MEMORANDUM

Missouri Department of Transportation
Construction and Materials
Central Laboratory

TO: Andrew Ellsworth-SW/rw

COPY:

FROM: Frank Reichart
Environmental Chemist

DATE: September 21, 2011

SUBJECT: Materials
Asbestos Inspection & Heavy Metal Paint Survey
Route 160
Job No. N/A
Parcel E8-0697 Rueter MT Lot
Taney 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
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Attachments

Form T746
Rev. 04/2003

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

ROUTE: US 160
MODOT JOB NO.: N/A
DISTRICT: SW
COUNTY: Taney
DATE OF SURVEY: August 31, 2011
PARCEL NO.: E8-0697 (Rueter MT Lot)
SITE ADDRESS: 33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

SURVEYED BY: Frank Reichart and Diane Roegge
CERTIFICATION #: 7112010411MOIR11239, F.R. 7112010411MOIR7165, D.R.
TYPE(S) OF STRUCTURE(S): 5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	Maintenance Shed			
11MD1R 625	Asphalt Roofing Shingles	Roof, 1st Layer	N-ACM	
11MD1R 626	Asphalt Roofing Shingles	Roof, 2nd Layer	N-ACM	
11MD1R 627	Asphalt Felt Material	Roof, 3rd Layer	N-ACM	
11MD1R 628	Asphalt Joint Compound☼	Roof, Around Vents	I NF	16 Sq. Ft.
11MD1R 629	Ceiling Tile (2'x 2')	Sink Area/Bathroom/Breakroom/Office	N-ACM	
11MD1R 630	Sheetrock (No Mud/Tape)	Walls, Under Paneling	N-ACM	
11MD1R 631	Insulation	Above Ceiling Tile	N-ACM	
11MD1R 632	Insulation	Flex-Duct, Above Ceiling Tile	N-ACM	
11MD1R 633	Insulation	Attic and Roofline	N-ACM	
	☼**NOTE:** Asphalt Joint Compound sample was not obtained due to safety considerations. Material is presumed to be ACM (P-ACM) with typical asbestos type and percentage reported.			
	Metal Used Oil Tank & Basin			
	No samples taken. No suspect ACM located.			
	Metal-Clad Uniform Shed			
	No samples taken. No suspect ACM located.			
	Block Wellhouse			
11MD1R 634	Asphalt Roofing Shingles	Roof, Under Metal Roofing	N-ACM	
	Salt Shed			
11MD1R 635	Asphalt Roofing Shingles	Roof, Under Metal Roofing	N-ACM	

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

Form T746
Rev. 04/2003

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

ROUTE: US 160
MODOT JOB NO.: N/A
DISTRICT: SW
COUNTY: Taney
DATE OF SURVEY: August 31, 2011
PARCEL NO.: E8-0697 (Rueter MT Lot)
SITE ADDRESS: 33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

SURVEYED BY: Frank Reichart and Diane Roegge
CERTIFICATION #: 7112010411MOIR11239, F.R. 7112010411MOIR7165, D.R.
TYPE(S) OF STRUCTURE(S): 5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin

Sample ID	Type of Materials	Location of Material	Friability Category	Field Measure
	Brine Tanks and Metal Supports			
	No samples taken. No suspect ACM located.			
	Concrete Jersey Trash Bins			
	No samples taken. No suspect ACM located.			
	Metal-Clad Flammable Shed			
11MD1R 636	Asphalt Roofing Shingles	Roof, 1st Layer	N-ACM	
11MD1R 637	Asphalt Felt Material	Roof, 2nd Layer	N-ACM	
11MD1R 638	Insulation	Attic	N-ACM	
	2-Car Metal Canopy			
	No samples taken. No suspect ACM located.			
	Metal Spreader Equipment Racks			
	No samples taken. No suspect ACM located.			
	Concrete Fuel Tank Basin			
	No samples taken. No suspect ACM located.			
	NOTE: Non-destructive means were used to survey and sample this property. Additional suspect material may be present hidden underneath vinyl/metal siding, metal roofing, interior walls and/or ceilings.			

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

Form T747
Rev. 12/2005

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

ROUTE:	US 160
MODOT JOB NO.:	N/A
DISTRICT:	SW
COUNTY:	Taney
DATE OF TESTS:	September 19 & 21, 2011
PARCEL NO.:	E8-0697 (Rueter MT Lot)
SITE ADDRESS:	33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

TESTED BY:	Frank Reichart and Diane Roegge
CERTIFICATION #:	7112010411MOIR11239, F.R. 7112010411MOIR7165, D.R.
TYPE(S) OF STRUCTURE(S):	5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin

Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
	Maintenance Shed					
11MD1R 628	Asphalt Joint Compound☼	Roof, Around Vents	I NF	16 Sq. Ft.	Chrysotile☼	15-30☼
	☼**NOTE:** Asphalt Joint Compound sample was not obtained due to safety considerations. Material is presumed to be ACM (P-ACM) with typical asbestos type and percentage reported.					
	Metal Used Oil Tank & Basin					
		None Located	I NF			
	Metal-Clad Uniform Shed					
		None Located	I NF			
	Block Wellhouse					
		None Located	I NF			
	Salt Shed					
		None Located	I NF			
	Brine Tanks and Metal Supports					
		None Located	I NF			
	Concrete Jersey Trash Bins					
		None Located	I NF			
	Metal-Clad Flammable Shed					
		None Located	I NF			

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

I NF = Category I Nonfriable

Form T747
Rev. 12/2005

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

ROUTE:	US 160
MODOT JOB NO.:	N/A
DISTRICT:	SW
COUNTY:	Taney
DATE OF TESTS:	September 19 & 21, 2011
PARCEL NO.:	E8-0697 (Rueter MT Lot)
SITE ADDRESS:	33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

TESTED BY:	Frank Reichart and Diane Roegge
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Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
	2-Car Metal Canopy					
		None Located	I NF			
	Metal Spreader Equipment Racks					
		None Located	I NF			
	Concrete Fuel Tank Basin					
		None Located	I NF			
	NOTE: Non-destructive means were used to survey and sample this property. Additional suspect material may be present hidden underneath vinyl/metal siding, metal roofing, interior walls and/or ceilings.					

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

I NF = Category I Nonfriable

Form T748
Rev. 04/2003

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

ROUTE:	US 160
MODOT JOB NO.:	N/A
DISTRICT:	SW
COUNTY:	Taney
DATE OF TESTS:	September 19 & 21, 2011
PARCEL NO.:	E8-0697 (Rueter MT Lot)
SITE ADDRESS:	33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

TESTED BY:	Frank Reichart and Diane Roegge
CERTIFICATION #:	7112010411MOIR11239, F.R. 7112010411MOIR7165, D.R.
TYPE(S) OF STRUCTURE(S):	5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		Maintenance Shed					
			None Located	F			
			None Located	II NF			
		Metal Used Oil Tank & Basin					
			None Located	F			
			None Located	II NF			
		Metal-Clad Uniform Shed					
			None Located	F			
			None Located	II NF			
		Block Wellhouse					
			None Located	F			
			None Located	II NF			
		Salt Shed					
			None Located	F			
			None Located	II NF			
		Brine Tanks and Metal Supports					
			None Located	F			
			None Located	II NF			

Continued on next page

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

Form T748
Rev. 04/2003

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

ROUTE:	US 160
MODOT JOB NO.:	N/A
DISTRICT:	SW
COUNTY:	Taney
DATE OF TESTS:	September 19 & 21, 2011
PARCEL NO.:	E8-0697 (Rueter MT Lot)
SITE ADDRESS:	33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

TESTED BY:	Frank Reichart and Diane Roegge
CERTIFICATION #:	7112010411MOIR11239, F.R. 7112010411MOIR7165, D.R.
TYPE(S) OF STRUCTURE(S):	5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin

Bid Item No.	Sample ID	Type of Material	Location of Material	Friability Category	Field Measure	Asbestos Type	Percent
		Concrete Jersey Trash Bins					
			None Located	F			
			None Located	II NF			
		Metal-Clad Flammable Shed					
			None Located	F			
			None Located	II NF			
		2-Car Metal Canopy					
			None Located	F			
			None Located	II NF			
		Metal Spreader Equipment Racks					
			None Located	F			
			None Located	II NF			
		Concrete Fuel Tank Basin					
			None Located	F			
			None Located	II NF			
		NOTE: Non-destructive means were used to survey and sample this property. Additional suspect material may be present hidden underneath vinyl/metal siding, metal roofing, interior walls and/or ceilings.					

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

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Form C760
Rev. 05/2011

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

ROUTE: US 160
MODOT JOB NO.: N/A
DISTRICT: SW
COUNTY: Taney
SURVEYED BY: Frank Reichart
DATE OF SURVEY: August 31, 2011
PARCEL NO.: E8-0697 (Rueter MT Lot)
SITE ADDRESS: 33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)

TESTED BY: Frank Reichart
DATE OF TESTS: August 31, 2011
TYPE(S) OF STRUCTURE(S): 5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
	Maintenance Shed								
11MD1R 639	Dark Brown/Exterior Wall/Concrete	<30	<258	369	<50	<4	5,079	<20	<38
11MD1R 640	Beige/Exterior Walls/Concrete	<22	<291	167	<49	<4	2,265	<21	<38
11MD1R 641	Beige/Exterior Walls/Block	<17	<282	121	<46	<4	<2,108	<16	<35
11MD1R 642	Brown/Exterior Walls, Window Sills/Concrete	<26	<215	316	<46	<4	832	<19	<35
11MD1R 643	Gray/Interior Walls/Concrete	<29	<196	358	<51	<4	<1,146	<19	<39
11MD1R 644	Gray/Interior Walls/Block	<37	<207	566	<49	<5	1,445	<40	<37
11MD1R 645	White/Interior Walls/Block	<21	<247	223	51	<4	<1,783	<15	<35
11MD1R 646	Red/Interior Walls/Block	<30	396	451	<44	<4	3,248	<20	<33
	Metal Used Oil Tank & Basin								
	No samples taken. No painted surfaces located.								
	Metal-Clad Uniform Shed								
	No samples taken. No painted surfaces located.								
	Block Wellhouse								
11MD1R 647	Beige/Exterior Walls/Block	<21	<323	136	<48	<4	<2,626	<19	<37
	Salt Shed								
	No samples taken. No painted surfaces located.								

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

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

ROUTE:	US 160	**TESTED BY:**	Frank Reichart
MODOT JOB NO.:	N/A	**DATE OF TESTS:**	August 31, 2011
DISTRICT:	SW	**TYPE(S) OF STRUCTURE(S):**	5-Bay Block Maintenance Shed on Concrete, Metal Used Oil Tank & Basin, Small Metal-Clad Uniform Shed, Small Block Wellhouse, 2-Bay Wood-Frame Salt Shed, Brine Tanks & Metal Supports, Concrete Jersey Barrier Trash Bin, Metal-Clad Wooden Flammable Shed on Concrete, Metal-Clad Metal Frame 2-Car Canopy, Metal Spreader Equipment Racks, and Concrete Fuel Tank Basin
COUNTY:	Taney		
SURVEYED BY:	Frank Reichart		
DATE OF SURVEY:	August 31, 2011		
PARCEL NO.:	E8-0697 (Rueter MT Lot)		
SITE ADDRESS:	33279 Highway 160, Kissee Mills (2¾ miles West of Rt 125)		

Sample ID	Color/Location of Material/Substrate	Metals (ppm)							
		As	Cr	Pb	Cd	Se	Ba	Hg	Ag
	Brine Tanks and Metal Supports								
	No samples taken. No painted surfaces located.								
	Concrete Jersey Trash Bins								
	No samples taken. No painted surfaces located.								
	Metal-Clad Flammable Shed								
	No samples taken. No painted surfaces located.								
	2-Car Metal Canopy								
	No samples taken. No painted surfaces located.								
	Metal Spreader Equipment Racks								
	No samples taken. No painted surfaces located.								
	Concrete Fuel Tank Basin								
	No samples taken. No painted surfaces located.								
	NOTE: Non-destructive means were used to survey and sample this property. Additional painted surfaces may be present hidden underneath vinyl/metal siding, metal roofing, interior walls and/or ceilings.								

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