January 23, 2020

Diane Czarnecki
Industrial Hygienist
Facilities Management Division
GSA Public Buildings Service - Heartland Region
U.S. General Services Administration
2300 Main Street, Kansas City, MO 64108

RE: Goodfellow Federal Center
Metals in Settled Dust Sampling – Building 106
4300 Goodfellow Boulevard
St. Louis, Missouri 63120
OCCU-TEC Project No. 919103

Dear Ms. Czarnecki:

Thank you for the opportunity to assist the General Services Administration (GSA) with the metals in settled dust sampling investigation of Building 106 located at the Goodfellow Federal Center (GFC) in St. Louis, Missouri. OCCU-TEC Inc. (OCCU-TEC) understands that the purpose of the investigation was to provide additional sampling data of existing environmental conditions that are present at GFC that could adversely impact the health and safety of building occupants as well as workers at the facility. The following report summarizes the sample collection activities and the laboratory analytical results of samples submitted.

On January 15th, 2020, a team of OCCU-TEC personnel including a Missouri licensed lead risk assessor conducted settled dust sampling for the presence of six (6) of the Resource Conservation and Recovery Act (RCRA) target metals (lead, arsenic, barium, cadmium, selenium, and silver) from various surfaces within tenant-occupied areas within the building. The purpose of this testing was to further characterize the presence and concentration of target metals in common tenant-occupied areas of the building.

The proposed sampling scheme, the number of samples, the sample distribution and general methodology was developed by GSA and OCCU-TEC. Specific sample locations were determined by OCCU-TEC personnel while on-site.
Metals in Settled Dust Sampling

Metals in settled dust sampling was conducted within only within tenant-occupied areas. Dust wipe sampling was conducted in accordance with ASTM Standard E1728-16: Standard Practice for Collection of Settled Dust Samples Using Wipe Sampling Methods for Subsequent Lead Determination. ASTM Standard E1728-16 is consistent with the methodology described in the Housing and Urban Development Guidelines and 40 CRF 745.63. The Brookhaven National Laboratory’s Surface Wipe Sampling Procedure (IH75190) was also used as a guideline.

Dust wipe sampling for the target metals was conducted on a variety of representative surfaces that have the potential of being disturbed by building occupants. A representative surface area of approximately one square foot (1 SF) was measured and delineated with prefabricated, disposable templates. The dust wipe samples were collected using dedicated dust wipe cloths meeting ASTM standards. Each dust wipe cloth was pre-moistened and individually wrapped. Each sample was collected by wiping in a back and forth “S” pattern over a measured sampling area. Then, the wipe was folded over itself and the area was wiped again in a direction perpendicular to the first wipe orientation. The wipe samples were then placed into labeled, clean laboratory-supplied plastic centrifuge tubes with screw on caps. Dust wipe samples were submitted to Scientific Analytical Institute, Inc. (SAI) in Greensboro, North Carolina for Inductively Coupled Plasma (ICP) analysis of metals analysis using Environmental Protection Agency (EPA) method SW846 350B/7420.

Results of the dust wipe sample collected from the building indicate that the sample contained concentrations of target metals above laboratory detection limits. The following table identifies the range of results for each of the six metals that were analyzed. Samples with a “<” sign indicate that the results were below the reportable limit.

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Concentration (µg/sq. ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>&lt;0.50</td>
</tr>
<tr>
<td>Arsenic</td>
<td>&lt;0.50</td>
</tr>
<tr>
<td>Barium</td>
<td>17</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.49</td>
</tr>
<tr>
<td>Lead</td>
<td>13</td>
</tr>
<tr>
<td>Selenium</td>
<td>&lt;1.3</td>
</tr>
</tbody>
</table>

The sample collected contained target metals below the Brookhaven recommended levels.
OCCU-TEC appreciates the opportunity to work with GSA on this project. If you have any questions concerning this report, or if we may be of any additional service, please feel free to contact us.

Sincerely,

Justin Arnold, CIEC
Project Manager

Kevin Heriford
Environmental Operations Manager (QA/QC)

Appendices:

A - Sample Location Diagram
B - Laboratory Analysis Reports
C - Licenses
Appendix A
Sample Location Diagrams
Appendix B
Laboratory Analytical Results and Chain of Custody Documentation
### Dust Wipe Metals Concentration
by Inductively-Coupled Plasma Analysis (ICP)
NIOSH 7300/EPA SW-846 3050B

**Client:** OCCU-TEC Inc.  
2604 NE Industrial Drive, Suite 230  
North Kansas City, MO  64117  

**Attn:** Justin Arnold  

**Lab Order ID:** 71933414  

**Date Received:** 01/16/2020  
**Date Reported:** 01/23/2020  

**Project:** 919103  

<table>
<thead>
<tr>
<th>Sample ID</th>
<th>Description</th>
<th>Area (ft²)</th>
<th>*Element</th>
<th>Reporting Limit (µg)</th>
<th>Concentration (µg)</th>
<th>Concentration (µg/ft²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>012020-MetW-106-01</td>
<td>Field Blank</td>
<td>-</td>
<td>Ag</td>
<td>0.50</td>
<td>&lt; 0.50</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>As</td>
<td>0.50</td>
<td>&lt; 0.50</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ba</td>
<td>0.75</td>
<td>&lt; 0.75</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cd</td>
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<td>&lt; 0.050</td>
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</tr>
<tr>
<td>71933414IPW_1</td>
<td></td>
<td></td>
<td>Pb</td>
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<td>&lt; 0.25</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Se</td>
<td>1.3</td>
<td>&lt; 1.3</td>
<td>--</td>
</tr>
<tr>
<td>012020-MetW-106-02</td>
<td>Guard Station Floor - West Side</td>
<td>1</td>
<td>Ag</td>
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<td>&lt; 0.50</td>
<td>&lt; 0.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>As</td>
<td>0.50</td>
<td>&lt; 0.50</td>
<td>&lt; 0.50</td>
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<tr>
<td>71933414IPW_2</td>
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<td></td>
<td>Pb</td>
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<td>13</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Se</td>
<td>1.3</td>
<td>&lt; 1.3</td>
<td>&lt; 1.3</td>
</tr>
</tbody>
</table>

* SAI is AIHA ELLAP accredited for Pb only for dust wipe metals.

Unless otherwise noted blank sample correction was not performed on analytical results. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. MDLs are available upon request. Time-weighted average (TWA) calculations are based on customer supplied data and valid only for samples included in the specified TWA group. Scientific Analytical Institute participates in the AIHA ELPAT program. ELPAT Laboratory ID: 173196.

Athena Summa  
**Analyst**

(b) (6)

Lab Director

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**Scientific Analytical Institute, Inc. 4604 Dundas Dr. Greensboro, NC 27407 (336) 292-3888**
**Company Contact Information**

**Company:** OCCU-TEC Inc.  
**Address:** 2604 NE Industrial Drive, Suite 230  
**Contact:** Justin Arnold  
**Phone:** 816-810-3276  
**Fax:** 816-994-3478  
**Email:** jarnold@ccutec.com

**Billing/Invoice Information**

<table>
<thead>
<tr>
<th>Sample ID #</th>
<th>Description/Location</th>
<th>Volume/Area</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>012020-MetW-106-01</td>
<td>Field Blank</td>
<td>NA</td>
<td>Ag, As, Ba, Cd, Pb, Se</td>
</tr>
<tr>
<td>012020-MetW-106-02</td>
<td>Guard Station Floor - West Side</td>
<td>1 SF</td>
<td>Ag, As, Ba, Cd, Pb, Se</td>
</tr>
</tbody>
</table>

**Industrial Hygiene Test Types**

- Silica as Alpha Quartz (XSZ)*
- Silica as Cristobalite (XSC)*
- Silica as Tridymite (XST)*
- Silica as Alpha Quartz, Cristobalite, Tridymite (XSX)*
- Silica Bulk (XSU)*
- Total Dust
- NIOSH Method 0500 (GTD)
- Respirable Dust
- NIOSH Method 0600 (GRD)
- PCM NIOSH 7400-A Rules (PCM)
- B Rules (PCB)
- TWA (PTA)
- TEM NIOSH 7402 (Asbestos) (TN)
- Hexavalent Chromium (OSHA ID: 215)
- Metals (NIOSH 7300) (Specify Metals Under Comments)
- Other

*Modified NIOSH 7500 OSHA ID 442

**Sample ID #**

- 012020-MetW-106-01
- 012020-MetW-106-02

**Description/Location**

- Field Blank
- Guard Station Floor - West Side

**Volume/Area**

- NA
- 1 SF

**Comments**

- Ag, As, Ba, Cd, Pb, Se
- Ag, As, Ba, Cd, Pb, Se

**Accepted □**

**Rejected □**

**Total # of Samples:** 2
Appendix C
Qualifications and Licenses
STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES

LEAD OCCUPATION LICENSE REGISTRATION

Issued to:

Justin E. Arnold

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Risk Assessor
Category of License

Issuance Date: 6/11/2018
Expiration Date: 6/11/2020
License Number: 120611-300003622

Randall W. Williams, MD, FACOG
Director
Department of Health and Senior Services

Lead Licensing Program, PO Box 570, Jefferson City, MO 65102