December 15, 2020

Gene. O. Brown, P.E.
Principal, Director of Federal Programs
Frankfurt-Short-Bruza Associates, P.C. (FSB)
Oklahoma City, OK 73118

Re: Asbestos, Lead-bearing Paint, and Hazardous Materials Assessment
XGFG182006 – Parking Shelters
W50S9F20F0002
Truax Field
Madison, WI 53704

Mr. Brown:

On behalf of Frankfurt-Short-Bruza Associates (FSB), Ayres Associates (Ayres) assessed the three existing Alert Parking Shelters at Truax Field for the presence of asbestos-containing materials (ACM), lead-bearing paint (LBP), and hazardous materials. The three shelters include one interlocking metal panel structure and two fabric shelters. The shelters were erected on pavement and are used to keep the elements off vehicles and equipment stored in them. It is our understanding that these shelters may be demolished and replaced with adequately sized facilities. The goal of this assessment was to identify ACM, LBP, or other hazardous materials before demolition of the shelters for estimating costs. Figure 1 shows the location of the site and the three shelters (see Attachment A).

Asbestos Assessment

The Wisconsin Department of Natural Resources (WDNR) requires building owners or operators to inspect for the presence of ACM before renovation or demolition. ACM refers to any building material containing greater than 1% asbestos. In all cases, materials may be assumed to contain asbestos but can never be assumed not to contain asbestos. If a material is assumed to contain asbestos, then it must be appropriately managed as ACM. Any suspect ACM that is not listed in this report should be sampled or assumed to contain asbestos.

Asbestos-containing materials, as designated by the WDNR, are defined as:

Category I non-friable ACM means asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products that contain more than 1% asbestos. When dry, category I non-friable ACM does not crumble, pulverize, or reduce to powder under hand pressure. These materials can remain in place during demolition if they are not in poor condition and are not rendered friable by handling, transporting, or disposal. Construction and demolition (C&D) material containing non-friable category I ACM may be disposed of at an approved C&D landfill, including a WDNR-approved one-time disposal landfill, or at any other landfill with a plan of operation approved under chapter 289, Stats. Contact the landfill for assistance. However, non-friable ACM that is sanded, ground, cut, or abraded during the demolition should be treated as friable ACM and disposed of accordingly.

Category II non-friable ACM means any non-friable material, excluding category I non-friable ACM, containing more than 1% asbestos. When dry, category II non-friable ACM does not crumble, pulverize, or reduce to powder under hand pressure. An asbestos inspector classifies materials as category II non-friable ACM on a case-by-case basis. The WDNR requires the removal of category II non-friable ACM that is likely to become friable during demolition. Cement board and transite are examples of category II non-friable ACM that often become friable and should be removed before demolition or renovation.

Regulated ACM (RACM) means friable ACM and category I non-friable ACM that has become friable or that is subjected to sanding, grinding, cutting, or abrading. RACM also includes category II non-friable ACM that is likely to become friable during demolition. Materials such as pipe insulation, duct paper wrap, sprayed on, or tiled sound insulation materials are usually considered RACM. Friable ACM has little structural strength and readily releases asbestos fibers upon breaking. The WDNR requires the removal of RACM before demolition or renovation.

Methodology

On October 13, 2020, William Honea (ALL-226200, exp.12/16/2020) Thomas Gaieck (AII-256096, exp. 11/16/2021) of Ayres, Wisconsin-certified asbestos inspectors, sampled building materials for laboratory analysis. The methods used to identify suspect materials, collect samples, analyze materials generally follow EPA, 40 CFR 763, and other applicable federal and state regulations and guidelines. At the time of this assessment, the property was occupied and in use. Ayres used limited destructive sampling methods to prevent exposing workers to fiber releases and avoid damage to operational equipment and critical building components. Copies of their current inspector card are in Attachment B.

This assessment's scope included estimating the quantities of reasonably and safely accessible ACM, sampling suspect materials, and summarizing their physical condition. The condition of ACM is essential for determining if it must be removed before renovation or demolition or if it can remain in place and be removed as asbestos-containing debris.

