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Suite 3000
Madison, WI 53717

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December 10, 2014

Ms. Amy Adrihan
Wisconsin Department of Transportation
1701 N 4th St
Superior, WI 54880

Subject: Asbestos-Containing Material (ACM) Inspection
462 and 466, USH 63, Shell Lake, WI
WisDOT ID #1560-31-21

Dear Ms. Adrihan:

The attached report documents the asbestos inspection of the structures at 462 and 466, USH 63 in Shell Lake, Wisconsin.

Approximately 1,100 square feet (sq ft) of Category I non-friable regulated ACM (RACM) is present in the tar paper on the roof of the north coal shed located at 466 USH 63. The asbestos must be properly removed and disposed of prior to the demolition of the buildings and site clearing of the properties.

Feel free to call me at (608) 826-3628 with any questions.

Sincerely,

TRC Environmental Corporation

Daniel Haak

Daniel Haak, P.E.
Project Manager

cc: Nicole Flamang – WisDOT (hard copy and pdf on CD)
Shar TeBeest – WisDOT (hard copy and pdf on CD)
Jim Morse – TRC

Asbestos-Containing Material (ACM) Inspection and Pre-Demolition Reconnaissance

462 and 466 USH 63
Shell Lake, Wisconsin

WisDOT Project ID #1560-31-21

December 2014

Asbestos-Containing Material (ACM) Inspection and Pre-Demolition Reconnaissance

462 and 466 USH 63
Shell Lake, Wisconsin

WisDOT Project ID #1560-31-21

December 2014

John Roelke
Technician
WDHFS Asbestos Inspector #AII-119523

Daniel Haak, P.E.
Project Manager

James E. Morse
Senior Client Service Manager

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Commonly Used Abbreviations and Acronyms

AST	aboveground storage tank
bgs	below ground surface
BRRTS	Bureau for Remediation and Redevelopment Tracking System
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CTH	County Trunk Highway
CY	cubic yards
DATCP	Department of Agriculture, Trade and Consumer Protection
DRO	diesel range organics
FDM	Facilities Development Manual
EMP	Excavation Management Plan
ERP	Environmental Repair Program
ES	Enforcement Standards
ESA	Environmental Site Assessment
FINDS	Facility Index System/Facility Identification Initiative Program Summary Report
GIS Registry	WDNR Geographic Information System (GIS) Registry of Closed Remediation Sites
GRO	gasoline range organics
HAZWOPER	Code of Federal Registry Chapter 29 (29 CFR) Part 1910.120 Hazardous Waste Operations and Emergency Response
HMA	Hazardous Materials Assessment
IH	Interstate Highway
LQG	large quantity generator
LUST	leaking underground storage tank
NPL	National Priorities List
NR ###	Wisconsin Administrative Code (WAC) Natural Resources (NR) Chapter ###
PAHs	polynuclear aromatic hydrocarbons
PAL	Preventive Action Limits
PCBs	polychlorinated biphenyls
PCE	perchloroethylene/tetrachloroethylene
PID	photoionization detector
PVOCs	petroleum volatile organic compounds
RCLs	Residual Contaminant Levels in NR 720
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
R/W or ROW	right-of-way
sf	square feet
STH	State Trunk Highway
TCE	trichloroethylene
TRIS	Toxic Chemical Release Inventory System
USGS	United States Geological Survey
USH	United States Highway
UST	underground storage tank
VOCs	volatile organic compounds
WDNR	Wisconsin Department of Natural Resources
WisDOT	Wisconsin Department of Transportation
WGNHS	Wisconsin Geological and Natural History Survey
WI ERP	Wisconsin Environmental Repair Program database

Executive Summary

The WisDOT has acquired two properties at 462 and 466 USH 63 in Shell Lake, Wisconsin. The properties contain former coal sheds that are currently vacant. The structures are planned to be demolished with highway reconstruction of USH 63.

TRC has been contracted by the WisDOT to perform an asbestos-containing materials (ACM) delineation inspection of the properties, in order to identify asbestos that must be removed prior to demolition of the buildings.

Approximately 1,100 square feet (sq ft) of Category I non-friable regulated ACM (RACM) is present in the tar paper on the roof of the north coal shed located at 466 USH 63. The asbestos must be properly removed and disposed of prior to the demolition of the buildings and site clearing of the properties.

