MEMORANDUM



Missouri Department of Transportation Construction and Materials Central Laboratory

TO:

Allen Lane-SL/gs

COPY:

FROM:

Diane Roegge

Environmental Chemist

DATE:

May 31, 2013, 2013

SUBJECT:

Materials

Asbestos Inspection & Heavy Metal Paint Survey

Route 141 Job No. N/A

St Louis District Office Boiler & Traffic Management Center Boiler Project

St Louis County

We are providing you with the results of the requested inspection on the above referenced property. The inspection report contains an asbestos and a heavy metals survey, unless otherwise requested. The asbestos inspection included sample collection of suspect asbestos-containing material and National Voluntary Laboratory Accreditation Program (NVLAP) accredited testing to confirm the presence of asbestos. This asbestos and heavy metal paint report includes four different report forms. Form T746 lists all of the samples taken during the asbestos inspection. Form T747 shows only those samples that tested positive for Category I nonfriable asbestos-containing materials that may remain in the structure during demolition, if kept adequately wet to avoid visible air emissions. Form T748 shows only those samples that tested positive for asbestos and require removal prior to demolition. Form C760 lists all paint samples taken during the heavy metal paint survey and their metal content.

In accordance with the National Emissions Standard for Hazardous Air Pollutants (NESHAP), as well as city and county asbestos abatement regulations - Registration, Notification, and Performance Requirements, regulated asbestos-containing material (RACM) namely, Friable and Category II nonfriable, have a high probability of becoming friable under normal demolition forces. Practices and procedures for removal prior to demolition, disposal, and clearances should be in accordance with referenced regulations. Missouri Department of Transportation policy is to perform asbestos abatements in accordance with NESHAP.

In accordance with Missouri Department of Natural Resources' Technical Bulletin "Managing Construction and Demolition Waste" dated January 31, 2003, a heavy metal paint survey has been performed on the above referenced property. We are providing you with the results of this survey. This survey includes locating painted concrete, block and/or brick surfaces, sampling/testing the painted surface(s) to determine if hazardous heavy metals are present. Non-hazardous painted concrete, blocks, or bricks may be used as clean fill materials, if properly

TO: Lane-SL/gs Page 2 May 31, 2013

handled. You must contact the Central Office Design Division for proper handling of the reported painted surfaces.

Although our survey included observing and sampling behind walls, above ceilings, beneath floors, etc., it is possible that potentially hidden asbestos-containing materials may exist within the structure. To our knowledge, we have located all suspect asbestos-containing and all painted concrete, block and brick surfaces. If suspect asbestos-containing materials or if painted concrete, block and/or brick surfaces are observed in addition to those reflected in this inspection report, then please advise us immediately so that we may schedule a follow-up inspection.

Should you have any questions regarding these reports, please contact me at (573) 526-4359.

db/dr

http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared documents/asbestos/districts/st louis (sl)/misc/dr1305311.docx Attachments

MISSOURI DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS Asbestos Survey Report

Asbestos Survey Report
All Suspect ACM

ROUTE: MODOT JOB NO.:	141 N/A	SURVEYED BY: CERTIFICATION #:	Frank Reichart and Diane Roegge 7118122712MOIR11239, F.R. 7118122712MOIR7165, D.R.	 	
COUNTY:		SITE ADDRESS:	1590 Woodlake Drive, Chesterfield 63017	63017	
DATE OF SURVEY: PARCEL NO.:	St Louis District Office Boiler Project	TYPE(S) OF STRUCTURE(S):	TYPE(S) OF STRUCTURE(S): 3-Story Block/Brick Commercial Office Building	Ince Building	
Sample ID	Type of Materials	Location of Material	Material	Friability Category	Field Measure
0	Insulation	Mechanical Room, Boiler, Insic	Inside around Tank	N-ACM	
			The state of the s		
		6			
			80		
		61			
	NOTE: This report is limited to only the boiler and piping as requested.		It does not include any other portion		
	of this building or any other buildings or structures at this site.	res at this site.			