Samples of suspect materials were submitted to EMSL Analytical in Minneapolis, Minnesota, for analysis by polarized light microscopy (PLM) using EPA method 600/R-93/116. National Emission Standards for Hazardous Air Pollutants (NESHAP) requires the verification of PLM results of less than 10% by point-counting, or those materials must be assumed and treated as ACM. In this assessment, all samples with PLM results greater than 1% were considered ACM, and no samples required verification by point-counting. The appropriate chain-of-custody forms accompanied the samples submitted for laboratory analysis.

This report is only intended to identify the location, condition, and estimated quantity of ACM, not to require specific response actions by the contractor. A certified asbestos inspector should test suspect ACM found during demolition that is not described in this report.

Asbestos Results

Asbestos-containing materials, ACM and RACM, were not confirmed through testing. Attachment C contains a laboratory report and chain-of-custody. Attachment D contains an asbestos sample summary table, which documents the materials sampled the locations where samples were collected.

Limitations

The quantities of ACM listed in this report are visual estimates, not exact measurements. Additionally, ACM classifications are based on condition and may change as the condition of building materials change.

Ayres does not sample active mechanical or electrical systems unless they are de-energized by certified personnel following lockout/tag-out procedures. To maintain safe working conditions and the integrity of these building systems, their components were not sampled and were assumed to contain asbestos. Likewise, destructive testing was limited in some areas to maintain the integrity of critical structural components, such as the roof system and walls. Additional destructive sampling and wall cavity investigation may be necessary if these areas will be disturbed during demolition or renovation. Similarly, because this was an active facility, Ayres did not assess the presence of ACM in operational equipment.

Asbestos Recommendations

A certified asbestos company should abate RACM and non-friable ACM that is likely to become friable before starting demolition or renovation activities that are likely to disturb them. Similarly, ACM should be abated before recycling any attached substrates, such as wood, metal, glass, concrete, or other masonry materials. The selected asbestos company should be licensed to perform abatement work in the state of Wisconsin by the Wisconsin Department of Health Services (DHS). Before beginning any demolition or activities involving the disturbance of ACM, submit a "Notification of Demolition and Renovation and Application for Permit Exemption" form and applicable fees to the WDNR (Attachment E).

Any suspect ACM found during demolition that is not described in this report should either be sampled by a certified asbestos inspector and analyzed; or assumed to contain asbestos. Manage confirmed and assumed ACM following all applicable federal, state, and local regulatory requirements. Several WDNR publications are available to guide building owners and operators through the proper handling and disposal procedures for ACM (Attachment E).

Lead-bearing Paint Assessment

Ayres assessed the presence of lead-bearing paint on masonry surfaces. None of the three shelters contained masonry surfaces. The shelters were constructed of unpainted metal or fabric. Therefore, no samples were submitted for lead analysis.

Hazardous Materials Survey

During the assessment, Ayres noted other hazardous or environmentally harmful materials that may require specialized disposal. Hazardous materials such as lead, mercury, chlorofluorocarbons (CFCs), hydrofluorocarbons (HCFCs), and polychlorinated biphenyls (PCBs) are often found in materials used in buildings such as air conditioners, lightbulbs, light ballasts, electrical panels, and thermostats found in buildings. Items containing hazardous materials should be removed before demolition and disposed of following applicable state and federal regulations. Items observed in the shelters that potentially contain hazardous materials include a fire extinguisher, four propane cylinders, and one flammable materials cabinet. See WDNR publication in Attachment E for information regarding the management of these materials.

This report is intended for the sole use of the FSB. Ayres does not assume liability for the use of this report by unauthorized parties, nor does Ayres assume responsibility or liability for the discovery or elimination of adverse environmental conditions that could cause accidents, injury, damage, or otherwise create a hazardous environment.

Please do not hesitate to contact me with questions or concerns at 608-443-1292 or Jeff Steiner at 608.443.1259.