The characterization as friable or non-friable is based on the condition of the material as observed during the ACM inspection. Some of the ACM characterized as non-friable will likely become friable during demolition, and would therefore be classified as regulated ACM. Both state and federal regulations require that all regulated ACM, including friable ACM and non-friable ACM that may become friable during demolition, be removed prior to demolition. Non-friable ACM can remain in buildings during demolition, provided the commingled demolition debris and ACM are managed and disposed as ACM.

TRC's pre-demolition reconnaissance of the buildings identified the following items as building contents within the north coal storage shed located at 466 USH 63:

- First floor: 54 1'x8" cinder blocks
- Second floor: 4 white painted doors with window panes, 3 window panes with glazing, 4 benches, and gray carpeting

As the contents of a building are not structurally part of the building, the contents are not included in the sampling for asbestos. However, TRC recommends proper disposal of these items be completed concurrent with the demolition of the buildings.

No items were observed in the south coal storage shed located at 462 USH 63.

Section 1
Background

1.1 Introduction

The WisDOT has acquired two properties at 462 and 466 USH 63 in Shell Lake, WI (see Figure 1). The properties contain former coal sheds that are currently vacant. The structures are planned to be demolished with highway reconstruction of USH 63.

TRC has been contracted by the WisDOT to perform an ACM delineation inspection of the properties, in order to identify asbestos that must be removed prior to demolition of the buildings.

1.2 ACM Investigation

On November 20, 2014, TRC conducted an asbestos inspection of the properties in order to determine the extent of ACM in the buildings, and to identify any ACM that would require removal prior to demolition. This was accomplished by identifying, sampling, characterizing, quantifying, and laboratory-analyzing potential ACM.

Section 2
ACM Delineation

2.1 ACM Sampling

TRC conducted an ACM survey of the properties on November 20, 2014. Samples of suspect ACM were collected for laboratory analysis in accordance with the United States Environmental Protection Agency's (USEPA's) Asbestos Hazardous Emergency Response Act (AHERA) 40 CFR Part 763, Subpart E, as indicated in WDNR and Occupational Safety and Health Administration (OSHA) regulations. A minimum of three randomly distributed samples of each type of material identified as homogeneous (same type, color, and age of application) were collected by John Roelke, WDHFS Asbestos Inspector #AII-119523. If there was any reason to suspect that the materials might be different, those materials were sampled separately. Samples were collected by hand using hammers, chisels, and utility knives. Sufficient water was applied before and during sample collection to prevent the generation of airborne particulate as a result of sampling activities.

A total of 24 samples were collected during the November sampling event and analyzed for the presence of ACM. Materials sampled included shingles with tar, tar paper, and paint. See Appendix A for photographs.

Samples collected were analyzed by TRC Solutions, Inc. (TRC) in Windsor, Connecticut. Samples were analyzed on a 3-day turnaround basis using polarized light microscopy (PLM) with dispersion staining techniques. Once one sample of a homogeneous material tested positive for asbestos, the remaining samples of that material were not analyzed. If an initial result of any sample was above detection, but below 1%, the sample was point counted to determine if the material is regulated asbestos.

2.2 ACM Sampling Results

The locations and types of the material sampled, the collection date, the sample number, and the condition of the material are presented in Table 1 (Asbestos Survey Log and Bulk Asbestos Analytical Results). Photographs showing representative sampled materials can be found in Appendix A. TRC's laboratory analysis reports are included in Appendix B.

Approximately 1,100 sq ft of Category I non-friable RACM is present in the tar paper on the roof of the north coal shed located at 466 USH 63. No ACM was identified on the south coal storage shed located at 462 USH 63.

2.3 Pre-Demolition Reconnaissance

TRC conducted a pre-demolition reconnaissance of the properties on November 20, 2014. During the reconnaissance, TRC inspected the property and building interiors to identify potential issues present. The following items were identified as contents within the north coal storage shed located at 466 USH 63:

- First floor: 54 1'x8" cinder blocks
- Second floor: 4 white painted doors with window panes, 3 window panes with glazing, 4 benches, and gray carpeting

No items were observed in the south coal storage shed located at 462 USH 63.

Section 3
ACM Abatement

3.1 Summary of ACM

Approximately 1,100 sq ft of Category I non-friable RACM is present in the tar paper on the roof of the north coal shed located at 466 USH 63.

