



Ms. Christine Campbell  
Project Manager  
Cushman & Wakefield, Inc.  
christine.campbell@cushwake.com

Subject:  
Remediation Closeout Report Letter  
Blaine Site  
277 G Street  
Blaine, WA 98230  
Mail Code: WA4-105

Dear Ms. Campbell:

ARCADIS U.S., Inc. (ARCADIS) performed oversight of the removal of deteriorating sound-dampening fiberglass insulation within the rooftop air-handling unit (AHU) at above-referenced building for Bank of America. The deteriorating insulation was identified during ARCADIS' Site investigation on November 29, 2010 in response to an Associate Health Complaint at the Site. The project was initiated and completed on February 28, 2011.

Please find included with this letter the following Attachments:

- Attachment A – Limitations and Service Constraints
- Attachment B – Daily Field Log
- Attachment C – Total Particulate Results

## **INSULATION REMEDIATION AND PARTICULATE MEASUREMENTS**

ARCADIS subcontracted Performance Abatement Services (PAS) of Seattle, Washington to perform the removal of deteriorating sound-dampening fiberglass insulation within the rooftop air-handling unit (AHU) using critical barriers and wet methods. The interior of the unit was vacuumed with a HEPA vacuum. An encapsulant was applied to the area of concern after the completion of the removal activities.

On-site monitoring, particulate testing and final visual inspections were performed by RGA Environmental (RGA) of Seattle, Washington, on behalf of ARCADIS. RGA

ARCADIS U.S., Inc.  
2300 Eastlake Avenue East  
Suite 200  
Seattle  
Washington 98102  
Tel 206.726.4737  
Fax 206.325.8218  
[www.arcadis-us.com](http://www.arcadis-us.com)

ENVIRONMENT

Date:  
March 2, 2011

Contact:  
Ethan Hennessey

Phone:  
206.726.4737

Email:  
[ethan.hennessey@arcadis-us.com](mailto:ethan.hennessey@arcadis-us.com)

Our ref:  
HT118808.0000

conducted on-site dust monitoring before, during and after remediation activities. The daily log for monitoring services is provided as Attachment B.

### FIBERGLASS ABATEMENT PARTICULATE TESTING

Upon completion of remediation and fine cleaning activities in the work area, a visual inspection was performed to ensure that no visible fiberglass debris remained.

The work areas monitored by RGA Environmental passed final visual inspections. After final visual inspections, final particulate air samples were collected. All air samples collected yielded satisfactory results of less than 0.05 milligrams per cubic meter ( $\text{mg}/\text{m}^3$ ) of respirable dust, the guidance value recommended in the American Industrial Hygiene Association (AIHA) *Indoor Air Quality Investigator's Guide* (AIHA, 2006). Analytical data for particulate air samples is provided in Attachment F.

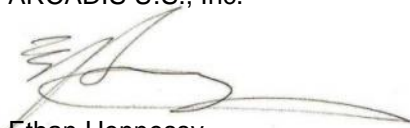
### CONCLUSIONS

Based on visual observations and results at the time of post-remediation validation particulate testing it has been determined by ARCADIS that as of February 28, 2011, the remediation effort conducted at the Site was complete and effective.

Thank you for your time and consideration. Please do not hesitate to call if you have questions regarding the results of this Closeout Report or require additional information.

Sincerely,

ARCADIS U.S., Inc.



Ethan Hennessy  
Scientist 2



Mark Williams  
Senior Project Manager

### Attachments

- A Limitations and Service Constraints
- B Daily Field Log
- C Total Particulate Results

**Attachment A**

Limitations and Service  
Constraints

## **Limitations and Service Constraints**

The opinions, conclusions and recommendations presented in this report are limited to the information obtained during the performance of the specific scope of service identified in the report. To the extent that ARCADIS relied upon any information prepared by other parties not under direct contract to ARCADIS, no representation as to the accuracy or completeness of such information is made. This report is an instrument of professional service and the services described in the report were performed in accordance with generally accepted standards and level of skill and care ordinarily exercised by members of the profession working under similar conditions including comparable budgetary and schedule constraints. No warranty, guarantee or certification express or implied, is intended or given with respect to ARCADIS's services, opinions, conclusions or recommendations. This statement is in lieu of any other statement either expressed or implied.

ARCADIS's observations, the results of testing and ARCADIS's opinions, conclusions and recommendations apply solely to conditions existing at the specific times when and specific locations where ARCADIS's investigative work was performed. Observation and testing activities such as those conducted by ARCADIS are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site, building or area may vary from conditions at the specific locations where observations were made and where testing was performed by ARCADIS. Additionally, other building material hazards which were not identified by ARCADIS, such as asbestos, lead-based paint and unidentified microbial impacts, may also be present in the indoor air, un-accessed areas and in walls, ceilings, cavities and floors. Therefore, the extent of ARCADIS's opinions, conclusions and recommendations are limited and 100% confidence in these opinions, conclusions and recommendations cannot reasonably be achieved. Nothing contained in this report shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards nor shall it be considered medical advice or consultation.