Sincerely,

Ayres Associates, Inc

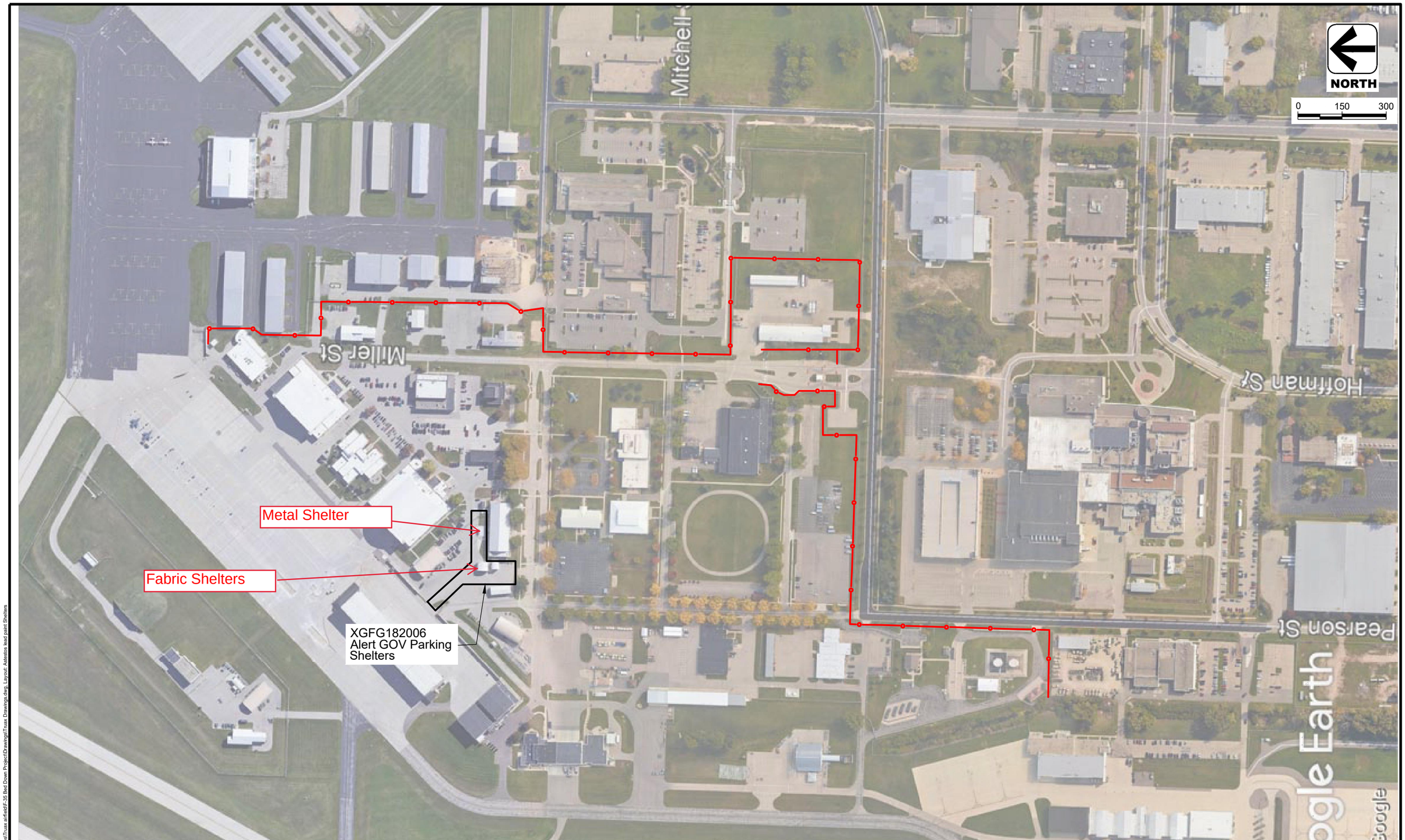
Thomas P. Gaieck
Certified Asbestos Inspector AII-256096
Direct: 608.443.1292
GaieckT@AyresAssociates.com