3.2 Regulatory Discussion

Friable ACM is any material containing more than 1 percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM is any material containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. The EPA also defines two categories of non-friable ACM, Category I and Category II non-friable ACM as follows:

- Category I non-friable ACM is any asbestos-containing packing, gasket, resilient floor covering, mastic, or asphalt roofing product that contains more than 1 percent asbestos.
- Category II non-friable ACM is any material, excluding Category I non-friable ACM, containing more than 1 percent asbestos that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

RACM is (a) friable asbestos material; (b) Category I non-friable ACM that has become friable; (c) Category I non-friable ACM that will be, or has been, subjected to sanding, grinding, cutting or abrading; or (d) Category II non-friable ACM that has a high probability of becoming, or has become, crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition operations.

Both the USEPA's and the WDNR's regulations mandate the removal of regulated ACM prior to demolition. ACM need not be removed before demolition if it is a Category I non-friable ACM that is not friable or a Category II non-friable ACM and the probability is low that the material will become crumbled, pulverized, or reduced to powder during demolition. Additionally, all asbestos-containing debris must be handled, transported, and disposed in accordance with the ACM regulations. If ACM is commingled with the demolition debris, the entire pile must be considered to be asbestos-containing material and managed accordingly. This requires disposal in a landfill licensed to accept ACM waste.

Both OSHA and the USEPA regulate the potential health hazards associated with ACM abatement. The USEPA regulates ACM from a general health perspective. USEPA regulations

contain language related to many aspects of ACM management, including visible emissions, licensing of workers, disposal, testing, inspections, and site management. OSHA regulations deal with worker exposure on the job and with the methodology to safely handle ACM. The State of Wisconsin regulations incorporate both OSHA and USEPA regulations, and mirror the federal regulations almost exactly. In a few cases, the practice of compliance with Wisconsin regulations is more restrictive than the federal interpretation.

3.3 ACM Removal Plans

All regulated ACM is required to be removed prior to demolition. It will be up to the demolition contractor and their asbestos abatement contractor to determine if the method of demolition will cause any non-friable ACM to become friable. If so, that material would be considered RACM and will be required to be removed prior to demolition. All demolition waste that is commingled with the non-friable asbestos-containing material will be required to be managed as asbestos-containing waste and disposed of at a solid waste landfill permitted to accept such waste.

Section 4
Conclusions and Recommendations

4.1 Conclusions

Category I non-friable asbestos is present in the tar paper located on the roof of the north coal storage shed located at 466 USH 63 in Shell Lake, Wisconsin. No ACM was identified on the south coal storage building located at 462 USH 63.

4.2 Recommendations

The ACM must be removed prior to demolition of the buildings. The cinder blocks, painted doors, window panes, benches, and carpeting located in the north coal storage shed at 466 USH 63 should be properly disposed of concurrent with the demolition of the buildings.

Table 1
Asbestos Survey Log and Bulk Asbestos Analytical Results

Client: WisDOT
Name: 466 and 462 USH 63
Location: Shell Lake
Project ID: 1560-31-21

