



September 2, 2014

Ms. Amy Axon
Hydrogeologist
Inactive Hazardous Sites Branch
NC DENR Division of Waste Management
217 West Jones Street
Raleigh, NC 27603

Re: Updated Groundwater Sampling Results
828 Martin Luther King Jr Blvd, Chapel Hill, NC

Dear Ms. Axon:

Falcon Engineering, Inc. (Falcon) has completed the requested groundwater sampling for the property located at 828 Martin Luther King Jr Boulevard in Chapel Hill, North Carolina. As per NCDENR's request sampling was completed for MW-3 and MW-4 for turbidity and metals. As observed from previous sampling efforts, these monitoring wells have exhibited high turbidity during sampling activities. As a result, metals analysis tends to be inaccurate due to the presence of these suspended particles.

As requested, Falcon redeveloped and purged the groundwater monitoring wells, as per NC DENR sampling guidance, prior to completing any sampling activities. Turbidity samples were collected following purging activities, with all monitoring wells displaying elevated turbidity. Given the elevated turbidity, and to provide more accurate metals analysis of these groundwater monitoring wells, Falcon completed low flow sampling via a peristaltic pump with a 0.45 μm in line Geotech filter. Falcon conducted the requested sampling on August 15, 2014 and August 20, 2014. As shown within the tables provided in Attachment A, all groundwater samples were shown to be below the established NC 2L Groundwater Standards. Full laboratory reports can be found within Attachment B.

We appreciate your review and assistance in this matter. If you have any questions, please give us a call at (919) 871-0800.

Sincerely,
FALCON ENGINEERING, INC.

A handwritten signature in black ink, appearing to read "J. Dunbar".

Josh Dunbar, PE
Director of Design Services



ATTACHMENT A | GROUNDWATER SAMPLING RESULTS SUMMARY TABLE



TABLE 1 | SUMMARY OF GROUNDWATER LAB RESULTS

| Constituent of Potential Concern (COPC) | Units | Sampling Locations | | NC DENR GW Standard (15A NCAC 02L .0202) |
|--|-------|--------------------|------|---|
| | | MW-3 | MW-4 | |
| Turbidity | NTU | 13 | 310 | NA |
| Arsenic | ug/L | < 10 | < 10 | 10 |
| Barium | ug/L | 220 | 75 | 700 |
| Cadmium | ug/L | < 1 | < 1 | 2 |
| Chromium | ug/L | < 5 | < 5 | 10 |
| Lead | ug/L | < 5 | < 5 | 15 |
| Selenium | ug/L | < 20 | < 20 | 20 |
| Silver | ug/L | < 5 | < 5 | 20 |

NOTES:

Values shown as "<" are below laboratory reporting limits as shown

Due to high turbidity being present within these monitoring wells, the metals results above were collected following a 0.45 µm in-line filter.



ATTACHMENT B | LABORATORY REPORTS





Full-Service Analytical &
Environmental Solutions

NC Certification No. 402
SC Certification No. 99012
NC Drinking Water Cert No. 37735
VA Certification No. 460211
DoD ELAP: L-A-B Accredited Certificate No. L2307
ISO/IEC 17025: L-A-B Accredited Certificate No. L2307

Case Narrative

09/02/2014

Falcon Engineering
Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr Blvd.

Lab Submittal Date: 08/18/2014
Prism Work Order: 4080360

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.

Angela D. Overcash
VP Laboratory Services

Reviewed By Angela D. Overcash
VP Laboratory Services

Data Qualifiers Key Reference:

| | |
|-----|--|
| HT | Sample received and analyzed outside of the hold time. |
| BRL | Below Reporting Limit |
| MDL | Method Detection Limit |
| RPD | Relative Percent Difference |
| * | Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J. |

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

| Client Sample ID | Lab Sample ID | Matrix | Date Sampled | Date Received |
|------------------|---------------|--------|--------------|---------------|
| MW-4 | 4080360-02 | Water | 08/15/14 | 08/18/14 |

Samples were received in good condition at 1.6 degrees C unless otherwise noted.



Falcon Engineering
Attn: Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr Blvd.