Jeffrey C. Steiner, PG, PH, CPG
Senior Hydrogeologist/Project Manager
Direct: 608.443.1259
SteinerJ@AyresAssociates.com

TPG:ac

Enclosure:
Attachment A – Figures
Attachment B – Asbestos Inspector Credentials
Attachment C – Asbestos Laboratory Reports and Chain-of-Custody
Attachment D – Asbestos Sample Summary Table
Attachment E – WDNR Form 4500-113, WDNR Asbestos Publications, and Information on Identifying, Handling, and Properly Disposing of Hazardous Materials (WDNR Guidance WA-651)

Attachment A
Figures



AA-Standard.stb
11/24/2020
V:\ENVCAD\Env_sites\Truax airfield\F-35 Bed Down Project\Drawings\Truax Drawings.dwg, Layout: Asbestos lead paint Shelters

DES BY J. STEINER								Asbestos, Lead Paint and Hazardous Material Assessment XGF182006 F-35 Bed Down Parking Shelters	AYRES Eau Claire, WI 54701 715.834.3161	SHEET NO. FIGURE 1
DR BY T. SHUPERT	PROJ NO									
CHK BY J. STEINER	DATE AUGUST 2020	NO	DATE	REVISION	NO	DATE	REVISION		Location Map	

Attachment B
Asbestos Inspector Credentials

ASBESTOS INSPECTOR

Issued By

STATE OF WISCONSIN

Dept. of Health Services

Thomas P Gaieck

109 Weald Bridge Road

Cottage Grove WI 53527-9364

		180 lbs	6' 00"
AII-256096	Exp: 11/16/2021	11/08/1963	

Training due by: 11/16/2021

ASBESTOS INSPECTOR

Issued By

STATE OF WISCONSIN

Dept. of Health Services

William Lee Honea

141 Walton Ave

Waukesha WI 53186-5903

		160 lbs	5' 08"
AII-226200	Exp: 12/16/2020	08/04/1987	

Training due by: 12/16/2020

Attachment C

Asbestos Laboratory Reports and Chain-of-Custody

EMSL Analytical, Inc.

3410 Winnetka Avenue North New Hope, MN 55427

Tel/Fax: (763) 449-4922 / (763) 449-4924

http://www.EMSL.com / minneapolislab@emsl.com

EMSL Order:	352010357
Customer ID:	AYER77
Customer PO:	
Project ID:	

Attention:	William Honea	**Phone:**	(262) 523-4488
	Ayres Associates	**Fax:**	(262) 523-4477
	N17W24222 Riverwood Drive	**Received Date:**	11/11/2020 9:50 AM
	Suite 310	**Analysis Date:**	11/17/2020
	Waukesha, WI 53188	**Collected Date:**	10/13/2020
Project:	Truax Shelter and Tent		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1 AS *352010357-0001*	Alert Shelter - gray caulk around seams	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
			HA: 1 AS		
2 AS *352010357-0002*	Alert Shelter - foam seal	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 2 AS		
1 AT *352010357-0003*	Tent - ext fabric, white	White Non-Fibrous Homogeneous	15% Synthetic	5% Ca Carbonate 80% Non-fibrous (Other)	None Detected
			HA: 1 AT		
2 AT *352010357-0004*	Tent - black weather strip - door	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 2 AT		
3 AT *352010357-0005*	Tent - foam seal - door	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 3 AT		
4 AT *352010357-0006*	Tent - gray caulk and door wind.	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
			HA: 4 AT		
5 AT *352010357-0007*	Tent - door window caulk	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
			HA: 5 AT		
6 AT *352010357-0008*	Tent - door foam core	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
			HA: 6 AT		

Analyst(s)

Kristie Elliott (4)

Sarah Breneman (4)