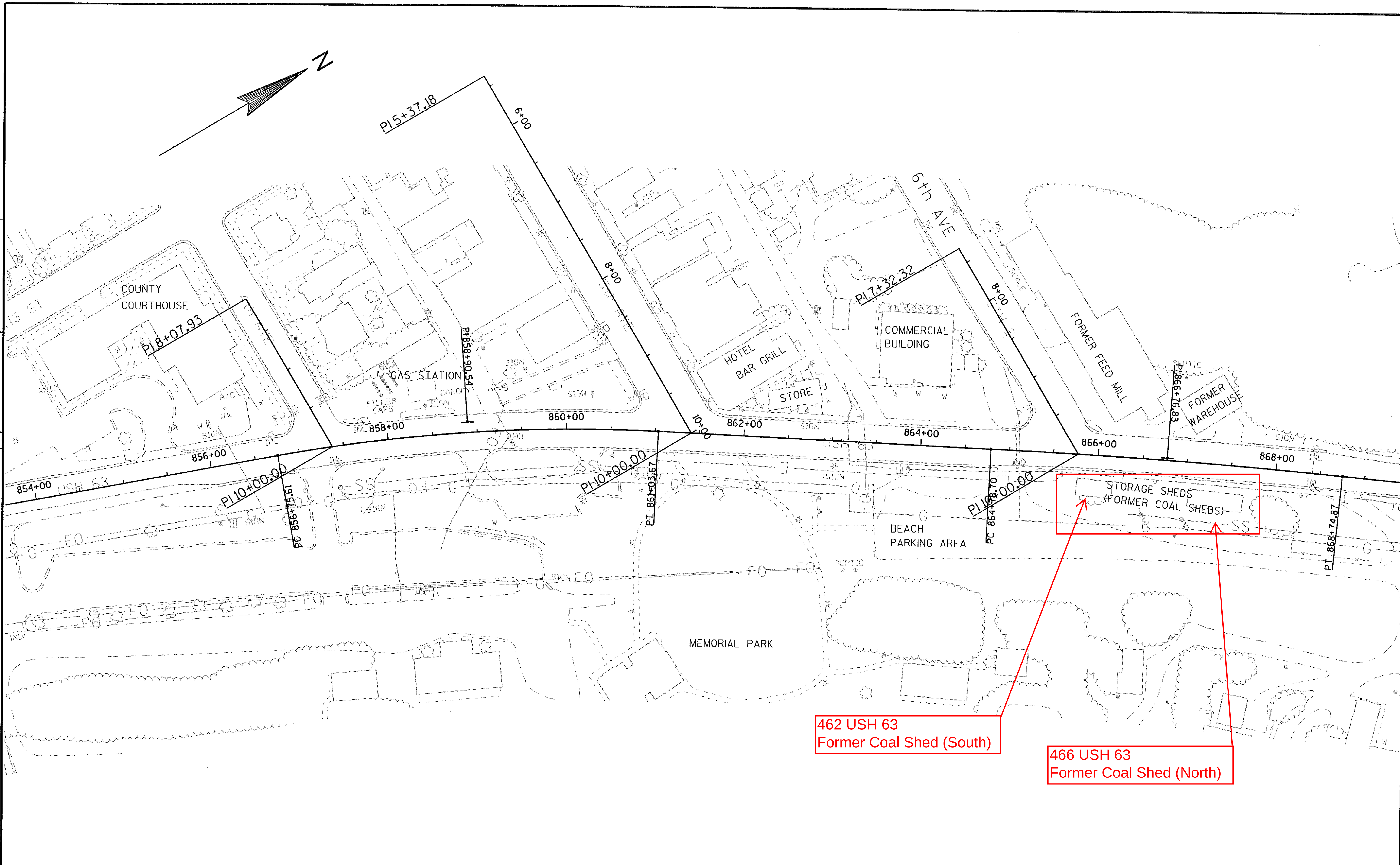
Project Number: 227329.0000.0000
Sample Collection Date: November 20, 2014
Samples Collected By: John Roelke
Asbestos Inspector Number: AII-119523

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE DESCRIPTION	COLOR	CONDITION	ANALYTICAL METHOD AND RESULTS	FRIABLE/ NON-FRIABLE	QUANTITY
North Coal Storage Building, 466 USH 63							
North 1	Roof	Shingle & tar, 1st layer	Tan/green/brown/black	Good	PLM, non-detect	No ACM	
North 2	Roof	Shingle & tar, 1st layer	Tan/green/brown/black	Good	PLM, non-detect	No ACM	--
North 3	Roof	Shingle & tar, 1st layer	Tan/green/brown/black	Good	PLM, non-detect	No ACM	
North 4	Roof	Shingle & tar, 2nd layer	Gray/tan/black	Good	PLM, non-detect	No ACM	
North 5	Roof	Shingle & tar, 2nd layer	Gray/tan/black	Good	PLM, non-detect	No ACM	--
North 6	Roof	Shingle & tar, 2nd layer	Gray/tan/black	Good	PLM, non-detect	No ACM	
North 7	Roof	Tar paper	Black	Good	PLM, 3%	Cat. I non-friable	50'x22' = 1,100 sq ft
North 8	Roof	Tar paper	Black	Good	NA/PS	--	
North 9	Roof	Tar paper	Black	Good	NA/PS	--	
North 10	Sliding door rails	Paint	Black	Damaged	PLM, non-detect	No ACM	
North 11	Sliding door rails	Paint	Black	Damaged	PLM, non-detect	No ACM	--
North 12	Sliding door rails	Paint	Black	Damaged	PLM, non-detect	No ACM	
South Coal Storage Building, 462 USH 63							
South 1	Roof	Shingle & tar, 1st layer	Gray/black	Good	PLM, non-detect	No ACM	
South 2	Roof	Shingle & tar, 1st layer	Gray/black	Good	PLM, non-detect	No ACM	--
South 3	Roof	Shingle & tar, 1st layer	Gray/black	Good	PLM, non-detect	No ACM	
South 4	Roof	Shingle & tar, 2nd layer	Brown/white/green/black	Good	PLM, non-detect	No ACM	
South 5	Roof	Shingle & tar, 2nd layer	Brown/white/green/black	Good	PLM, non-detect	No ACM	--
South 6	Roof	Shingle & tar, 2nd layer	Brown/white/green/black	Good	PLM, non-detect	No ACM	
South 7	Roof	Shingle & tar, 3rd layer	Green/black	Good	PLM, non-detect	No ACM	
South 8	Roof	Shingle & tar, 3rd layer	Green/black	Good	PLM, non-detect	No ACM	--
South 9	Roof	Shingle & tar, 3rd layer	Green/black	Good	PLM, non-detect	No ACM	
South 10	Exterior, N&S sides	Paint	Yellow	Damaged	PLM, non-detect	No ACM	
South 11	Exterior, N&S sides	Paint	Yellow	Damaged	PLM, non-detect	No ACM	--
South 12	Exterior, N&S sides	Paint	Yellow	Damaged	PLM, non-detect	No ACM	

