discharge

QC Batch ID: MP7318
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 04/18/12

| Metal | D33683-1 Original | MSD | Spikelot ICPALL2 | % Rec | MSD RPD | QC Limit |
|------------|----------------------|-------|---------------------|----------|------------|-------------|
| Aluminum | | | | | | |
| Antimony | | | | | | |
| Arsenic | 128 | 1250 | 1000 | 112.2 | 3.3 | 20 |
| Barium | | | | | | |
| Beryllium | 3.0 | 543 | 500 | 108.2 | 1.7 | 20 |
| Boron | | | | | | |
| Cadmium | 18.7 | 563 | 500 | 108.9 | 1.1 | 20 |
| Calcium | anr | | | | | |
| Chromium | 5.2 | 532 | 500 | 105.4 | 1.7 | 20 |
| Cobalt | | | | | | |
| Copper | 44.6 | 612 | 500 | 113.5 | 1.2 | 20 |
| Iron | anr | | | | | |
| Lead | 0.0 | 1020 | 1000 | 102.0 | 1.0 | 20 |
| Lithium | | | | | | |
| Magnesium | anr | | | | | |
| Manganese | | | | | | |
| Molybdenum | | | | | | |
| Nickel | 65.6 | 559 | 500 | 98.7 | 1.4 | 20 |
| Phosphorus | anr | | | | | |
| Potassium | | | | | | |
| Selenium | 0.0 | 1200 | 1000 | 120.0 | 1.7 | 20 |
| Silicon | | | | | | |
| Silver | anr | | | | | |
| Sodium | | | | | | |
| Strontium | | | | | | |
| Thallium | | | | | | |
| Tin | | | | | | |
| Titanium | | | | | | |
| Uranium | | | | | | |
| Vanadium | | | | | | |
| Zinc | 22300 | 22600 | 500 | 60.0 (a) | 2.7 | 20 |

Associated samples MP7318: D33733-1, D33733-1F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

QC Batch ID: MP7318
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

4.1.2
4

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D33733
 Account: DIAMOCOB - Diamond Operating Inc.
 Project: Ward Discharge

QC Batch ID: MP7318
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 04/18/12

| Metal | BSP Result | Spikelot ICPALL2 | % Rec | QC Limits |
|------------|---------------|---------------------|-------|--------------|
| Aluminum | | | | |
| Antimony | | | | |
| Arsenic | 1090 | 1000 | 109.0 | 85-115 |
| Barium | | | | |
| Beryllium | 560 | 500 | 112.0 | 85-115 |
| Boron | | | | |
| Cadmium | 547 | 500 | 109.4 | 85-115 |
| Calcium | anr | | | |
| Chromium | 546 | 500 | 109.2 | 85-115 |
| Cobalt | | | | |
| Copper | 508 | 500 | 101.6 | 85-115 |
| Iron | anr | | | |
| Lead | 1050 | 1000 | 105.0 | 85-115 |
| Lithium | | | | |
| Magnesium | anr | | | |
| Manganese | | | | |
| Molybdenum | | | | |
| Nickel | 520 | 500 | 104.0 | 85-115 |
| Phosphorus | anr | | | |
| Potassium | | | | |
| Selenium | 1140 | 1000 | 114.0 | 85-115 |
| Silicon | | | | |
| Silver | anr | | | |
| Sodium | | | | |
| Strontium | | | | |
| Thallium | | | | |
| Tin | | | | |
| Titanium | | | | |
| Uranium | | | | |
| Vanadium | | | | |
| Zinc | 530 | 500 | 106.0 | 85-115 |

Associated samples MP7318: D33733-1, D33733-1F

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

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

QC Batch ID: MP7318
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

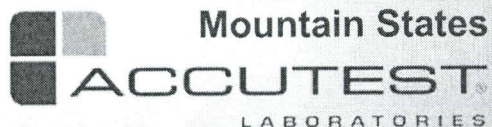
Prep Date:

Metal

(anr) Analyte not requested

4.1.3

4



General Chemistry

5

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: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|----------------------|----------|-------|--------------|-------|-----------------|---------------|---------------|--------------|
| Chromium, Hexavalent | GN14579 | 0.010 | 0.0 | mg/l | 0.1 | 0.10 | 99.7 | 90-110% |

Associated Samples:
Batch GN14579: D33733-1
(*) Outside of QC limits

5.1

5

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33733
Account DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

| Analyte | Batch ID | QC Sample | Units | Original Result | DUP Result | RPD | QC Limits |
|----------------------|----------|--------------|-------|--------------------|---------------|----------|--------------|
| Chromium, Hexavalent | GN14579 | D33720-1F | mg/l | 0.0 | 0.0 | 66.7 (a) | 0-20% |

Associated Samples:

Batch GN14579: D33733-1

(*) Outside of QC limits

(a) RPD acceptable due to low duplicate and sample concentrations.

5.2
5

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRYLogin Number: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec | QC Limits |
|----------------------|----------|-----------|-------|-----------------|--------------|-----------|---------|-----------|
| Chromium, Hexavalent | GN14579 | D33720-1F | mg/l | 0.0 | 0.1 | 0.0 | 0.0*(a) | 85-115% |

Associated Samples:

Batch GN14579: D33733-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference.

5.3

5

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D33733
Account: DIAMOCOB - Diamond Operating Inc.
Project: Ward Discharge

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MSD Result | RPD | QC Limit |
|----------------------|----------|-----------|-------|-----------------|--------------|------------|--------|----------|
| Chromium, Hexavalent | GN14579 | D33720-1F | mg/l | 0.0 | 0.1 | 0.00400 | 0.0(a) | 20% |

Associated Samples:

Batch GN14579: D33733-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(a) Spike recovery indicates possible matrix interference.

5.4

5