Sample Matrix: Water

Client Sample ID: MW-4
Prism Sample ID: 4080360-02
Prism Work Order: 4080360
Time Collected: 08/15/14 14:00
Time Submitted: 08/18/14 17:00

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|-------------------------------------|--------|-------|--------------|------|-----------------|--------|--------------------|---------|----------|
| General Chemistry Parameters | | | | | | | | | |
| Turbidity | 310 HT | NTU | 10 | 0.16 | 10 | *180.1 | 8/19/14 15:00 | CDE | P4H0340 |



Falcon Engineering
Attn: Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr Blvd.

Prism Work Order: 4080360
Time Submitted: 8/18/2014 5:00:00PM

General Chemistry Parameters - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
| Batch P4H0340 - NO PREP | | | | | | | | | | |
| Blank (P4H0340-BLK1) | | | | | | | | | | |
| Prepared & Analyzed: 08/19/14 | | | | | | | | | | |
| Turbidity | BRL | 0.40 | NTU | | | | | | | |
| LCS (P4H0340-BS1) | | | | | | | | | | |
| Prepared & Analyzed: 08/19/14 | | | | | | | | | | |
| Turbidity | 4.24 | 0.40 | NTU | 4.000 | | 106 | 90-110 | | | |



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NC Drinking Water Cert No. 37735
VA Certification No. 460211
DoD ELAP: L-A-B Accredited Certificate No. L2307
ISO/IEC 17025: L-A-B Accredited Certificate No. L2307

Case Narrative

09/02/2014

Falcon Engineering
Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr Blvd.

Lab Submittal Date: 08/21/2014
Prism Work Order: 4080415

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Please call if you have any questions relating to this analytical report.

Respectfully,

PRISM LABORATORIES, INC.

Angela D. Overcash
VP Laboratory Services

Reviewed By Angela D. Overcash
VP Laboratory Services

Data Qualifiers Key Reference:

BRL Below Reporting Limit

MDL Method Detection Limit

RPD Relative Percent Difference

* Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J.

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449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543
Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

| Client Sample ID | Lab Sample ID | Matrix | Date Sampled | Date Received |
|------------------|---------------|--------|--------------|---------------|
| MW-4 | 4080415-01 | Water | 08/20/14 | 08/21/14 |
| MW-3 | 4080415-02 | Water | 08/20/14 | 08/21/14 |

Samples were received in good condition at 0.5 degrees C unless otherwise noted.



Falcon Engineering
Attn: Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr
Blvd.

Sample Matrix: Water

Client Sample ID: MW-4
Prism Sample ID: 4080415-01
Prism Work Order: 4080415
Time Collected: 08/20/14 11:15
Time Submitted: 08/21/14 08:20

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|---------------------|--------------|-------------|--------------|---------------|-----------------|---------------|----------------------|------------|----------------|
| Total Metals | | | | | | | | | |
| Arsenic | BRL | mg/L | 0.010 | 0.0012 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |
| Barium | 0.075 | mg/L | 0.010 | 0.0025 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |
| Cadmium | BRL | mg/L | 0.0010 | 0.000044 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |
| Chromium | BRL | mg/L | 0.0050 | 0.00038 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |
| Lead | BRL | mg/L | 0.0050 | 0.00057 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |
| Selenium | BRL | mg/L | 0.020 | 0.0037 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |
| Silver | BRL | mg/L | 0.0050 | 0.00024 | 1 | *6010C | 8/27/14 21:00 | BGM | P4H0393 |

Falcon Engineering
Attn: Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr
Blvd.