Notes:
PLM = Polarized Light Microscopy
NA/PS = Not analyzed, positive stop

Created By: A. Voit 12/7/14
Checked By: D. Haak 12/8/14

Condition Descriptions:
Good: The material shows no visible damage or deterioration, or shows only limited damage or deterioration.
Damaged: The material is friable that has deteriorated or sustained physical damage.



PROJECT NO: 1560-31-00	HWY: USH 63	COUNTY: WASHBURN	WOODYARD ROAD - CTH B (EAST)

FILE NAME : N:\PDS\Design\Projects\15603100_Woodyard_CTHB\DGNs\Plan View Exhibits\Exhibit 18.DGN

PLOT DATE : 06-OCT-2010 15:02 PLOT BY : dotgbp PLOT NAME : PLOT SCALE : 100:1

FIGURE 1

Appendix A
Photographs

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
1	11/20/14

Description
466 USH 63 – North coal storage building.

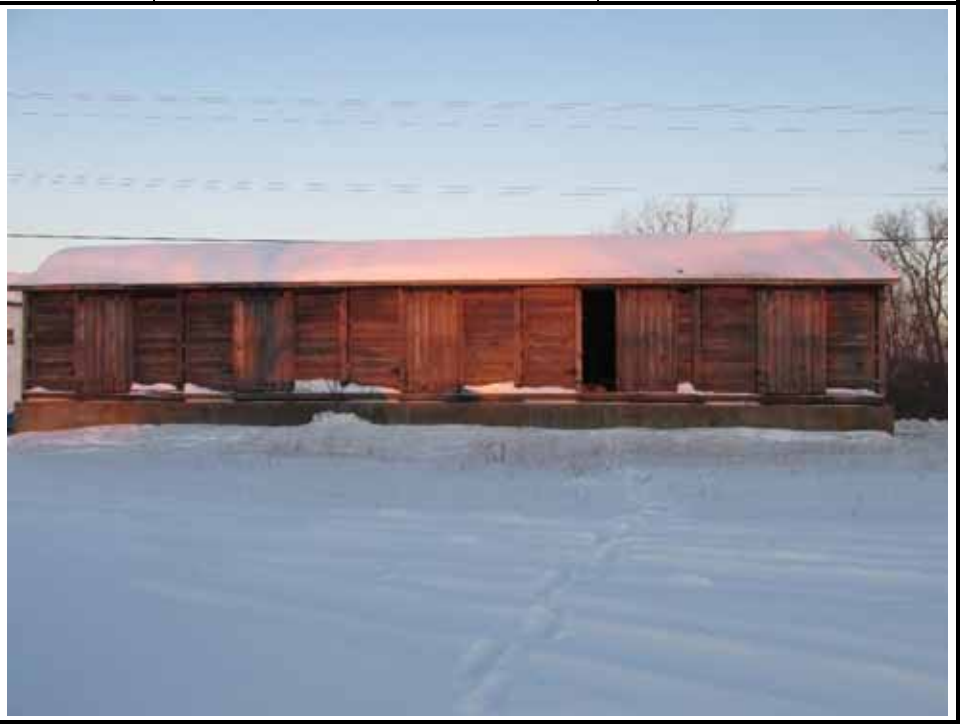


Photo No.	Date
2	11/20/14

Description
466 USH 63 – North coal storage building.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
3	11/20/14

Description
466 USH 63 – North coal storage building.

