

October 5, 2015

Mr. Art Goguen, MEPM  
Director of EH&S - Healthcare Division  
Higgins and Associates, LLC  
14 Inverness Drive East- Building E-100  
Englewood, Colorado 80112

**RE: Air Monitoring, Oversight and Final Air Clearance Report  
Denver Department of Veterans Affairs Facility  
Building 21, Room 110, Closet Plenum Area**

Dear Mr. Goguen,

Environmental Quality Management, LLC (EQM) conducted air monitoring, oversight and a final air clearance at the Denver Department of Veterans Affairs Facility in and around Building 21, Room 110 closet plenum area. Work activities included the removal of loose asbestos containing fire proofing material above the ceiling tiles of the closet in room 110. A State-Certified Air Monitoring Specialist (AMS) conducted the work activities. Third-party laboratory results indicated that the air quality outside the work area during abatement and inside the work area after abatement were within acceptable regulatory levels. A summary of activities and results is discussed below.

***Perimeter/Area Air Monitoring***

Three air samples were collected outside the containment. One sample was collected in the hallway outside of Room 109, one sample was collected inside Room 110 and one sample was collected in the hallway outside of Room 106. The purpose of the area samples was to document the air quality during abatement activities. The samples were collected using high volume pumps at a rates ranging from 4.8 to 5.3 liters per minute for the duration of the work (11:32 AM to 1:23 PM). The total volume collected ranged from 534 to 583 liters. These samples were submitted to Reservoirs Environmental, Inc. (Reservoirs), a successful AIHA participating member.

Reservoirs analyzed the samples according to NIOSH Method 7400 using a positive Phase-contrast microscope equipped with a Walton-Beckett graticule (Type G-22 for 'A counting rules'). A quarter-wedge was cut from the sample filter and was examined at a magnification of 400x. Fibers greater than 5 microns in length with a length-to-width (aspect) ratio equal to or greater than 3:1 were counted. Total fiber counts for each sample filter were divided by their respective sample volumes. The resulting concentration was expressed in terms of total fibers per cubic centimeter of air (fibers/cc).

Laboratory results indicated that fiber concentrations were less than 0.01 fibers per cubic centimeter, which is within acceptable regulatory levels.

### ***Final Air Clearance***

After removal of the loose fire proofing material, the work area was inspected. The area was visibly clean of dust and debris at the time of the clearance.

EQM conducted the final air clearance sampling as follows. Five (5) air samples were collected using high volume pumps. The samples were collected by drawing air at an average rate of ten (10) liters per minute (LPM) through 25mm mixed cellulose ester membrane (Millipore 0.8 MCEF) filters, which were housed in a three-piece cassette, equipped with 50mm electrically-conductive extension cowl. The samples were collected with variable volume pumps. The flow rate was established and checked with a DryCal. The total volume collected ranged from 1,247 to 1,323 liters.

The final clearance samples and two blanks were submitted to Reservoirs for analysis according to NIOSH Method 7400. Results from the area sampled exhibited fiber counts that were below 0.01f/cc.

Based on this result, it is the opinion of EQM that the air quality outside the work area during abatement and within the work area after abatement was in compliance with regulatory and industry standards at the time of this inspection.

Air monitoring worksheets and third party laboratory reports are attached.

Should you have any questions concerning this project, please call me at 720.468.2420.

Sincerely,



Gabe Touma, CHMM No. 14285  
AMS No. 16860





September 29, 2015

**Subcontract Number:** NA  
**Laboratory Report:** RES 333072-1  
**Project # / P.O. #** VA-03  
**Project Description:** B/21-VA

Environmental Quality Management (CO)  
6487 Turnstone Ave.  
Castle Rock CO 80106

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

**RES 333072-1** is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

  
Nicole Castillo for

Jeanne Spencer  
President

## RESERVOIRS ENVIRONMENTAL INC.

AIHA Certificate of Accreditation #480, Lab ID 101533

### TABLE: FIBER COUNT ANALYSIS IN AIR

RES Job Number: **RES 333072-1**  
 Client: **Environmental Quality Management (CO)**  
 Client Project Number / P.O.: **VA-03**  
 Client Project Description: **B/21-VA**  
 Date Samples Received: **September 29, 2015**  
 Method: **REI-SOP Fibers in Air / NIOSH 7400A**  
 Turnaround: **2 Hour**  
 Date Samples Analyzed: **September 29, 2015**

Client ID Number	Lab ID Number	Air Volume Sampled (L)	Fields Analyzed	Fiber Count	Reporting Limit (F/mm <sup>2</sup> )	Fiber Density (F/mm <sup>2</sup> )	Reporting Limit (F/cc)	Fiber Concentration (F/cc)
P-01-109	EM 1499774	550	100	2	7.01	BRL	0.005	BRL
P-02-110	EM 1499775	583	100	2.5	7.01	BRL	0.005	BRL
P-03-106	EM 1499776	534	100	1.5	7.01	BRL	0.005	BRL
F01	EM 1499777	1296	100	7	7.01	7.32	0.002	0.002
F02	EM 1499778	1293	100	4	7.01	BRL	0.002	BRL
F03	EM 1499779	1307	100	8	7.01	8.6	0.002	0.003
F04	EM 1499780	1247	100	10.5	7.01	11.78	0.002	0.004
F05	EM 1499781	1323	100	7	7.01	7.32	0.002	0.002
B01	EM 1499782	0	100	1.5	7.01	BRL	---	---

