September 28, 2017

Kennewick School District
Attn: Keith Colee, Maintenance and Operations Manager
1000 West Fourth Avenue
Kennewick, Washington, 99336

**RE: Winter 2016 Drinking Water Sampling Results**
**Mid-Columbia Parent Partnership, 201 South Garfield Street, Kennewick, Washington**

Dear Keith:

On Thursday, December 22, 2016, Fulcrum Environmental Consulting, Inc. (Fulcrum) collected six drinking water samples for lead and copper analysis from Mid-Columbia Parent Partnership (School) located at 201 South Garfield in Kennewick, Washington. Sampling was completed as part of a District-wide project and all analysis was completed by Washington State Department of Ecology (Ecology) accredited laboratories.

The purpose of sampling was to evaluate current drinking water quality conditions with respect to lead and copper as a result of the increased national and local interest related to lead in drinking water. The intent of sampling was to meet the requirements of the pending regulations set forth in Washington Administrative Code (WAC) 246-366A-130 and 246-366A-135[1]. Consistent with the pending regulations, Fulcrum completed sampling at the rates of at least 50% of plumbing fixtures used regularly for drinking or cooking in elementary and preschools and at least 25% of drinking or cooking fixtures in middle schools, junior high schools, and high schools. In addition, Fulcrum sampled administrative facilities in the District at the same rate as elementary schools, of at least 50% of drinking and cooking fixtures.

## Summary

Fulcrum completed initial sampling in the building on December 22, 2016. Analytical results indicate that all of the samples were below the Environmental Protection Agency (EPA) action level of 15 micrograms per liter (µg/L) for lead and 1,300 µg/L for copper.

At this time, Fulcrum does not recommend any additional sampling. However, consistent with industry practice and the intent of WAC 246-366A, Fulcrum recommends that the District complete re-sampling of the building within the next five years (before December 2021). Additionally, if WAC 246-366A-130 is enacted, the regulations would require testing of all remaining fixtures within two years of the effective date (July 1, 2017). See Figure 1 in Attachment A for fixture locations and laboratory results.

[1] Washington State Department of Health, WAC 246-366A, *The Environmental Health and Safety Standards of Primary and Secondary Schools*, http://apps.leg.wa.gov/WAC/default.aspx?cite=246-366A, July 26, 2016



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efulcrum.net

## Sampling Methodology

As a portion of this project, Fulcrum prepared a Sampling and Analysis Plan (SAP) intended to satisfy future initial sampling requirements under pending regulations.

For initial evaluation purposes, Fulcrum collected "first draw" samples. This "first draw" water volume consists of 250 milliliters (mL) and is intended to represent the water quality in the fixture, tubing connecting the fixture to the building piping, and potentially a portion of the building piping. If lead or copper are present, this first-draw sample typically contains the highest lead and copper levels.

Field evaluation of pH and temperature of drinking water was completed during the initial cold water flush and immediately following sample collection on select fixtures.

## Sampling Activities

Fulcrum's two-part sampling process consisted of an initial site visit the prior afternoon/evening to locate and flush each water sampling location (fixture). Sample collection occurred the following morning, after the fixture sat motionless for more than eight but no less than 18 hours, typically approximately 14 hours.

On the initial visit, Fulcrum flushed cold water through each fixture selected for sampling for approximately one minute. Following the flush, each fixture was covered and secured within a plastic bag. The plastic bags were marked with signage in English and Spanish indicating that testing was in progress and the fixture should not be used. Fulcrum returned to the school eight to 18 hours later to collect the samples. Each sample consisted of the first draw collected into 250-mL unpreserved polyethylene bottles and immediately placed on ice in a chilled cooler.

As a quality control measure, Fulcrum also included a laboratory blank of distilled water and a laboratory "spike" sample with known concentrations of lead and copper at the selected action levels for the project.

Collected samples were delivered under chain-of-custody to RJ Lee Group's Columbia Basin Analytical Laboratory (Lab ID: C859-16) in Pasco, Washington for analysis.

## Analytical Results

Samples were analyzed for lead and copper in drinking water by EPA Method 200.8. Sample locations and laboratory results are presented in Figure 1 in Attachment A of this letter. A site-specific sampling and analysis plan (SSSAP) that provides a building specific summary of the location, number, and sampling frequency of water fixture locations is located in Attachment B. The analytical results from this project are summarized in Table 1 located in Attachment C of this letter. Laboratory analytical results from the sampling event are located in Attachment D of this letter.

In addition, pH and temperature data is presented in Table 2 in Attachment C of this letter.