Photo No.	Date
4	11/20/14

Description
466 USH 63 – Interior of building.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
5	11/20/14

Description
466 USH 63 – Interior of building.

Photo No.	Date
6	11/20/14

Description
466 USH 63 – Ceiling of building.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
7	11/20/14

Description
466 USH 63 – Interior of storage bin.

Photo No.	Date
8	11/20/14

Description
466 USH 63 – Sliding door.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
9	11/20/14

Description
466 USH 63 – Paint on sliding door rail. Non-detect for ACM.

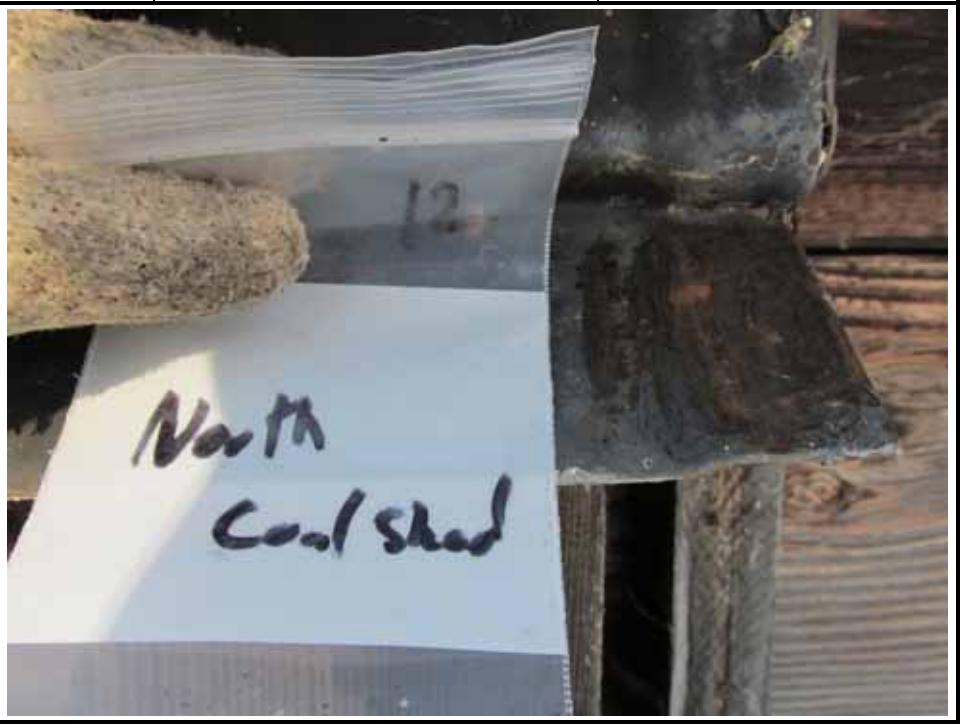


Photo No.	Date
10	11/20/14

Description
466 USH 63 – 1st layer of shingles and tar. Non-detect for ACM.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
11	11/20/14

Description
466 USH 63 – 2nd layer of shingles and tar. Non-detect for ACM.

Photo No.	Date
12	11/20/14

Description
466 USH 63 – Tar paper on roof. Contains 3% Cat. I non-friable ACM.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
13	11/20/14

Description
466 USH 63 – Doors and windows left in building. Glazing around glass in doors and windows was not sampled.

Photo No.	Date
14	11/20/14

Description
466 USH 63 – Cinder blocks left in building.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
15	11/20/14

Description
462 USH 63 – South coal storage building.

Photo No.	Date
16	11/20/14

Description
462 USH 63 – South coat storage building.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
17	11/20/14

Description
462 USH 63 – South coal storage building.

Photo No.	Date
18	11/20/14

Description
462 USH 63 – Paint on exterior of building. Non-detect for ACM.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
19	11/20/14

Description
462 USH 63 – Interior of building.