\* Unless otherwise stated sample analyses have been blank corrected.  
 ND= None Detected

BRL = Below Reporting Limit  
 CBR = Cannot Be Read

Laboratory Quarterly Coefficient Variation (CV) by Fiber Count Range - October 1st, 2014 - December 31st, 2014

5-20 CV = 0.39

>20-50 CV = 0.32

>50-100 CV = 0.25



Brendan O'Brien

Analyst / Data QA

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<b>B02</b>	EM 1499783	0	100	1	7.01	BRL	---	---

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Brendan O'Brien

Analyst / Data QA

Due Date: 9/29/15  
 Due Time: 7:00pm



**Reservoirs Environmental, Inc.**  
 5801 Logan St. Denver, CO 80216 • Ph: 303-964-1986 • Fax: 303-477-4275 • Toll Free: 866-RESI-ENV

RES 333072

After Hours Cell Phone: 720-339-9228

**SUBMITTED BY:**

Company: REM  
 Address: 6487 Turnstone Ave  
Castle Rock CO 80104  
 Project Number and/or P.O. #: VA-03  
 Project Description/Location: B/21-VA

**INVOICE TO: (IF DIFFERENT)**

Company:  
 Address:  
 Project Number and/or P.O. #:  
 Project Description/Location:

Contact:  
 Phone:  
 Fax:  
 Cell/pager:  
 Final Data Deliverable Email Address:

**CONTACT INFORMATION:**

Contact:  
 Phone:  
 Fax:  
 Cell/pager:

**ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm**

PLM / PCM / TEM  RUSH (Same Day)  PRIORITY (Next Day)  STANDARD (3-5 Day)  
 (Rush PCM = 2hr, TEM = 6hr.)

**CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm**

Metal(s) / Dust\*\*  RUSH  24 hr.  3-5 Day  
 RCRA 8 / Metals & Welding  RUSH (3 Day)  5 Day  10 Day  
 Fume Scan / TCLP\*\*  
 Organics  24 hr.  3 day  5 Day  
 \*\*Prior notification is required for RUSH turnarounds.\*\*

**MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm**

E.coli and/or Coliforms\*  24-48 Hour  Other:  
 Pathogens\*  24-48 Hour  
 Microbial Growth\*  5-10 Day  
 Legionella  10 Day  
 Mold  RUSH  24 Hr  48 Hr  3 Day  5 Day  
 \*TAT dependent on speed of microbial growth.\*

\*\*Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.\*\*

**Special Instructions:**

Client sample ID number (Sample ID's must be unique)

- 1 p-01-109
- 2 p-02-110
- 3 p-03-106
- 4 F01
- 5 F02
- 6 F03
- 7 F04
- 8 F05
- 9 B01
- 10 B02

**REQUESTED ANALYSIS**

PLM - Short report, Point Count, Long report, Qualitative  
 TEM - AHERA, Level II, 7402, ISO, +/- (Air, Bulk or Dust), Quant, Semi-Quant, Micro-vac, ISO-Indirect Preps  
 PCM - 7400A, 7400B, OSHA  
 DUST - Total, Respirable  
 METALS - Analyte(s)  
 RCRA 8, TCLP, Welding Fume, Metals Scan, pH  
 ORGANICS - METH, TSS  
 Pathogens: Aerobic Plate Count, Salmonella, E. coli O157:H7, Listeria, S. aureus, Campylobacter: +/- or Quantification  
 E. coli and/or Coliforms: +/- or Quantification  
 Microbial Growth: Aerobic Plate Count ID, Bacteria or Y & M: +/- or Quantification  
 Legionella: +/- or Quantification  
 Other: Bioburden, LAL or Environmental  
 Mold: Spore Trap or Bulk: +/-, Identification, Quantification

**SAMPLER'S INITIALS OR OTHER NOTES:**

VALID MATRIX CODES		LAB NOTES:
Air = A	Bulk = B	
Dust = D	Paint = P	
Soil = S	Wipe = W	
Swab = SW	F = Food	
Drinking Water = DW	Waste Water = WW	
O = Other		
**ASTM E1792 approved wipe media only**		
Sample Volume (L) / Area	Date Collected mm/dd/yy	Time Collected hh:mm:ap
Matrix Code		
# Containers		

Number of samples received: 10 (Additional samples shall be listed on attached long form.)  
 NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: [Signature] Date/Time: 9/29/15 5:00pm Carrier: Hand / FedEx / UPS / USPS / Drop Box / Courier

Sample Condition: On Ice  Sealed  Intact   
 Temp. (F°)          Yes / No Yes / No Yes / No

Received By:	Phone	Email	Fax	Date	Time	Initials	
<u>[Signature]</u>							
Data Entry QA:	Contact	Phone	Email	Fax	Date	Time	Initials