

ASBESTOS ABATEMENT CLOSE-OUT REPORT – Goodfellow Federal Center – Building #122B (MO0620)

Prepared for:



Mr. Gary Adams, GSA Heartland Region

Certified Industrial Hygienist

GSA Heartland Region Safety & Environmental Management Office 1500 East Bannister Road, Room 2101

Kansas City, Missouri 64131-3088

Project Number: 91101.02

November 29, 2011



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1. INTRODUCTION

As authorized by GSA-Heartland, OCCU-TEC provided third-party air monitoring and project oversight services for an asbestos abatement project located at the Goodfellow Federal Center – Building #122B, located at 4300 Goodfellow Blvd., in St. Louis, Missouri. This final report contains the OCCU-TEC representatives' air sampling data, laboratory results, and accreditation documentation. This report has been prepared to document completion of the project in accordance with the Task Order prepared for the project.

2. PROJECT DESCRIPTION

The abatement project at the Goodfellow Federal Center – Building #122B, located at 4300 Goodfellow Blvd. took place to pro-actively abate potential asbestos hazards before potential exposures to GSA personnel and/or building tenants occur. Materials selected for abatement were determined by accessing the present condition and the potential for future disturbance. Global Environmental Inc. (GEI), of St. Charles, Missouri, a sub-contractor for Terracon Consultants, Inc. (Terracon) of Lenexa, Kansas, performed the asbestos abatement activities in the building from November 4, 2011 through November 5, 2011. GEI abated the following asbestos-containing materials while OCCU-TEC was on-site:

Floor Number	Location	Description	Quantity	Units
Basement	Ice Machine Room	Pipe Fittings -3-4"	45	Each
Basement	Ice Machine Room	Pipe Fittings - 5"	9	Each
Basement	Ice Machine Room	Pipe Fittings - 6"	4	Each
Basement	Ice Machine Room	Pipe Insulation - 3-4"	90	Ln. Ft
Basement	Ice Machine Room	Pipe insulation - 5"	25	Ln. Ft
Basement	Ice Machine Room	Pipe Fittings - 8"	4	Each
Basement	Ice Machine Room	Pipe Insulation - 6"	8	Ln. Ft
Basement	Ice Machine Room	Pipe Insulation - 8"	8	Ln. Ft
Basement	Air Handler Room	Pipe Insulation - 3-4"	310	Ln. Ft
Basement	Air Handler Room	Pipe Fittings -3-4"	117	Each
Basement	Air Handler Room	Pipe insulation - 5"	45	Ln. Ft

Floor Number	Location	Description	Quantity	Units
Basement	Air Handler Room	Pipe Insulation - 6"	45	Ln. Ft
Basement	Air Handler Room	Tank Insulation - White	24	Sq. Ft.
Basement	Air Handler Room	Pipe Fittings - 12"	15	Each

OCCU-TEC was on-site during the entire abatement process. Appendix A contains accreditation documentation for OCCU-TEC staff on-site during asbestos abatement activities.

3. OBSERVATIONS

Airborne fiber concentrations measured outside the work area by OCCU-TEC ranged from between < 0.001 fibers per cubic centimeter (f/cc) to 0.007 f/cc.

Following completion of asbestos abatement, OCCU-TEC conducted clearance air monitoring using phase contract microscopy (PCM) and transmission electron microscopy (TEM). These procedures were performed to indicate successful completion of the abatement activities. Airborne fiber concentrations in the clearance samples were less than 0.01 f/cc by PCM. This indicated that the area were ready for re-occupancy. Visual inspections and clearance air monitoring indicated successful completion of the asbestos abatement actions. OCCU-TEC authorized the abatement contractor to remove the containment enclosures following analysis of the PCM clearance samples.

Daily field reports are attached as Appendix B. Photos were taken during the abatement activities per GSA's request. A photo log is attached as Appendix E.

4. AIR SAMPLING

ASBESTOS PCM AREA AND CLEARANCE SAMPLING

PCM air samples were collected on 25 millimeter, 0.8-micron pore size mixed cellulose ester membrane filters. The filters were contained in three piece cassettes equipped with electrically conductive 50-mm cowls. Sample flow rates ranged from 3.08 liters per minute to 10.11 liters per minute. This flow rate was selected to provide a low detection limit with minimal likelihood of overloading the filter.