Photo No.	Date
20	11/20/14

Description
462 USH 63 – Interior of building.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
21	11/20/14

Description
462 USH 63 – Interior of building.

Photo No.	Date
22	11/20/14

Description
462 USH 63 – Roof.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
23	11/20/14

Description
462 USH 63 – 1st layer of shingles with tar. Non-detect for ACM.

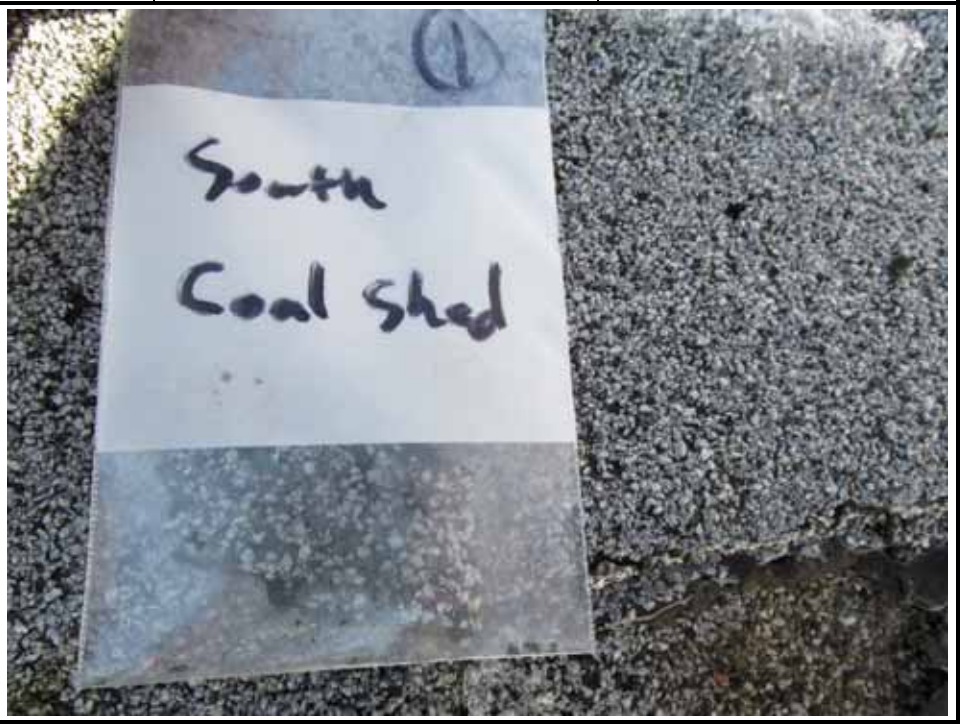


Photo No.	Date
24	11/20/14

Description
462 USH 63 – 2nd layer of shingles with tar. Non-detect for ACM.

Photographic Log

Client Name:	Site Location:	Project No.:
Wisconsin Department of Transportation (WisDOT)	462 and 466 USH 63 Shell Lake, WI	TRC: 227329.0000.0000 WisDOT: 1560-31-21

Photo No.	Date
25	11/20/14

Description
462 USH 63 – 3rd layer of shingles with tar. Non-detect for ACM.

Appendix B
Laboratory Analytical Results

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Wisconsin Department of Transportation

Lab Log #: 0044968
Project #: 227329.0000.0000
Date Received: 11/24/2014
Date Analyzed: 11/25/2014

Site: DOT Bridge Inspection, North Coal Shed

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
North Coal Shed (1)	Black/Tan/Green/Brown	Yes	No	- -	30%	cellulose	ND	None
North Coal Shed (2)	Black/Tan/Green/Brown	Yes	No	- -	30%	cellulose	ND	None
North Coal Shed (3)	Black/Tan/Green/Brown	Yes	No	- -	30%	cellulose	ND	None
North Coal Shed (4)	Black/Grey/Tan	Yes	No	- -	30%	cellulose	ND	None
North Coal Shed (5)	Black/Grey/Tan	Yes	No	- -	30%	cellulose	ND	None
North Coal Shed (6)	Black/Grey/Tan	Yes	No	- -	30%	cellulose	ND	None
North Coal Shed (7)	Black	Yes	No	- -	30%	cellulose	3%	Chrysotile
North Coal Shed (8)	- -	- -	- -	- -		- -	NA/PS	- -
North Coal Shed (9)	- -	- -	- -	- -		- -	NA/PS	- -
North Coal Shed (10)	Black	Yes	No	- -		- - -	ND	None
North Coal Shed (11)	Black	Yes	No	- -		- - -	ND	None
North Coal Shed (12)	Black	Yes	No	- -		- - -	ND	None