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## Discussion

Analytical results indicate that all of the samples were below the action level of 15 µg/L for lead and 1,300 µg/L for copper.

## Recommendations

Although all samples collected contain detectable amounts of lead and copper, the concentrations identified are below the EPA action levels of 15 µg/L for lead and 1,300 µg/L for copper.

At this time, Fulcrum does not recommend any additional sampling. However, consistent with industry practice and the intent of WAC 246-366A, Fulcrum recommends that the District complete re-sampling of the building within the next five years (before November 2021). Additionally, if WAC 246-366A-130 is enacted, the regulations would require testing of all remaining fixtures within two years of the effective date (July 1, 2017).

If you have any questions, please feel free to contact me at (509) 574-0839.

Sincerely,

Amanda Enbysk, GIT
Environmental Geologist

Ryan K. Mathews, CIH, CHMM
Principal




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# ATTACHMENT A

Figure 1: Sample Location Map



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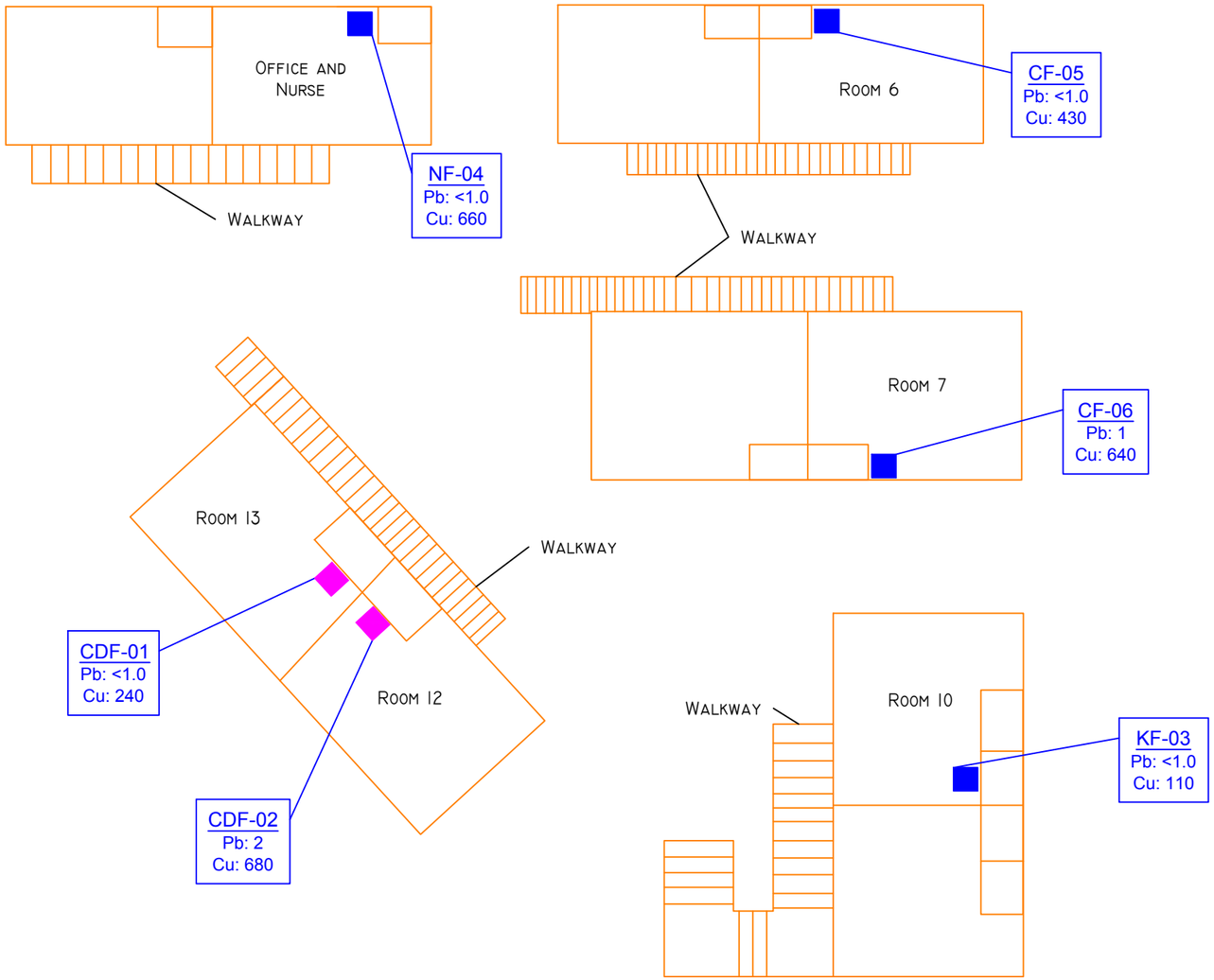


## LEGEND

KF-## - Kitchen faucet

CF-## - Classroom faucet

CDF-## - Classroom drinking fountain

- - Sample location: faucet

- - Sample location: drinking fountain at sink

Lead (Pb) and copper (Cu) results for each sample location are below each identifier. All results reported in µg/L.