PCM analyses were performed according to the analysis procedures specified in the National Institute of Occupational Safety and Health, Protocol 7400, Asbestos Fibers, using the "A" counting rules. This method does not permit discrimination between asbestos fibers and non-asbestos fibers. Asbestos air monitoring PCM reports are provided in Appendix C.

ASBESTOS TEM CLEARANCE SAMPLING

TEM clearance sampling took place following completion of the visual inspections and encapsulation of the work areas. All asbestos clearances were collected on 25 millimeter; 0.45-micron pore size mixed cellulose ester membrane filters. The filters were contained in three-piece cassettes equipped with electrically conductive 50-mm cowls. Samples are currently being held by OCCU-TEC pending further instruction by GSA. TEM sampling data tables are attached as Appendix D.

5. RECOMMENDATIONS

OCCU-TEC recommends that the building management undertake the following:

- 1. Update the building asbestos management program to include the completed abatement action.
- 2. Continued implementation of the building's asbestos management program.

Appendix A Accreditation Documentation

(b) (6) CERTIFICATION NUMBER: 7011091511MOIR11347

THIS CERTIFIES

Patricia J. Garcia

HAS COMPLETED THE CERTIFICATION REQUIREMENTS FOR

Inspector

APPROVED: 10/19/2011 TRAINING DATE: 9/15/2011

10/18/2012 EXPIRES:

(b) (6) Birector of Air Pollution Control Program





Appendix B Daily Field Reports



4151 N. Mulberry Drive, Suite 275 KANSAS CITY, MO 64116 PH: (816) 231-5580 TOLL FREE: (800) 950-1953 FAX: (816) 231-5641

DAILY FIELD REPORT

(Please	print	information	clearly)
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CLIENT: GSA	PROJECT NAME: 3rd Party Air Monitoring Project Oversight
PROJECT NUMBER.: 91101.02	DATE: 11-04-11
CONTRACTOR: Global Environmental	
OCCU-TEC PERSONNEL: Patricia Garcia	
IN: 11:00	OUT: 23:15
CONTRACTOR SUPERVISOI Chris Townsend/Vicki Dunn	NUMBER OF WORKERS: 6
IN: 15:00	OUT: 20:00/23:15
VISITORS ON SITE: Kevin Arnold w/Terracon Onsite	as GC
OBSERVED WEATHER CONDITIONS: Temperature:	
TODAY'S ACTIVITIES: PrepX, Removal _X_	, Cleanup _X_, EncapX_, Enclosure, Demo, Teardown/DemobX
Area of Activity:Basement Ice Machine Room	Quantity Removed:45 Fittings
Material Description:3" to 4" Pipe Fittings	Quantity Remaining: 0
Area of Activity:Basement Ice Machine Room	Quantity Removed:9 Fittings
Material Description:5" Pipe Fitting	Quantity Remaining:0_
Area of Activity:Basement Ice Machine Room	Quantity Removed:4 Fittings
Material Description:6" Pipe Fitting	Quantity Remaining: 0
WORK PROCEDURES: Gross Removal, Glovebag	_X, Friable _X, Non-Friable, Exterior, Other (Explain)
ENGINEERING CONTROLS: Full Containment, Critic	cal BarriersX,Splash Guards, Drop ClothX, Barrier Tape
NEGATIVE AIR SYSTEM: Yes _X, No,# o.	f Units2, Manometer on site, Manometer Reading (if < 0.02")
DECONTAMINATION UNIT: YesX_, No, # c	f Stages3 Shower: Yes _X, No
PROJECT SITE CHECKLIST PERSONA	AL PROTECTIVE EQUIPMENT RESPIRATORY PROTECTION
X Emergency Info. Posted X Disposable	Suits X Half-Face Air Purifying Respirator
X Fire Extinguishers On-Site X Boots	Full-Face Air Purifying Respirator
GFCI's Used X Gloves	Powered Air Purifying Respirator
X	ses/ Goggles Other:
X	
X	CICNIEICA NE EXEMPE
Entrance Warning Signs Posted Safety Vest	
Entry/Exit Logs PostedHearing Pro	
Storage Bins LabeledOther:	
X Bags Labeled	
	<u> </u>
X Area Ventilation Off X Wet Meth	
X All Edges Sealed X HEPA Va	
X Penetrations Sealed X Waste Do	uble-Bagged or Barreled
X Entry Curtains X Wastewate	er Filtered or Barreled
X Critical Barriers Negative	Air Pressure Achieved
Containment Smoke TestedXEquipmen	t Decontaminated
X Work Area Secured Other:	
AIR MONITORING PERFORMED BY OCCU-TEC INC. :	PCM _X, TEM
Type	
No. of Background Samples 5 No. of Area Samples 3	No. of Personal Samples 0 No. of Clearance Samples 0
	1.0. of escalate bumples