Industrial Hygiene Laboratory
21 Griffin Road North
Windsor, CT 06095
(860) 298-6308

TRC
Results you can rely on

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, negative results must be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2015. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2014. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

Date Issued
12/01/2014

TRC

Edition: Octo[illegible]2009
Supersede Previous Edition

21 GRIFFIN ROAD NORTH
WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6380

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 44968

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
227329	DOT Bridge Inspection		PLM: 8hr 24hr 48hr X 3day TEM: 24hr 48hr 3day 5day
SIGNATURE	INSPECTOR		

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
North Coal Shed (1)	11/20/14	9[illegible]		X	North Coal Shed	X					Tan, Green & Brown, Shingles/mastic
(2)											
(3)											
(4)											Gray & Tan, Shingles/mastic
(5)											
(6)											
(7)											Black, Tar paper
(8)											
(9)											
(10)											Black, Paint
(11)											
(12)											

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	11/21/14	11/24/14			
(Printed)	Time:	(Printed)	(Printed)	Time:	(Printed)
John Rolke	1900	Williamson 1000			

Remarks:

Condition of Samples:
Acceptable: Yes ✓ No
Comments:

Industrial Hygiene Laboratory
21 Griffin Road North
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TRC
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BULK ASBESTOS ANALYSIS REPORT

CLIENT: Wisconsin Department of Transportation

Lab Log #: 0044967
Project #: 227329.0000.0000
Date Received: 11/24/2014
Date Analyzed: 11/25/2014

Site: DOT Bridge Inspection, Coal Storage Building South

POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials		Asbestos %	Asbestos Type
Coal Storage Building (South) (1)	Black/Grey	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (2)	Black/Grey	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (3)	Black/Grey	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (4)	Black/Brown/White/Green	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (5)	Black/Brown/White/Green	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (6)	Black/Brown/White/Green	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (7)	Black/Green	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (8)	Black/Green	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (9)	Black/Green	Yes	No	- -	30%	cellulose	ND	None
Coal Storage Building (South) (10)	Yellow	Yes	No	- -		- - -	ND	None
Coal Storage Building (South) (11)	Yellow	Yes	No	- -		- - -	ND	None
Coal Storage Building (South) (12)	Yellow	Yes	No	- -		- - -	ND	None

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POLARIZED LIGHT MICROSCOPY by EPA 600/R-93/116

Sample No.	Color	Homogenous	Multi-Layered	Layer No.	Other Matrix Materials	Asbestos %	Asbestos Type

Reporting limit- asbestos present at 1%
ND - asbestos was not detected
Trace - asbestos was observed at level of less than 1%
NA/PS - Not Analyzed / Positive Stop

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, negative results must be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2015. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through October 1, 2014. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

Analyzed by: K. Williamson — Kathleen Williamson, Laboratory Manager

Reviewed by: Amanda Parkins — Amanda Parkins, Approved Signatory

Date Issued
12/01/2014

TRC

Edition: Oct[illegible] 2009
Supersede Previous Edition

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ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 44967

PROJECT NUMBER	PROJECT NAME	PARAMETERS	TURNAROUND TIME
227329	DOT Bridge Inspection		PLM: 8hr 24hr 48hr X 3day TEM: 24hr 48hr 3day 5day
SIGNATURE	INSPECTOR		
	John Rock		

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM EPA 600/R93/116 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
Coal Storage (1) building (South)	11/20/14	10[illegible]		X	Coal Storage building South	X					Gray & Black, Shingles - Roofing
(2)											
(3)											
(4)											Brown White Green Shingles - Roofing
(5)											
(6)											
(7)											Green Shingles - Roofing
(8)											
(9)											
(10)											Yellow Paint
(11)											
12											

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
	11/21/14	11/24/14			
(Printed) John Rock	Time: 1900	(Printed) 1000 Williamson	(Printed)	Time:	(Printed)

Remarks:

Condition of Samples:
Acceptable: Yes ✓ No
Comments: