MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Randy Potts-CD/de

COPY:

FROM: Frank Reichart
Environmental Chemist

DATE: January 21, 2015

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route M
Job No. WGPHTW01
Parcel Flat Radio Tower
Phelps 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

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/central (cd)/misc/fr1501211.docx
Attachments

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All Suspect ACM

ROUTE:	M	**SURVEYED BY:**	Frank Reichart and Diane Roegge
MODOT JOB NO.:	WGPHTW01	**CERTIFICATION #:**	7118110514MOIR11239, F.R.
DISTRICT:	CD	**CERTIFICATION #:**	7118110514MOIR7165, D.R.
COUNTY:	Phelps	**SITE ADDRESS:**	North side, ~10 miles West of US 63, Flat
DATE OF SURVEY:	January 13, 2015	**TYPE(S) OF STRUCTURE(S):**	Block & Concrete Shed on Concrete and Metal Radio Tower
PARCEL NO.:	Flat Radio Tower		

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	No samples taken. No suspect material located.			

N-ACM = Non-Asbestos Containing Material I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable
NAFD = No Asbestos Fiber Detected * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
Nonfriable Asbestos-Containing Materials
(Abatement not required if not made friable during demolition.)

ROUTE:	M	**TESTED BY:**	Frank Reichart and Diane Roegge
MODOT JOB NO.:	WGPHTW01	**CERTIFICATION #:**	7118110514MOIR11239, F.R.
DISTRICT:	CD	**CERTIFICATION #:**	7118110514MOIR7165, D.R.
COUNTY:	Phelps	**SITE ADDRESS:**	North side, ~10 miles West of US 63, Flat
DATE OF TESTS:	N/A	**TYPE(S) OF STRUCTURE(S):**	Block & Concrete Shed on Concrete and Metal Radio Tower
PARCEL NO.:	Flat Radio Tower		

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		None Located	I NF			

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

I NF = Category I Nonfriable

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Asbestos Survey Report
All materials requiring removal or special handling.

ROUTE:	M	**TESTED BY:**	Frank Reichart and Diane Roegge
MODOT JOB NO.:	WGPHTW01	**CERTIFICATION #:**	7118110514MOIR11239, F.R.
DISTRICT:	CD	**CERTIFICATION #:**	7118110514MOIR7165, D.R.
COUNTY:	Phelps	**SITE ADDRESS:**	North side, ~10 miles West of US 63, Flat
DATE OF TESTS:	N/A	**TYPE(S) OF STRUCTURE(S):**	Block & Concrete Shed on Concrete and Metal Radio Tower
PARCEL NO.:	Flat Radio Tower		

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
			None Located	F			
			None Located	II NF			

I NF = Category I Nonfriable II NF = Category II Nonfriable F = Friable * = Tested By Point Count Procedure

MISSOURI DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MATERIALS
Metals Survey Report of Painted Concrete, Block, Brick Surfaces for Clean Fill Purposes

ROUTE:	M	**TESTED BY:**	Frank Reichart
MODOT JOB NO.:	WGPHTW01	**DATE OF TESTS:**	January 16, 2015
DISTRICT:	CD	**PARCEL NO.:**	Flat Radio Tower
COUNTY:	Phelps	**SITE ADDRESS:**	North side, ~10 miles West of US 63, Flat
SURVEYED BY:	Frank Reichart	**TYPE(S) OF STRUCTURE(S):**	Block & Concrete Shed on Concrete and Metal Radio Tower
DATE OF SURVEY:	January 13, 2015		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
	Shed								
15MD1R 001	Beige/Exterior Wall/Block	186	1,215	551	<42	<4	1,467	<14	<32
15MD1R 002	Beige/Exterior Wall/Concrete	11	<215	<8	<42	<3	1,984	<11	<33
15MD1R 003	Brown/Exterior Roof/Concrete	<13	<235	42	<46	<4	1,844	<13	<35
15MD1R 004	White/Interior Wall/Block	<8	<155	<7	<41	<3	<985	<9	<31

All results are by XRF unless otherwise indicated: a = USEPA SW-846 Method 3050
b = USEPA SW-846 Method 7471

MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Randy Potts-CD/de

CC:

FROM: Frank Reichart
Environmental Chemist, Lead License #110506-300003364

DATE: January 16, 2015

SUBJECT: Materials
Job No. WGPHTW01
M/Phelps
Flat Radio Tower

On January 16, 2015, a paint screening for regulated heavy metals was performed on the metal radio tower. The following results were obtained:

	15MD1R005
Arsenic (As)	46,261 ppm** (4.6%)
Chromium (Cr)	266,635 ppm (26.7%)
Lead (Pb)	300,062 ppm (30.0%)
Cadmium (Cd)	442 ppm
Selenium (Se)	LOD*
Barium (Ba)	7,530 ppm
Mercury (Hg)	LOD
Silver (Ag)	LOD

*LOD = below the detection limit of the instrument **ppm = parts per million

The existing paint system on the metal radio tower is lead-based paint (LBP). Additionally be advised that high levels of chromium, another regulated heavy metal, will also be found on this radio tower.

Should any further screenings be required, please contact Todd Bennett, Chemical Laboratory Director, at (573) 751-1045. Should you have any questions regarding the screenings, feel free to call me at (573) 526-4359.

fr/dr
http://sharepoint/systemdelivery/cm/chemicallab/environmental/shared documents/asbestos/districts/central (cd)/misc/flat radio tower xrf.docx