SIGNATURE: _____Patricia Garcia_



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DAILY FIELD REPORT

(Please print information clearly)

	,	
CLIENT: GSA	PROJECT !	NAME: 3rd Party Air Monitoring Project Oversight
PROJECT NUMBER.: 91101.02	DATE: 11-0	04-11
CONTRACTOR: Global Environmental		
OCCU-TEC PERSONNEL: Patricia Garcia		
IN: 11:00	OUT: 23:15	5
CONTRACTOR SUPERVISOI Chris Townsend	/Vicki Dunn NUMBER C	OF WORKERS: 6
IN: 15:00	OUT: 20:00	0/23:15
VISITORS ON SITE: Kevin Arnold w	Terracon Onsite as GC	
OBSERVED WEATHER CONDITIONS:	Temperature:56 Degrees Condition	ons: Clear _X, Cloudy, Rain / Snow
TODAY'S ACTIVITIES: PrepX,	Removal _X, Cleanup _X, Encap	X, Enclosure, Demo, Teardown/Demob
Area of Activity:Basement Ice Machine R	oom	Quantity Removed:90 LF
Material Description:3" to 4" Pi	pe Insulation	Quantity Remaining: 0
Area of Activity:Basement Ice Machine R	oom	Quantity Removed:25 LF
Material Description:5" Pipe I	nsulation	Quantity Remaining:0
Area of Activity:Basement Ice Macl	nine Room	Quantity Removed:4 Fittings
Material Description:8" Pipe Fitting_		Quantity Remaining: 0
WORK PROCEDURES: Gross Removal	, Glovebag _X, Friable _X, Non-Frial	ble, Exterior, Other (Explain)
ENGINEERING CONTROLS: Full Containment	t, Critical BarriersX,Splash Gua	ards, Drop ClothX, Barrier Tape
NEGATIVE AIR SYSTEM: Yes _X, N	o, # of Units2, Manometer on	site, Manometer Reading (if < 0.02")
DECONTAMINATION UNIT: YesX, N	o, # of Stages3	Shower: YesX, No
PROJECT SITE CHECKLIST	PERSONAL PROTECTIVE EQUIPMENT	RESPIRATORY PROTECTION
X Emergency Info. Posted	X Disposable Suits	X Half-Face Air Purifying Respirator
X	X Boots	
Fire Extinguishers On-Site		Full-Face Air Purifying Respirator
GFCI's Used X	X Gloves	Powered Air Purifying Respirator
OSHA Info.Posted	Safety Glasses/ Goggles	Other:
Personal Sampling Conducted X	Hard Hat	GEO. VIEW DATE OF THE STATE OF
Entrance Warning Signs Posted	Safety Vest	SIGNIFICANT EVENTS
Entry/Exit Logs Posted	Hearing Protection	
Storage Bins Labeled	Other:	
X Bags Labeled		
X Floor and Walls Covered	WORK PRACTICES	
X Area Ventilation Off	X Wet Methods Used	
X All Edges Sealed	X HEPA Vacuums Used	
X Penetrations Sealed	X Waste Double-Bagged or Barreled	
X Entry Curtains	X Wastewater Filtered or Barreled	
X Critical Barriers	Negative Air Pressure Achieved	
Containment Smoke Tested	X Equipment Decontaminated	
X Work Area Secured	Other:	
AIR MONITORING PERFORMED BY OCCU	-TEC INC.: PCM _X_	, TEM
Туре		
No. of Background Samples No. of Area Samples	No. of Personal Samples No. of Clearance Samples	<u>0</u> 0
1.0. of their bumples	. Tio. of Cicarance Samples	

SIGNATURE: _____Patricia Garcia_



SIGNATURE: ____Patricia Garcia_

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DAILY FIELD REPORT

(Please print information clearly)

CLIENT: GSA	PF	OJECT NAME: 3rd Party Air Monitoring Project Oversight
PROJECT NUMBER.: 91101.02	DA	ATE: 11-04-11
CONTRACTOR: Global Environmental		
OCCU-TEC PERSONNEL: Patricia Garcia		
IN: 11:00	O	JT: 23:15
CONTRACTOR SUPERVISOI Chris Townsend/	Vicki Dunn NI	UMBER OF WORKERS: 6
IN: 15:00	Ol	JT: 20:00/23:15
VISITORS ON SITE: Kevin Arnold w/	Γerracon Onsite as GC	
OBSERVED WEATHER CONDITIONS:	Temperature:56 Degrees	Conditions: Clear _X, Cloudy, Rain / Snow
TODAY'S ACTIVITIES: PrepX, I	RemovalX, CleanupX,	EncapX, Enclosure, Demo, Teardown/Demob
Area of Activity:Basement Ice Machine Ro	oom	Quantity Removed:8 LF
Material Description:6" Pipe Ins	ulation	Quantity Remaining: 0
Area of Activity:Basement Ice Machine Ro	oom	Quantity Removed:8 LF
Material Description:8" Pipe In	sulation	Quantity Remaining:0
Area of Activity:		Quantity Removed:
Material Description:		Quantity Remaining:
WORK PROCEDURES: Gross Removal	, Glovebag _X, Friable _X,	Non-Friable, Exterior, Other (Explain)
ENGINEERING CONTROLS: Full Containment	, Critical BarriersX,	Splash Guards, Drop ClothX, Barrier Tape
NEGATIVE AIR SYSTEM: Yes _X, No	, # of Units2_, Man	ometer on site, Manometer Reading (if < 0.02")
DECONTAMINATION UNIT: YesX_, No	, # of Stages3	Shower: YesX, No
PROJECT SITE CHECKLIST	PERSONAL PROTECTIVE EQ	UIPMENT RESPIRATORY PROTECTION
X Emergency Info. Posted	X Disposable Suits	X Half-Face Air Purifying Respirator
X Fire Extinguishers On-Site	X Boots	Full-Face Air Purifying Respirator
X GFCI's Used	X Gloves	Powered Air Purifying Respirator
X OSHA Info.Posted	Safety Glasses/ Goggles	Other:
X Personal Sampling Conducted	Hard Hat	<u> </u>
X Entrance Warning Signs Posted	Safety Vest	SIGNIFICANT EVENTS
Entry/Exit Logs Posted	Hearing Protection	SIGNITEART EVENTS
 · · · · ·		
Storage Bins Labeled	Other:	
X Bags Labeled	WORK DRAGEGE	
X Floor and Walls Covered	WORK PRACTICES	
X Area Ventilation Off	X Wet Methods Used	
X All Edges Sealed	X HEPA Vacuums Used	
X Penetrations Sealed	X Waste Double-Bagged or Barre	
X Entry Curtains	X Wastewater Filtered or Barrele	
X Critical Barriers	Negative Air Pressure Achieve	<u> </u>
Containment Smoke Tested	X Equipment Decontaminated	
X Work Area Secured	Other:	
AIR MONITORING PERFORMED BY OCCU-	TEC INC.: PC	M _X, TEM
Type No of Background Samples 5	No of Domano	Samples 0
No. of Background Samples 5 No. of Area Samples 3	No. of Personal No. of Clearand	



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DAILY FIELD REPORT

(Please print information clearly)

CLIENT: GSA	PR	OJECT NAME: 3rd Party Air Monitoring Project Oversight							
PROJECT NUMBER.: 91101.02	DA	DATE: 11-05-11							
CONTRACTOR: Global Environmental									
OCCU-TEC PERSONNEL: Patricia Garcia									
IN: 7:00	OU	T: 20:00							
CONTRACTOR SUPERVISOI Chris Townsend/Vicki Dunn NUMBER OF WORKERS: 7									
IN: 7:00		T: 13:00/20:00							
VISITORS ON SITE: Kevin Arnold w/	Terracon Onsite as GC								
OBSERVED WEATHER CONDITIONS:	Temperature:56 Degrees	Conditions: Clear _X, Cloudy, Rain / Snow							
TODAY'S ACTIVITIES: PrepX, F	Removal _X, Cleanup _X, E	ncapX, Enclosure, Demo, Teardown/DemobX							
Area of Activity:Basement Air Handler Ro	om	Quantity Removed:117 LF							
Material Description:3" or 4" Pip	e Insulation	Quantity Remaining: 0							
Area of Activity:Basement Air Handler Ro	om	Quantity Removed:310 LF							
Material Description:3" or 4" P	ipe Fitting	Quantity Remaining:0							
Area of Activity:Basement Air	Handler Room	Quantity Removed:45 Each							
Material Description:5"	Pipe Fitting	Quantity Remaining: 0							
WORK PROCEDURES: Gross Removal	, Glovebag _X, Friable _X,	Non-Friable, Exterior, Other (Explain)							
ENGINEERING CONTROLS: Full Containment	, Critical BarriersX,S	plash Guards, Drop ClothX, Barrier Tape							
NEGATIVE AIR SYSTEM: Yes _X, No	, # of Units2_, Mano	ometer on site, Manometer Reading (if < 0.02")							
DECONTAMINATION UNIT: YesX_, No	, # of Stages3	Shower: Yes _X, No							
PROJECT SITE CHECKLIST	PERSONAL PROTECTIVE EQ	JIPMENT RESPIRATORY PROTECTION							
X Emergency Info. Posted	X Disposable Suits	X Half-Face Air Purifying Respirator							
X Fire Extinguishers On-Site	X Boots	Full-Face Air Purifying Respirator							
GFCI's Used	X Gloves	Powered Air Purifying Respirator							
X OSHA Info.Posted	Safety Glasses/ Goggles	Other:							
X Personal Sampling Conducted	Hard Hat								
X Entrance Warning Signs Posted	Safety Vest	SIGNIFICANT EVENTS							
Entry/Exit Logs Posted	Hearing Protection	DEGLINE ACIDITE DE PRIVATO							
Storage Bins Labeled	Other:								
X Bags Labeled									
X Floor and Walls Covered	WORK PRACTICES								
X Area Ventilation Off	X Wet Methods Used								
	X HEPA Vacuums Used								
X All Edges Sealed X Penetrations Sealed	X Waste Double-Bagged or Barrel	ed.							
									
X Entry Curtains	X Wastewater Filtered or Barreled								
X Critical Barriers Containment Smales Tested	Negative Air Pressure Achieved	·							
Containment Smoke Tested X Work Area Secured	X Equipment Decontaminated								
	Other:	M V TEM V							
AIR MONITORING PERFORMED BY OCCU-	TECHNO.: PCI	M _X, TEM _X							
Type No. of Background Samples 0	No. of Personal	Samples 0							
No. of Area Samples 3									

SIGNATURE: _____Patricia Garcia_



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DAILY FIELD REPORT

(Please print information clearly)

CLIENT: GSA	PROJECT NAME: 3rd Party Air Monitoring Project Oversight							
PROJECT NUMBER.: 91101.02	DATE: 11-05-11							
CONTRACTOR: Global Environmental								
OCCU-TEC PERSONNEL: Patricia Garcia								
IN: 7:00 OUT: 20:00								
CONTRACTOR SUPERVISOI Chris Townsend/Vicki Dunn	NUMBER OF WORKERS: 7							
IN: 7:00	OUT: 13:00/20:00							
VISITORS ON SITE: Kevin Arnold w/Terracon Onsite as GC								
OBSERVED WEATHER CONDITIONS: Temperature: _56 Degrees	Conditions: Clear _X, Cloudy, Rain / Snow							
TODAY'S ACTIVITIES: PrepX, Removal _X, Cleanup _X_	, Encap, Demo, Teardown/DemobX							
Area of Activity:Basement Air Handler Room	Quantity Removed:45 Each							
Material Description: 6" Pipe Fitting	Quantity Remaining: 0							
Area of Activity:Basement Air Handler Room	Quantity Removed:24 SF							
Material Description:Tank Insulation	Quantity Remaining: 00							
Area of Activity:Basement Air Handler Room	Quantity Removed:15 Each							
Material Description:12" Pipe Fitting	Quantity Remaining: 0							
WORK PROCEDURES: Gross Removal, Glovebag _X, Friable _2	(, Non-Friable, Exterior, Other (Explain)							
ENGINEERING CONTROLS: Full Containment, Critical BarriersX								
	Manometer on site, Manometer Reading (if < 0.02")							
DECONTAMINATION UNIT: YesX_, No, # of Stages3_	Shower: Yes _X, No							
PROJECT SITE CHECKLIST X V Discussion of the control of the cont								
Emergency Info. Posted X Disposable Suits	X Half-Face Air Purifying Respirator							
$\frac{\text{Fire Extinguishers On-Site}}{X} = \frac{X}{X} = \text{Boots}$	Full-Face Air Purifying Respirator							
$\frac{\text{GFCI's Used}}{X}$ Gloves	Powered Air Purifying Respirator							
OSHA Info.PostedSafety Glasses/ Goggles	Other:							
Personal Sampling Conducted Hard Hat								
Entrance Warning Signs PostedSafety Vest	SIGNIFICANT EVENTS							
Entry/Exit Logs PostedHearing Protection								
Storage Bins Labeled Other:								
X Bags Labeled								
X Floor and Walls Covered WORK PRACTICES								
X Area Ventilation Off X Wet Methods Used								
X All Edges Sealed X HEPA Vacuums Used								
X Penetrations Sealed X Waste Double-Bagged or E	arreled							
X Entry Curtains X Wastewater Filtered or Bar	reled							
X Critical Barriers Negative Air Pressure Achi	eved							
Containment Smoke TestedX _ Equipment Decontaminated								
X Work Area Secured Other:								
AIR MONITORING PERFORMED BY OCCU-TEC INC. :	PCM _X, TEM _X							
<u>Туре</u>								
	onal Samples0							
No. of Area Samples 3 No. of Clea	rance Samples 5							
SIGNATURE:Patricia Garcia								

Appendix C

Asbestos Air Monitoring Reports (PCM)

PCM ANALYSIS OF AIR SAMPLES



4151 N. Mulberry Drive, Suite 275 KANSAS CITY, MO 64116

PH: (816) 231-5580 FAX: (816) 231-5641

OCCU-TEC Project #: 91101.02

11/29/2011

Sample Date: 11/4/2011 Analysis Date: 11/4/2011

PJG Rotometer #

Report Date:

CLIENT NAME: GSA - Heartland

ADDRESS: 1500 E. Bannister, Kansas City, MO

PROJECT NAME: Goodfellow Federal Center - Bldg. #122B (MO0620)

FILTER TYPE: 25mm, 0.8	s um MCE	ANALYTIC	AL METHO	DD: NIOSH	17400					Blank Ave	rage =	0		
Client	Activity/	Sample	Pump	Flo	w Rate (I/I	min)	Runnir	ng Time	Total	Volume			Fibers/	Fibers/
Sample ID	Location	Type	ID	Start	End	Avg	Start	Stop	Minutes	Liters	Fibers	Fields	mm2	cc
MO0620-001	Blank	BLK									0	100		
MO0620-002	Blank	BLK									0	100		
MO0620-003	Basement - Ice Machine Room	BGD	401	10.11	10.11	10.11	11:29	14:17	168	1698.5	7.5	100	9.55	0.002
MO0620-004	Basement - Ice Machine Room	BGD	407	10.11	10.11	10.11	11:30	14:18	168	1698.5	3	100	3.82	< 0.002
MO0620-005	Basement - Air Handler Room	BGD	383	10.11	10.11	10.11	11:31	14:19	168	1698.5	4	100	5.10	< 0.002
MO0620-006	Basement - Air Handler Room	BGD	409	10.11	10.11	10.11	11:32	14:20	168	1698.5	4	100	5.10	< 0.002
MO0620-007	Basement - Air Handler Room	BGD	408	10.11	10.11	10.11	11:33	14:21	168	1698.5	4	100	5.10	< 0.002
MO0620-008	Basement - Ice Machine Rm:HM;GLBG	IWA	407	3.08	3.08	3.08	16:30	10:55	1105	3403.4	26.5	100	33.76	0.004
MO0620-009	Basement - Hallway;HM;GLBG	OWA	409	3.08	3.08	3.08	16:31	10:56	1105	3403.4	6	100	7.64	< 0.001
MO0620-010	Basement - Fitness Rm;HM;GLBG	OWA	401	3.08	3.08	3.08	16:32	10:57	1105	3403.4	23.5	100	29.94	0.003
														
														<u> </u>

SAMPLE TYPE

PRS=personal IWA=inside work area NAE=negative air exhaust BLK= blank BGD=background CL=clearance

ACTIVITY

PREP=site prep. BGLO=bag load out GLBG=glovebag CLN=clean up GREM=gross removal EXC=excursion

RESPIRATOR TYPE

HM=half mask APR=air purifying resp. FF=full face SA=supplied air P=powered PD=pressure demand SCBA=self contained preatning apparatus.

Analyzed By:

Checked By:

The NIOSH 7400 counting rules A does not distinguish between asbestos and non-asbestos fibers.

The NIOSH 7400 method assumes the lowest quantitative fiber density is 7 fibers / 100 fields at 95% confidence level. OCCUTEC's limit of detection (LOD) is equal to 7 fibers/100 fields.

Samples proceeded by a < sign are calculated using a count of 7 fibers per 100 fields.

This report should not be reproduced except in full.

AIHA PAT Lab #: 101266

The estimated intracounter coefficient of variation (CV) for this laboratory is 0.77 (Low Range), 0.27 (Medium Range, 0.17 (High Range).

Low Range = 5 to 20 Fibers; Medium Range = 20 to 50 Fibers; High Range = 50 to 100 Fibers

The estimated interlaboratory CV for the quality control program that this laboratory participates in is 0.45.

f:share\masters\forms\asbestos\pcmmaster.xls

PCM ANALYSIS OF AIR SAMPLES



4151 N. Mulberry Drive, Suite 275 KANSAS CITY, MO 64116

PH: (816) 231-5580 FAX: (816) 231-5641

OCCU-TEC Project #: 91101.02

Sample Date:

11/5/2011

Analysis Date:

11/5/2011

11/29/2011

Report Date: PJG Rotometer #

CLIENT NAME: GSA - Heartland

ADDRESS: 1500 E. Bannister, Kansas City, MO

PROJECT NAME: Goodfellow Federal Center - Bldg. #122B (MO0620)

FILTER TYPE: 25mm, 0.8 um MCE

ANALYTICAL METHOD: NIOSH 7400

0.5 Blank Average =

Client	Activity/	Sample	Pump	Flo	w Rate (I/I	min)	Runnir	ng Time	Total	Volume			Fibers/	Fibers/
Sample ID	Location	Туре	ID	Start	End	Avg	Start	Stop	Minutes	Liters	Fibers	Fields	mm2	СС
MO0620-011	Blank	BLK									1	100		
MO0620-012	Blank	BLK									0	100		
MO0620-013	Basement - Ice Machine Rm:HM;GLBG	IWA	407	3.08	3.08	3.08	7:24	15:45	501	1543.1	30.5	100	38.22	0.010
MO0620-014	Basement - Hallway;HM;GLBG	OWA	409	3.08	3.08	3.08	7:25	15:29	484	1490.7	13	100	15.92	0.004
MO0620-015	Basement - Fitness Rm;HM;GLBG	OWA	401	3.08	3.08	3.08	7:26	15:28	482	1484.6	23	100	28.66	0.007
MO0620-016	Basement - Ice Machine	CL	407	10.11	10.11	10.11	15:45	17:51	126	1273.9	1	100	0.64	< 0.003
MO0620-017	Basement - Ice Machine	CL	392	10.11	10.11	10.11	15:46	17:53	127	1284	1	100	0.64	< 0.003
MO0620-018	Basement - Air Handler	CL	393	10.11	10.11	10.11	15:47	17:54	127	1284	4	100	4.46	< 0.003
MO0620-019	Basement Air Handler	CL	409	10.11	10.11	10.11	15:48	17:55	127	1284	5	100	5.73	< 0.003
MO0620-020	Basement Air Handler	CL	408	10.11	10.11	10.11	15:49	17:56	127	1284	2	100	1.91	< 0.003

SAMPLE TYPE

PRS=personal IWA=inside work area NAE=negative air exhaust BLK= blank BGD=background CL=clearance

ACTIVITY

Checked By:

PREP=site prep. BGLO=bag load out GLBG=glovebag CLN=clean up GREM=gross removal EXC=excursion

RESPIRATOR TYPE

HM=half mask APR=air purifying resp. FF=full face SA=supplied air P=powered PD=pressure demand SCBA=self contained preatning apparatus.

Analyzed By:

The NIOSH 7400 counting rules A does not distinguish between asbestos and non-asbestos fibers.

The NIOSH 7400 method assumes the lowest quantitative fiber density is 7 fibers / 100 fields at 95% confidence level. OCCUTEC's limit of detection (LOD) is equal to 7 fibers/100 fields.

Samples proceeded by a < sign are calculated using a count of 7 fibers per 100 fields.

This report should not be reproduced except in full.

AIHA PAT Lab #: 101266

The estimated intracounter coefficient of variation (CV) for this laboratory is 0.77 (Low Range), 0.27 (Medium Range, 0.17 (High Range).