This report may document whether work conducted by ARCADIS, under contract to ARCADIS or under ARCADIS's observation was done so in accordance with applicable regulatory standards. In the absence of standards such as is often the case for microbial assessment and abatement, this report may not be construed as providing clearance, approval, or authorization for use or re-occupancy of a given structure. Actual site conditions and quantities should be field verified and unless expressly stated, this report may not be used as a bid specification. Although an attempt may have been made to locate microbial growth (mold) and indoor air quality issues, in many cases only further investigation or full demolition procedures will reveal sources or impacted materials. In addition, the passage of time including the nominal passage of time may result in a change in the characteristics at the project site.

This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared and for the particular purpose outlined in the report. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

ARCADIS

**Attachment B**

Daily Field Log

(This log page is required every day of work)

Sheet: 1 OF 3

PROJECT NAME <u>Acadis BOA - Blaine</u>	Project Manager <u>Debie Mullins</u>	206.455-0599
DESIGN FIRM	Designer Name:	Phone Number:
CONTRACTOR <u>PAS</u>	Contract Number:	Phone Number:
MONITOR FIRM <u>RG A Env.</u>	Monitor Name: <u>Luke Swart</u>	Phone Number:

Certified Asbestos Supervisor name:  
Ovidiu Cristea

Contractor Start Time: 1600

Number and Name of Certified Workers onsite:	Fit Test (date/type)	Last four of Social Security # exp. date	WA certified worker card #
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The boxes below contains information on the crew for any given day of work. For long running projects (>1 day) you may only note the crew members on the first day along with all of their information. On all following days place a note that refers back to the date of the activity log that contains that worker's information. If a new worker has joined the crew then enter their information on the day that they joined. **AT A MINIMUM, THE ASBESTOS SUPERVISOR AND NUMBER OF CREW MEMBERS MUST BE ON EVERY DAY'S LOG.**

1	<u>Cristea, Ovidiu</u>		<u>05/23/11</u>	<u>2011027047A</u>
2	<u>Sandru, Mihai</u>		<u>06/18/11</u>	<u>2011028947A</u>
3	<u>Bot, Catalin</u>		<u>09/01/11</u>	<u>2011028221A</u>
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

In the "samples collected boxes" below, put the start and ending sample number for this given day. Therefore, numbers can be sequential for multiple day projects.

Delivered to lab: (put the date in this box)

Analyzed by: (put the lab name in this box)

PCM Samples Collected: number \_\_\_\_\_ to \_\_\_\_\_

Asbestos Bulk Samples Collected: number \_\_\_\_\_ to \_\_\_\_\_

TEM Samples Collected: number \_\_\_\_\_ to \_\_\_\_\_

Silica Samples Collected: number \_\_\_\_\_ to \_\_\_\_\_

"Other" Samples Collected: number \_\_\_\_\_ to \_\_\_\_\_

\_\_\_\_\_  
Monitor Signature

\_\_\_\_\_  
REVIEWED BY

(This log sheet is required every day of work)

SHEET 2 OF 3

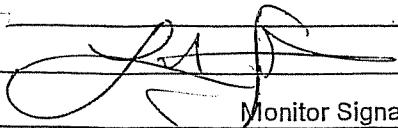
PROJECT NAME <u>Aradis - BOA - Blaine</u>	
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TIME	SUMMARY OF PROJECT DETAILS
1600	RGA representative Luke Swert arrived on site at Bank of America in Blaine. PAS crew of 3 is on site, to remove insulation in an HVAC unit located on the rooftop. Purpose of RGA's visit is air sampling via Dust-Trak & PCM.
1630	RGA checks PAS' worker certs & fit tests for currency. They do not have fit test paperwork with them. PAS begins mobilizing & prepping work area.
1700	RGA mobilizes into the lobby of Bank of America. A PCM air sample is initiated and a 5 minute Dust-Trak air sample is taken. "Before"
1730	Field/Test blank PCM samples are read on site.
1800	Receive call from supervisor Ovideu - work is about 1/2 way completed - a 5 minute Dust-Trak "During" sample is taken. PAS has removed insulation and is spraying encapsulant over area via Hudson sprayer.

**SCHEDULE ANALYSIS (This information includes upcoming events, inspections, shift changes, etc.)**

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FOLLOW-UP ACTION ITEMS	RESPONSIBLE PERSON	DUE DATE



Monitor Signature

REVIEWED BY

DATE: 02/28/11 SHIFT: DAY SWING GRAVE (circle one)

PROJECT DAILY LOG - Page 2 + (include enough sheets as needed)

PROJECT NO./ID: ARCA 26877

(This log sheet is required every day of work)

SHEET 3 OF 3

PROJECT NAME Arcadia - BOA - Blaine

SUMMARY OF PROJECT DETAILS

Table with 2 columns: TIME and SUMMARY OF PROJECT DETAILS. Contains handwritten entries for 1830 and 1900.

SCHEDULE ANALYSIS (This information includes upcoming events, inspections, shift changes, etc.)

Empty table area for schedule analysis.

FOLLOW-UP ACTION ITEMS RESPONSIBLE PERSON DUE DATE

Table with 3 columns: FOLLOW-UP ACTION ITEMS, RESPONSIBLE PERSON, DUE DATE.

Handwritten signature and 'Monitor Signature' label.

REVIEWED BY





# ASBESTOS AIR SAMPLE DATA SHEET

1730 Minor Avenue Suite 900  
Seattle, WA 98101

RGA Batch #: \_\_\_\_\_  
Project #: ARCA20877

Client: Acadris Job Location: 277 G St, Blaine WA  
 Contractor: PAS Date: 2/28/11  
 Sampled by: Luke Sweet Date: 2/28/11 of RGA Env. Regular \_\_\_\_\_  
 Delivered by: \_\_\_\_\_ Rush \_\_\_\_\_  
 Received by: \_\_\_\_\_  
 Analyzed by: \_\_\_\_\_ Blank Count = 1/100  
 Microscope field area: 0.0801 Blank Cassettes: 2

Sample ID: B0A-01 Location: Inside Lobby  
 Sample Type: A/CL Activities: HVAC Insulation removal  
 Protection: \_\_\_\_\_  
 Decon: \_\_\_\_\_ Worker \_\_\_\_\_ SS#: \_\_\_\_\_ Cert#: \_\_\_\_\_  
 Environment: \_\_\_\_\_ Time: Start: 17:09 Rate: Start: 15.7 Fibers \_\_\_\_\_ Fibers \_\_\_\_\_  
 Pump #: A-201 End: 18:26 End: 15.7 Liters \_\_\_\_\_ /field \_\_\_\_\_ LOD \_\_\_\_\_ /cc \_\_\_\_\_  
 Date: 02/28/11 Minutes = 77 Average: 15.7 1209 11.5/100 0.02 0.03

Sample ID: B0A-02 Location: \_\_\_\_\_  
 Sample Type: FB Activities: \_\_\_\_\_  
 Protection: \_\_\_\_\_  
 Decon: \_\_\_\_\_ Worker \_\_\_\_\_ SS#: \_\_\_\_\_ Cert#: \_\_\_\_\_  
 Environment: \_\_\_\_\_ Time: Start: \_\_\_\_\_ Rate: Start: \_\_\_\_\_ Fibers \_\_\_\_\_ Fibers \_\_\_\_\_  
 Pump #: \_\_\_\_\_ End: \_\_\_\_\_ End: \_\_\_\_\_ Liters \_\_\_\_\_ /field \_\_\_\_\_ LOD \_\_\_\_\_ /cc \_\_\_\_\_  
 Date: 02/28/11 Minutes = \_\_\_\_\_ Average: \_\_\_\_\_ 2/100

Sample ID: B0A-03 Location: \_\_\_\_\_  
 Sample Type: TB Activities: \_\_\_\_\_  
 Protection: \_\_\_\_\_  
 Decon: \_\_\_\_\_ Worker \_\_\_\_\_ SS#: \_\_\_\_\_ Cert#: \_\_\_\_\_  
 Environment: \_\_\_\_\_ Time: Start: \_\_\_\_\_ Rate: Start: \_\_\_\_\_ Fibers \_\_\_\_\_ Fibers \_\_\_\_\_  
 Pump #: \_\_\_\_\_ End: \_\_\_\_\_ End: \_\_\_\_\_ Liters \_\_\_\_\_ /field \_\_\_\_\_ LOD \_\_\_\_\_ /cc \_\_\_\_\_  
 Date: 02/28/11 Minutes = \_\_\_\_\_ Average: \_\_\_\_\_ 0/100

Sample ID: \_\_\_\_\_ Location: \_\_\_\_\_  
 Sample Type: \_\_\_\_\_ Activities: \_\_\_\_\_  
 Protection: \_\_\_\_\_  
 Decon: \_\_\_\_\_ Worker \_\_\_\_\_ SS#: \_\_\_\_\_ Cert#: \_\_\_\_\_  
 Environment: \_\_\_\_\_ Time: Start: \_\_\_\_\_ Rate: Start: \_\_\_\_\_ Fibers \_\_\_\_\_ Fibers \_\_\_\_\_  
 Pump #: \_\_\_\_\_ End: \_\_\_\_\_ End: \_\_\_\_\_ Liters \_\_\_\_\_ /field \_\_\_\_\_ LOD \_\_\_\_\_ /cc \_\_\_\_\_  
 Date: \_\_\_\_\_ Minutes = \_\_\_\_\_ Average: \_\_\_\_\_