Sample Matrix: Water

Client Sample ID: MW-3
Prism Sample ID: 4080415-02
Prism Work Order: 4080415
Time Collected: 08/20/14 12:40
Time Submitted: 08/21/14 08:20

| Parameter | Result | Units | Report Limit | MDL | Dilution Factor | Method | Analysis Date/Time | Analyst | Batch ID |
|-------------------------------------|--------|-------|--------------|----------|-----------------|--------|--------------------|---------|----------|
| General Chemistry Parameters | | | | | | | | | |
| Turbidity | 13 | NTU | 1.0 | 0.016 | 1 | *180.1 | 8/21/14 15:50 | MES | P4H0394 |
| Total Metals | | | | | | | | | |
| Arsenic | BRL | mg/L | 0.010 | 0.0012 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |
| Barium | 0.22 | mg/L | 0.010 | 0.0025 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |
| Cadmium | BRL | mg/L | 0.0010 | 0.000044 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |
| Chromium | BRL | mg/L | 0.0050 | 0.00038 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |
| Lead | BRL | mg/L | 0.0050 | 0.00057 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |
| Selenium | BRL | mg/L | 0.020 | 0.0037 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |
| Silver | BRL | mg/L | 0.0050 | 0.00024 | 1 | *6010C | 8/27/14 21:08 | BGM | P4H0393 |



Falcon Engineering
Attn: Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr Blvd.

Prism Work Order: 4080415
Time Submitted: 8/21/2014 8:20:00AM

Total Metals - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------------------------------------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
| Batch P4H0393 - 3010A | | | | | | | | | | |
| Blank (P4H0393-BLK1) | | | | | | | | | | |
| Prepared: 08/22/14 Analyzed: 08/27/14 | | | | | | | | | | |
| Arsenic | BRL | 0.010 | mg/L | | | | | | | |
| Barium | BRL | 0.010 | mg/L | | | | | | | |
| Cadmium | BRL | 0.0010 | mg/L | | | | | | | |
| Chromium | BRL | 0.0050 | mg/L | | | | | | | |
| Lead | BRL | 0.0050 | mg/L | | | | | | | |
| Selenium | BRL | 0.020 | mg/L | | | | | | | |
| Silver | BRL | 0.0050 | mg/L | | | | | | | |
| LCS (P4H0393-BS1) | | | | | | | | | | |
| Prepared: 08/22/14 Analyzed: 08/27/14 | | | | | | | | | | |
| Arsenic | 0.255 | 0.010 | mg/L | 0.2500 | | 102 | 80-120 | | | |
| Barium | 0.259 | 0.010 | mg/L | 0.2500 | | 104 | 80-120 | | | |
| Cadmium | 0.257 | 0.0010 | mg/L | 0.2500 | | 103 | 80-120 | | | |
| Chromium | 0.256 | 0.0050 | mg/L | 0.2500 | | 102 | 80-120 | | | |
| Lead | 0.257 | 0.0050 | mg/L | 0.2500 | | 103 | 80-120 | | | |
| Selenium | 0.262 | 0.020 | mg/L | 0.2500 | | 105 | 80-120 | | | |
| Silver | 0.105 | 0.0050 | mg/L | 0.1000 | | 105 | 80-120 | | | |



Falcon Engineering
Attn: Josh Dunbar
1210 Trinity Road
Raleigh, NC 27607

Project: 828 Martin Luther King Jr Blvd.

Prism Work Order: 4080415
Time Submitted: 8/21/2014 8:20:00AM

General Chemistry Parameters - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------------------------|-----|-----------|-------|
| Batch P4H0394 - NO PREP | | | | | | | | | | |
| Blank (P4H0394-BLK1) | | | | Prepared & Analyzed: 08/21/14 | | | | | | |
| Turbidity | BRL | 0.40 | NTU | | | | | | | |
| LCS (P4H0394-BS1) | | | | Prepared & Analyzed: 08/21/14 | | | | | | |
| Turbidity | 4.34 | 0.40 | NTU | 4.000 | | 108 | 90-110 | | | |
| Duplicate (P4H0394-DUP1) | | | | Source: 4080415-02 | | | Prepared & Analyzed: 08/21/14 | | | |
| Turbidity | 12.1 | 0.40 | NTU | | 12.9 | | | 6 | 20 | |

Sample Extraction Data

Prep Method: 3010A

| Lab Number | Batch | Initial | Final | Date/Time |
|------------|---------|---------|-------|---------------|
| 4080415-01 | P4H0393 | 50 mL | 50 mL | 08/22/14 8:45 |
| 4080415-02 | P4H0393 | 50 mL | 50 mL | 08/22/14 8:45 |