Low Range = 5 to 20 Fibers; Medium Range = 20 to 50 Fibers; High Range = 50 to 100 Fibers

The estimated interlaboratory CV for the quality control program that this laboratory participates in is 0.45.

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Appendix D

Asbestos Clearance Reports (TEM)

TEM ANALYSIS OF AIR SAMPLES



GSA - Heartland

1500 E. Bannister, Kansas City, MO

PROJECT NAME: Goodfellow Federal Center - Bldg. #122B (MO0620)

4151 North Mulberry Drive, Suite 275 Kansas City, Missouri 64116

(816) 231-5580

Toll Free: (800) 950-1953 Fax: (816) 231-5641

OCCU-TEC Project #: 91101.02

Sample Date:

11/5/2011

Analysis Date:

Report Date: 11/29/2011

Rotometer # **PJG**

FILTER TYPE: 25mm, 0.45 um

CLIENT NAME:

ADDRESS:

Client	Activity/	Sample	Pump	Flov	w Rate (I/	min)	Runnin	g Time	Total	Volume	# Asbestos	Asbestos	Concentration
Sample ID	Location	Туре	ID	Start	End	Avg	Start	Stop	Minutes	Liters	Stuctures	Structures/mm ²	Structures/cc
MO0620-T001	Blank	BLK											Not Analyzed
MO0620-T002	Blank	BLK											Not Analyzed
MO0620-T003	Blank	BLK											Not Analyzed
MO0620-T004	Basement Ice Machine Room	CL	68	10.11	10.11	10.11	15:50	17:51	121	1223.3			Not Analyzed
MO0620-T005	Basement Ice Machine Room	CL	Terr1	10.11	10.11	10.11	15:51	17:53	122	1233.4			Not Analyzed
MO0620-T006	Basement Fan Room	CL	Terr2	10.11	10.11	10.11	15:52	17:54	122	1233.4			Not Analyzed
MO0620-T007	Basement Fan Room	CL	Terr3	10.11	10.11	10.11	15:53	17:55	122	1233.4			Not Analyzed
MO0620-T008	Basement Fan Room	CL	Terr4	10.11	10.11	10.11	15:54	17:56	122	1233.4			Not Analyzed

SAMPLE TYPE

PRS=personal IWA=inside work area BLK= blank OWA= outside work area ICL=inside clearance OCL=outside clearance BGD=background NAE=negative air exhaust **ACTIVITY**

PREP=site prep. BGLO=bag load out GLBG=glovebag CLN=clean up GREM=gross removal EXC=excursion

RESPIRATOR TYPE

HM=half mask APR=air purifying resp. FF=full face SA=supplied air PD=pressure demand P=powered SCBA=self contained breathing apparatus

Sampled By: Pat Garcia

Appendix E

Photo Log

Photo #1: Pre-Abatement – Basement Air Handler Room (Thermal Pipe Insulation)



Photo #2: Pre-Abatement – Basement Air Handler Room (Thermal Pipe Insulation)





Client: GSA Heartland Region

Project Location: Goodfellow Fed. Center. – Bldg. #122B

(MO0620)

Date: November 29, 2011

Photo #3: Pre-Abatement – Air Handler Room (Tank Insulation)



Photo #4: During-Abatement – Air Handler Room (Glovebag Removal)





Client: GSA Heartland Region

Project Location: Goodfellow Fed. Center. – Bldg. #122B

(MO0620)

Date: November 29, 2011

Photo #5: During-Abatement – Air Handler Room (Glovebag Removal)



Photo #6: During-Abatement – Air Handler Room (Glovebag Removal)





Client: GSA Heartland Region

Project Location: Goodfellow Fed. Center. – Bldg. #122B

(MO0620)

Date: November 29, 2011

Photo #7: During-Abatement – Air Handler Room (Glovebag Removal)



Photo #8: Post-Abatement – Air Handler Room (Glovebag Removal)





Client: GSA Heartland Region

Project Location: Goodfellow Fed. Center. – Bldg. #122B

(MO0620)

Date: November 29, 2011

Photo #9: Post-Abatement – Air Handler Room (Tank Insulation Removal)



Photo #10: Post-Abatement – Air Handler Room (Tank Insulation Removal)





Client: GSA Heartland Region

Project Location: Goodfellow Fed. Center. – Bldg. #122B

(MO0620)

Date: November 29, 2011