N

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Kennewick SD Drinking Water Sampling. 162017.00. AME. 09272017

Mid-Columbia Parent Partnership
200 South Garfield Street
Kennewick, Washington

Sample Location Map

FIGURE
1

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# ATTACHMENT B

Site-Specific Sampling and Analysis Plan



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# Site-Specific Sampling and Analysis Plan

## Kennewick School District – Winter 2016 Drinking Water Sampling

*Note: This SSSAP has been prepared as a supplement to the project SAP/QAPP and provide a building specific summary of the location, number, and sampling frequency of water fixture locations.*

Campus/Building: Mid-Columbia Parent Partnership Address: 201 South Garfield St, Kennewick WA

☑ Elementary ☐ Middle School ☐ High School ☐ Administration

Date of Construction: _____ Modernizations: _____

| Fixture Type | Locations | Fixture Styles[1] | Samples | Ratio |
|---|---|---|---|---|
| Drinking fountain/water cooler (DF/WC) | N/A | N/A | N/A | - |
| Kitchen Fixture (KF) | 1 | 1 | 1 | 100% |
| Classroom faucet, including faucets in Food Labs and Life Sciences Classrooms (CF) | 5 | 1 | 2 | 40% |
| Classroom drinking fountain at sink (CDF) | 2 | 1 | 2 | 100% |
| Nurse's Office/Health Room (NF) | 1 | 1 | 1 | 100% |
| Teacher's Lounges/Work Rooms (OF) | N/A | N/A | N/A | - |
| **TOTALS** | **9** | | **6** | **67%** |

1 Fixture styles are approximate based on sampler's observations

Lead Sampler: Nathan Bostrom Date: 12/21/16

Sample Prefix: MCP – 122116 – P (first-draw) – _____ – 01-08

*School Code* *Date* *Sample Type* *Fixture Type* *Sample Number*

Laboratory: R. J. Lee Group, Columbia Basin Analytical Delivery Date: December 21, 2016

Comments:

-School categorized as "elementary" as it serves students in K-12th grades



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## ATTACHMENT C

Table 1: Analytical Results Summary Table
Table 2: pH and Temperature Data Summary Table



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**Table 1: Initial Sampling Analytical Results**

| Sample Identification and Location | Type of Fixture | Lead Results (µg/L) | Copper Results (µg/L) |
|---|---|---|---|
| MCP122116-P-CDF-01: Room 13 | Classroom Drinking Fountain | <1.0 | 240 |
| MCP122116-P-CDF-02: Room 12 | Classroom Drinking Fountain | 2 | 680 |
| MCP122116-P-KF-03: Room 10 | Kitchen Faucet | <1.0 | 110 |
| MCP122116-P-NF-04: Nurse's Office | Nurse's Faucet | <1.0 | 660 |
| MCP122116-P-CF-05: Room 6 | Classroom Faucet | <1.0 | 430 |
| MCP122116-P-CF-06: Room 7 | Classroom Faucet | 1 | 640 |
| *MCP122116-P-CF-07: Laboratory Blank - labeled Room 8* | *Distilled Water Blank* | *<1.0* | *<10* |
| *MCP122116-P-CF-08: Laboratory Spike - labeled Room 9* | *Lead and Copper Spike* | *15* | *1,350* |
| **EPA Action Level** | | **15** | **1,300** |

1 µg/L means microgram per liter or parts per billion (ppb).

2 Action levels based on the U.S. EPA's Lead and Copper Rule.

Results indicated in **bold** indicate concentrations above the action levels of 15 µg/L for lead and 1,300 µg/L for copper
Results indicated in *italics* are quality assurance spike and blank samples

**Table 2: pH and Temperature Data Summary**

| Sample Number and Location | Fixture Type | pH Flush | pH Sample | Temperature Flush (°C) | Temperature Sample (°C) |
|---|---|---|---|---|---|
| MCP122116-P-NF-04: Nurse's Office | Nurse's Faucet | 7.91 | - | 18.6 | - |



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# ATTACHMENT D

Analytical Results



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**RJ Lee*Group*, Inc. | Columbia Basin Analytical Laboratories**
2710 North 20th Avenue, Pasco WA 99301
Tel: (509) 545-4989 | Fax: (509) 544-6010

Fulcrum Environmental
406 N. 2nd St.
Yakima, WA 98901

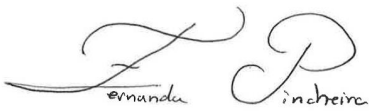
**Subject: Chemical Analysis Report**

Columbia Basin Analytical Laboratories received 8 sample(s) on 12/22/16 for analysis. These sample(s) have been assigned a login order number of W612114. Enclosed is the final report that consists of a summary report of the sample(s), and a copy of the chain of custody.

**General Lab Comments**

The results provided in this report relate only to the items tested. Sample(s) were received in acceptable conditions unless otherwise noted in the comments above. Sample(s) have not been field blank corrected unless otherwise noted in the general set comments above. The sample(s) were prepared in accordance with EPA 200.8 and analyzed in compliance with EPA 200.8. This test report shall not be reproduced, except in full, without written approval of Columbia Basin Analytical Laboratories. Any questions, please contact our office.

Release of the data contained in the hard copy report has been authorized by the Laboratory Director or a designee as verified by the following signature. This report has been administratively reviewed by the following individual:



01/27/17

Project Coordinator II, M. Fernanda Pincheira — Date

If you have any questions please feel free to contact Fernanda Pincheira at MPincheira@rjleegroup.com.

RJ LEE GROUP

# Laboratory Report

Amanda Enbysk

Fulcrum Environmental
406 N. 2nd St.
Yakima, WA 98901

Client Project:

Fulcrum Kennewick

RJ Lee Group No.: W612114
COC No.: Kennewick
Samples Received: 12/22/16
Analysis/Prep Date: 01/25/17
Report Date: 01/27/17

**Sample Name:** MCP122216-P-CDF-01 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-01 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 0.24 | 0.01 | |
| Lead | EPA 200.8 | < 0.0010 | 0.001 | |

**Sample Name:** MCP122216-P-CDF-02 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-02 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 0.68 | 0.01 | |
| Lead | EPA 200.8 | 0.002 | 0.001 | |

**Sample Name:** MCP122216-P-KF-03 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-03 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 0.11 | 0.01 | |
| Lead | EPA 200.8 | < 0.0010 | 0.001 | |

**Sample Name:** MCP122216-P-NF-04 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-04 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 0.66 | 0.01 | |
| Lead | EPA 200.8 | < 0.0010 | 0.001 | |

**Sample Name:** MCP122216-P-CF-05 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-05 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 0.43 | 0.01 | |
| Lead | EPA 200.8 | < 0.0010 | 0.001 | |

RJ LEE GROUP

**Sample Name:** MCP122216-P-CF-06 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-06 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 0.64 | 0.01 | |
| Lead | EPA 200.8 | 0.001 | 0.001 | |

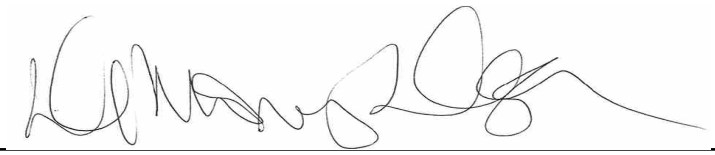
**Sample Name:** MCP122216-P-CF-07 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-07 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | < 0.010 | 0.01 | |
| Lead | EPA 200.8 | < 0.0010 | 0.001 | |

**Sample Name:** MCP122216-P-CF-08 **Matrix:** Potable Water **Date Received:** 12/22/16
**RJ Lee Grp. ID:** W612114-08 **Date Analyzed:** 01/25/17

| Analyte | Method | Result (mg/L) | PQL (mg/L) | Qualifiers |
|---|---|---|---|---|
| Copper | EPA 200.8 | 1.35 | 0.01 | |
| Lead | EPA 200.8 | 0.015 | 0.001 | |

*Report Qualifiers:*
*A = Target Analyte media breakthrough suspect, see analytical report*
*B = Analyte detected in the associated blank*
*D = Analyte analyzed in a dilution*
*d = Data that exceeds the RSD criteria set by the SOP*
*E = Report concentration was above the instrument calibration range*
*H = Holding times for preparation or analysis exceeded*
*J = Analyte detected below quantitation limits, concentration is estimated*
*L = Sample condition at receipt out of compliance with method defined conditions*
*P = Library spectrum match, rsd >90% w RT match*
*Q = Result out of method specific acceptance QC criteria*
*R = RPD (relative percent difference) outside accepted recovery limits*
*S = Spike Recovery outside accepted recovery limits*
*U = Analyte analyzed for but not detected*
*Z = Not ELAP accredited analyte*
*N/A = Not Applicable*
*ND = Not Detected*