Sample ID: \_\_\_\_\_ Location: \_\_\_\_\_  
 Sample Type: \_\_\_\_\_ Activities: \_\_\_\_\_  
 Protection: \_\_\_\_\_  
 Decon: \_\_\_\_\_ Worker \_\_\_\_\_ SS#: \_\_\_\_\_ Cert#: \_\_\_\_\_  
 Environment: \_\_\_\_\_ Time: Start: \_\_\_\_\_ Rate: Start: \_\_\_\_\_ Fibers \_\_\_\_\_ Fibers \_\_\_\_\_  
 Pump #: \_\_\_\_\_ End: \_\_\_\_\_ End: \_\_\_\_\_ Liters \_\_\_\_\_ /field \_\_\_\_\_ LOD \_\_\_\_\_ /cc \_\_\_\_\_  
 Date: \_\_\_\_\_ Minutes = \_\_\_\_\_ Average: \_\_\_\_\_

Rotometer #: MFB Calibration Date: 9/16/10

- SAMPLE TYPES**
- P Pre abatement
  - A Area
  - I Inside reg. area
  - O Outside reg. area
  - H HEPA exhaust
  - CL Clearance

- X Aggressive clearance
- FB Field blank
- TB Trip blank
- B Breathing zone (TWA)
- C Ceiling (STEL)

- RESP. PROT**
- PA Pressure demand air
  - CA Continuous flow air
  - PAPR Powered APR
  - F Full face mask APR
  - M Half face mask APR

- CONTROLS**
- DECON.
  - D,S Decon w/ shower
  - D Decon w/o shower


- ENVIRONMENT**
- H HEPA vac
  - N Negative air
  - G Glove bag
  - O Outside

**CERTIFICATE OF WORK AREA CLEARANCE**

**ASBESTOS ABATEMENT CONTRACTOR CERTIFICATION OF VISUAL INSPECTION**

The Asbestos Abatement Contractor hereby certifies that he has visually inspected the work area (all surfaces including pipes, beams, ledges, walls, ceiling and floor, sheet plastic etc.) and has found no dust, debris or residue.

IDENTITY OF WORK AREA: Bank of America - Blaine, WA - Lobby Area

BY: (Signature)  Date: 2-28-11

(Print Name) Ovidiu Cristea

(Print Title) Supervisor

**OWNER WORK AREA CLEARANCE CERTIFICATION**

The Owner or Owner Representative certifies that they have accompanied the Asbestos Abatement Contractor on his visual inspection and verifies that this inspection has been thorough and air clearance sampling valid according to specifications to the best of their knowledge and belief.

IDENTITY OF WORK AREA: Lobby Area

AIR SAMPLE IDENTIFICATION #: BOA-

TIME SAMPLE TAKEN: 17:09 - 18:26

FLOW RATE: 15.7 LPM

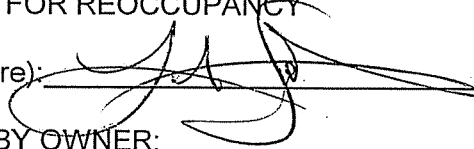
VOLUME: 1209 L

ANALYZED BY: Luke Sweet

AIR SAMPLE RESULTS: .005 fib/cc

NOTES: Insulation Removal

**APPROVED FOR REOCCUPANCY**

BY: (Signature)  DATE: 02/28/11

RECEIVED BY OWNER: \_\_\_\_\_ DATE \_\_\_\_\_

**Attachment C**

Total Particulate Results

Blaine Bank of America  
 Total Particulate Levels Before, During, & After Sound Insulation Installation

<b>Instrument [S/N]</b>	<b>Test #</b>	<b>Date</b>	<b>Start Time</b>	<b>Duration dd:hh:mm:ss</b>	<b>Average</b>	<b>Units</b>	<b>Channel</b>	<b>Maximum</b>	<b>Minimum</b>
Dust Trak 85201794	001	02/28/2011	17:05:49	0:00:06:00	0.011	mg/m <sup>3</sup>	Aerosol	0.015	0.009
Dust Trak 85201794	002	02/28/2011	17:55:59	0:00:06:00	0.011	mg/m <sup>3</sup>	Aerosol	0.016	0.007
Dust Trak 85201794	003	02/28/2011	18:35:03	0:00:08:00	0.011	mg/m <sup>3</sup>	Aerosol	0.022	0.004