Asbestos Survey Report

	(Abatement not required if not made friable during demolition.)	Nonfriable Asbestos-Containing Materials	
2	_		

ROUTE: MODOT JOB NO.: DISTRICT: COUNTY: DATE OF TESTS: PARCEL NO.: Sample ID	N/A St Louis May 31, 2013 St Louis District Office Boiler Project Type of Material	TESTED BY: CERTIFICATION #: CERTIFICATION #: SITE ADDRESS: TYPE(S) OF STRUCTURE(S): Location of Material None Located	Frank Reichart and Diane Roegge 7118122712MOIR11239, F.R. 7118122712MOIR7165, D.R. 1590 Woodlake Drive, Chesterfield 3-Story Block/Brick Commercial O Friability Category I NF INF	AOIR11239, AOIR7165, I ke Drive, Ch //Brick Com //Briability Category I NF	Frank Reichart and Diane Roegge 7118122712MOIR11239, F.R. 7118122712MOIR7165, D.R. 1590 Woodlake Drive, Chesterfield 63017 3-Story Block/Brick Commercial Office Building Category Field Asbes Category Measure Typ I NF	Building Asbestos Type	Percen
		None Located		I Z			
						6	
G							
NO	NOTE: This report is limited to only the boiler and piping as requested. It does not include any other portion of this building or any other buildings or structures at this site.	r and piping as requested. It does no	t include				
шу	any other portion of this building or any other buildings or structures at this site.	buildings or structures at this site.					

Asbestos Survey Report
All materials requiring removal or special handling.

55 55	DATE OF TESTS: Ma		DISTRICT: SL	MODOT JOB NO.: N/A	ROUTE: 141
Louis District Office Boiler Project	May 31, 2013	St Louis		Α	

TESTED BY:
CERTIFICATION #:
CERTIFICATION #:
SITE ADDRESS:
TYPE(S) OF STRUCTURE(S):

Frank Reichart and Diane Roegge
7118122712MOIR11239, F.R.
7118122712MOIR7165, D.R.
1590 Woodlake Drive, Chesterfield 63017
3-Story Block/Brick Commercial Office Building

													Bid Item No.
					8								Sample ID
structures at this site.	NOTE: This report is limited does not include any other r												Type of Material
6	NOTE: This report is limited to only the boiler and piping as requested. It does not include any other portion of this building or any other buildings or										None Located	None Located	Location of Material
•	Or II										II NF	ъ	Friability Category
			II.s.										Field Measure
													Asbestos Type
													Percent

Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE: MODOT JOB NO.: DISTRICT: COUNTY: SURVEYED BY: DATE OF SURVEY:	: N/A St Louis Frank Reichart May 28, 2013	TESTED BY: DATE OF TESTS: PARCEL NO.: SITE ADDRESS: TYPE(S) OF STRU	TESTED BY: DATE OF TESTS: PARCEL NO.: SITE ADDRESS: St Louis District Office Boiler Project 1590 Woodlake Drive, Chesterfield 63017 TYPE(S) OF STRUCTURE(S): 3-Story Block/Brick Commercial Office Building	(§) 3 - 8 x x	N/A N/A St Louis District Office Boiler Project 1590 Woodlake Drive, Chesterfield 63017 3-Story Block/Brick Commercial Office B	t Office Boi Drive, Che brick Comm	ller Project sterfield 6301 ercial Office	7 Building	
					Metals (ppm)	als m)			
					, is				
Sample ID	Color/Location of Material/Substrate No samples taken. No painted surfaces located.	As	Cr	РЬ	Cd	Se	Ba	Hg	Ag
	NOTE: This report is limited to only the boiler and								
	piping as requested. It does not include any other portion of this building or any other building or					8			
	structures at this site.								

Serial Number: 201305311

MISSOURI DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS 1617 Missouri Blvd, Jefferson City, MO 65101

Tested For:	Allen Lar	ie-gs	Proje	ct #:	Boiler	Parcel:	Dist. Office	
	1590 Woo	odlake Dr	Route	e:	141	County:	St. Louis	
	Chesterfie	eld, MO 6301	7			Allert A. E. March Str. and A. B. March		
Sampled _	05/28/13	Received	05/31/13	Completed	05/31/13	Reporte	d 05/31/13	

TEST REPORT OF BULK SAMPLE ANALYSIS FOR ASBESTOS

Sample ID:	13	MD	1R1	20						
Material Type	I	nsul	ation	1					=	
Appearance (Color/Texture)		Tan/Fi	brous							
Homogeneous?	X	Yes		No	Yes	No	Yes	No	Yes	No
If No, Sub-sample #		N/	Α							
Layers Present?		Yes	X	No	Yes	No	Yes	No	Yes	No
If Yes, Layer #		N/	Ά		•					
ASBESTOS DETECTED?	,	Yes	X	No	Yes	No	Yes	No	Yes	No
If Yes, Type and Percent								MARKA N		
Chrysotile										
Amosite										
Crocidolite		- 17.77112								
Fibrous Anthophyllite										
Fibrous Actinolite						TT				
Fibrous Tremolite										
TOTAL % ASBESTOS		Χ								
OTHER FIBERS DETECTED?	X	Yes		No	Yes	No	Yes	No	Yes	No
If Yes, Type and Percent				DEED R						
Glass		98-	99							
Cellulose										
Synthetic					ASTREES IT :					
Other (specify, if known)										
TOTAL % OTHER FIBERS		98-	99							
NONFIBROUS MATRIX?	X	Yes		No	Yes	No	Yes	No	Yes	No
If Yes, Type and Percent			4573							
Binder										
Calcite										
Gypsum										
Granular Materials					*					
Other (specify, if known)		1-	2							
TOTAL % NONFIBROUS		1-	2							

REMARKS: (deviations/departures from test method)

Quantification is based on a visual determination of the relative volume of bulk sample components unless otherwise noted. The results are valid only for the item tested. This report may not be used to claim product endorsement by NVLAP or any agency of the US Government. Sampling Procedure used: MoDOT PLM QAM Section 8.1 Test Method used: EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA-600/M4-82-020 Dec. 1982). No part of this report may be reproduced except in full with the written permission of MoDOT Chemical Laboratory.

Environmental Chemist / NVLAP LAB CODE 200544-0 Chemical Laboratory Director
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LOUIS (SL)/MISC/201305311 DIST OFFICE BOILER.DOC

Asbestos Survey Report All Suspect ACM

COUNTY: MODOT JOB NO.: PARCEL NO.: DATE OF SURVEY: DISTRICT: ROUTE: SL N/A TMC-Boiler Project May 28, 2013 St Louis

> **CERTIFICATION #:** SURVEYED BY: CERTIFICATION #:

SITE ADDRESS:

Frank Reicharl and Diane Roegge

7118122712MOIR7165, D.R. 7118122712MOIR11239, F.R.

14301 S Outer 40, Chesterfield 63017

TYPE(S) OF STRUCTURE(S): 2-Story Commercial Office Building

	3	NOTE: This report is limited to only the boiler and piping as requested. It does not include any other portion of this building or any other buildings or structures at this site.	NOTE: This report is limited to only the boiler and piping as of this building or any other buildings or structures at this site.	
			50	16.
			0	
			TOT INTIGAT CITE	12IVICIAICI
	N-ACM	2-Exposed Ends	TSI Mud/Paint	13MD1R 123
	N-ACM	From Boiler to First Manifold	TSI Elbows	13MD1R 122
	N-ACM	From Boiler to First Manifold	TSI Runs	13MD1R 121
Measure	Category	Location of Material	Type of Materials	Sample ID
Field	Friability			

ROUTE:

141

MISSOURI DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS

Asbestos Survey Report

(Abatement not required if not made friable during demolition.) Nonfriable Asbestos-Containing Materials

PARCEL NO.: COUNTY: DISTRICT: DATE OF TESTS: MODOT JOB NO.: Sample ID any other portion of this building or any other buildings or structures at this site. NOTE: This report is limited to only the boiler and piping as requested. It does not include SL N/A May 31, 2013 St Louis TMC-Boiler Project Type of Material None Located SITE ADDRESS: CERTIFICATION #: TYPE(S) OF STRUCTURE(S): CERTIFICATION #: TESTED BY: Location of Material 2-Story Commercial Office Building 7118122712MOIR7165, D.R. 7118122712MOIR11239, F.R. Frank Reichart and Diane RoeggeV 14301 S Outer 40, Chesterfield 63017 Category Friability INF Measure Field Asbestos Type Percent

All necessary work to handle this material is the contractor's responsibility.

Asbestos Survey Report
All materials requiring removal or special handling.

					3	R	851	
MODOT JOB NO.:	N/A		CERTIFICATION #:	7118122712MOIR11239, F.R.	10IR11239	F.R.		
DISTRICT:			CERTIFICATION #:	7118122712MOIR7165, D.R.	10IR7165,	D.R.		
COUNTY:	St Louis	ouis	SITE ADDRESS:	14301 S Outer 40, Chesterfield 63017	r 40, Cheste	rfield 63017		
DATE OF TESTS:		May 31, 2013	TYPE(S) OF STRUCTURE(S):	2-Story Commercial Office Building	nercial Offi	ce Building		
PARCEL NO.:		TMC-Boiler Project	ļ					
Bid No	Sample ID	Type of Material	Location of Material	O F	Friability Category	Field Measure	Asbestos Type	Percent
			None Located		F			
			None Located		IINF			
			¥					
(A)								
	ю							
				5				
		NOTE: This report is limite	NOTE: This report is limited to only the boiler and piping as requested.	uested. It				
		does not include any other p	does not include any other portion of this building or any other buildings or	ildings or				
		structures at this site.	-			Ð		

Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE:	141	TESTED BY:	Y:	7	N/A				
MODOT JOB NO.:	N/A	DATE OF TESTS:	TESTS:	احا	N/A				
DISTRICT:	SL	PARCEL NO.:	Ö.:	اد	TMC-Boiler Project	oject			
COUNTY:	St Louis (h)	SITE ADDRESS:	RESS:	-1	14301 S Outer 40, Chesterfield 63017	40, Chesterf	field 63017		
SURVEYED BY:	**	TYPE(S) O	F STRUCT	$JRE(S): \overline{2}$	TYPE(S) OF STRUCTURE(S): 2-Story Commercial Office Building	ercial Office	Building		
DATE OF SURVEY:				1					
					Me	Metals			
					(DE	(ppm)			
Sample ID	Color/Location of Material/Substrate	As	Ç	РЬ	C	Se	ಸ್ತ	Ho	Δo
7	No samples taken. No painted surfaces located.							d	o
	(2)								
	NOTE: This report is limited to only the boiler and								
ld	piping as requested. It does not include any other					2	45		
Po	portion of this building or any other buildings or								
9	פון מכנמוכס מנ מווס פונצי.				72				

Serial Number: 201305312

MISSOURI DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS 1617 Missouri Blvd, Jefferson City, MO 65101

Tested For:	Allen Lar	ie-gs	Projec	et #:	Boiler	Parcel:	Traf. Mgmt. Ctr.
	1590 Woo	odlake Dr.	Route	:	141	County:	St. Louis
	Chesterfic	eld, MO					
Sampled	05/28/13	Received	05/31/13	Completed	05/31/13	Reporte	d 05/31/13

TEST REPORT OF BULK SAMPLE ANALYSIS FOR ASBESTOS

Sample ID:	13MD1R121				13MD1R121				13MD1R122				13MD1R123*				
Material Type	Insulation				Insulation				Insulation				Paint				
Appearance (Color/Texture)	White/Shiny				Yellow/Fluff				Pale Yellow/Fluff				Lt Gray/Sl Soft				
Homogeneous?	X	Yes		No	X	Yes		No	X	Yes		No	X	Yes		No	
If No, Sub-sample #	N/A			N/A				N/A				N/A					
Layers Present?	X	Yes		No	X	Yes		No		Yes	X	No		Yes	X	No	
If Yes, Layer #	Paper			Insulation			N/A				N/A						
ASBESTOS DETECTED?		Yes	X	No		Yes	X	No		Yes	X	No		Yes	X	No	
If Yes, Type and Percent									bles.								
Chrysotile																	
Amosite			0000000														
Crocidolite																	
Fibrous Anthophyllite				i i													
Fibrous Actinolite																	
Fibrous Tremolite										a							
TOTAL % ASBESTOS	0			0				0				0					
OTHER FIBERS DETECTED?	X	Yes		No	X	Yes	lecour.	No	X	Yes		No		Yes	X	No	
If Yes, Type and Percent																	
Glass				98-99			98-99										
Cellulose		50-	60														
Synthetic								xaa-a									
Other (specify, if known)				-													
TOTAL % OTHER FIBERS	50-60				98-99				98-99				0				
NONFIBROUS MATRIX?	X	Yes		No	X	Yes		No	X	Yes		No	X	Yes		No	
If Yes, Type and Percent																	
Binder							8										
Calcite																	
Gypsum																	
Granular Materials								-30%									
Other (specify, if known)	40-50 (Foil)					1-2				1-2				100 (Ti02)			
TOTAL % NONFIBROUS	40-50					1-2				1-2				100			

REMARKS: (deviations/departures from test method and/or sampling procedure)

Quantification is based on a visual determination of the relative volume of bulk sample components unless otherwise noted. The results are valid only for the item tested. This report may not be used to claim product endorsement by NVLAP or any agency of the US Government. Sampling Procedure used: MoDOT PLM QAM Section 8.1 Test Method used: EPA Interim Method for the Determination of Asbestos in Bulk Insulation Samples (EPA-600/AM4-82-020 Dec. 1982). No part of this report may be reproduced except in full with the written permission of MoDOT Chemical Laboratory.

Environmental Chemist NVLAP LAB CODE 200544-0

Chemical Laboratory Director

^{*}Sample was ashed.