Scientist II DeNomy Dage

# Request for Environmental and IH Laboratory Analytical Services

W612114





| | | | |
|---|---|---|---|
| **ATTENTION TO:** | **RYAN MATHEWS** | Purchase Order No.: | Client Job No.: **162017** |

| | | | |
|---|---|---|---|
| **Lab Use Only** | Project No.: | Client No: | |
| | Date Logged In: | Logged In By: | |
| **Report Results To** | Name: Amanda Enbysk, Ryan Mathews | | |
| | Company: Fulcrum Environmental Consulting | | |
| | Address: 406 North 2nd Street | | |
| | City, State, Zip: Yakima, WA, 98901 | | |
| | Phone: (509) 574-0839 | Fax: ( 509) 575-8453 | |
| | Call with Verbal Results: | | |
| | Email Results To: aenbysk@efulcrum.net, **CC:** rmathews@efulcrum.net | | |
| | Fax Results To: | | |
| **Send Invoice To** | Name: Lorrie Boutillier | | |
| | Company: Fulcrum Environmental | Email: lboutillier@efulcrum.net | |
| | Address: 406 North 2nd Street | | |
| | City, State, Zip: Yakima, WA, 98901 | | |
| | Phone: (509) 574-0839 | Fax: ( 509) 575-8453 | |
| **Special Instructions** | | | |

**Turnaround Request:** Standard: Yes No — If 'No,' No. of Business Days:

**Drinking Water Sample Only:** Sample Purpose: Information X Regulatory □ Accreditation (please list below):
System ID #:
DOH Source #:
Multiple Sources #s:
Sample Purpose: A □ B □ Other □

**Chemistry Analysis Key**

| Preservation: | | Matrix: | | Container: |
|---|---|---|---|---|
| Unpres | $H_2SO_4$ | WW=Wastewater | SW=Surface Water | P=Plastic |
| 4°C | HCl | GW=Groudwater | DW=Drinking Water | G=Glass |
| $HNO_3$ | NaOH | S=Soil/Sludge | O=Oil | W=Wipe |
| Other | $Na_2SO_4$ | E=Extract | X=Other | A=Air (filter or tube) |

| Client Sample ID | Sample Description | Sample Date | Sample Time Start | Sample Time Stop | Wipe Area / Air Volume | Analysis Requested: EPA 200.8: Pb, Cu | Pres. Upon Receipt (Y/N) | Preservation | Matrix | Container Type | pH | No. Containers | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MCP122216-P-CDF-01 | RM-13 | 12-22-16 | | | | X | | UNPR | DW | P | | | 12.1 |
| MCP122216-P-CDF-02 | RM-12 | | | | | | | | | | | | 12.1 |
| MCP122216-P-RIC-03 | RM-16 | | | | | | | | | | | | 11.9 |
| MCP122216-P-NF-04 | RM-2 | | | | | | | | | | | | 12.5 |
| MCP122216-P-CF-05 | RM-6 | | | | | | | | | | | | 12.0 |
| MCP122216-P-CF-06 | RM-7 | | | | | | | | | | | | 12.1 |
| MCP122216-P-CF-07 | RM-8 | | | | | | | | | | | | 10.9 |
| MCP122216-P-CF-08 | RM-9 | | | | | | | | | | | | 10.7 |

| | | | | | |
|---|---|---|---|---|---|
| **Chain of Custody** | Relinquished By (Signature): Nathan Bostrom | Date: 12-22-16 | Time: 2:20 | Received By (Signature): | Date: DEC 22 2016 Time: 1420 |
| | Relinquished By (Print Name): Nathan Bostrom | Relinquished To: | | Received By (Print Name): R. Lopez | Relinquished To: |
| | Company Name: Fulcrum | Method of Shipment: | | Company Name: | Method of Shipment: |
| **Chain of Custody** | Relinquished By (Signature): | Date: | Time: | Received By (Signature): | Date: Time: |
| | Relinquished By (Print Name): | Relinquished To: | | Received By (Print Name): | Relinquished To: |
| | Company Name: | Method of Shipment: | | Company Name: | Method of Shipment: |

**Pennsylvania - HQ**
350 Hochberg Road
Monroeville, PA 15146

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DELIVERING SCIENTIFIC RESOLUTION