Rachel Travis, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method") but augmented with procedures outlined in the 1993 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 11/17/2020 16:24:01

OrderID: 352010357

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number *(lab use only)*: 35201035 7

EMSL Analytical, Inc.
3410 Winnetka Avenue North
New Hope, MN 55427
Phone (763) 449-4922
Fax (763) 449-4924

Company Name : Ayres Associates		**EMSL Customer ID:**	
Street: N17 W24222 Riverwood Drive Suite 310		**City:** Waukesha	**State or Province:** WI
Zip/Postal Code: 53188	**Country:** US	**Telephone #:** (262) 522-4924	**Fax #:**
Report To (Name): William Honea		**Please Provide Results via:** ☐ Fax ☒ Email	
email Address: honeaw@ayresassociates.com		**Purchase Order Number:**	
Client Project ID: Truax Shelter and Tent		**EMSL Project ID** *(internal use only)*:	
State or Province Collected: WI		**CT only** ☐ **Commercial/Taxable** ☐ **Residential/Tax Exempt**	

EMSL-Bill to: ☑ Same ☐ Different - *If bill to is different note instructions in comment. Third party billing requires written authorization from third party*

Turnaround Time (TAT) Options Please Check

☐ 3 Hour	☐ 6 Hour	☐ 24 Hour	☐ 32 Hour*	☐ 48 Hour	☐ 72 Hour	☐ 96 Hour	☒ 1 Week	☐ 2 Week

**32 Hour TAT available for select tests only; samples must be submitted by 11:30am. Please call ahead for large projects and/or turnaround times 6 hours or less.*

PLM - Bulk (reporting limit)	TEM – Bulk
☒ PLM EPA 600/R-93/116 (<1%)	☐ TEM EPA NOB – EPA 600/R-93/116 Section 2.5.5.1
☐ PLM EPA NOB (<1%)	☐ NY ELAP Method 198.4 non-friable - NY
Point Count ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ Chatfield Protocol (semi-quantitative)
Point Count w/Gravimetric ☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM % by Mass – EPA 600/R-93/116 Section 2.5.5.2
☐ NIOSH 9002 (<1%)	☐ TEM Qualitative via Filtration Prep Technique
☐ NY ELAP Method 198.1- friable - NY	☐ TEM Qualitative via Drop Mount Prep Technique
☐ NY ELAP Method 198.6 NOB- non-friable - NY	**Other tests (please specify)**
☐ NY ELAP Method 198.8- Vermiculite Surfacing Material	
☐ OSHA ID-191 Modified	☐
☐ EMSL Standard Addition Method	

☐ **Positive Stop – Clearly Identify Homogenous Areas (HA)** **Date Sampled:** 10-13-20

Sampler's Name: William Honea **Sampler's Signature:** William Honea

Sample #	HA #	Sample Location	Material Description
1AS	1AS	Alert Shelter	gray caulk around seams
~~2AS~~ 2AS	2AS	Alert Shelter	foam seal
1AT	1AT	Tent	ext fabric, white
2AT	2AT	↓	black weather strip - door
3AT	3AT	↓	foam seal - door
4AT	4AT	↓	gray caulk arnd door wind.

Client Sample # (s): 1AS - 6AT **Total # of Samples:**

Relinquished by (Client): William Honea **Date:** 11-6-20 **Time:** 1512O

Received by (Lab): [signature] **Date:** 11/11/20 **Time:** 9:50 am

Comments/Special Instructions: UPS 1Z577100397973353

Acct ID AYRE50

Page 1 of 2

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

OrderID: 352010357

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (*lab use only*):

352010357

EMSL Analytical, Inc.
3410 Winnetka Avenue North

New Hope, MN 55427
Phone (763) 449-4922
Fax (763) 449-4924

Additional pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	HA #	Sample Location	Material Description
5AT	5 AT	Tent	door window caulk
6 AT	6 AT	Tent	door foam core

***Comments/Special Instructions:**

Acct ID AYRE 50

Page 2 of 2 pages

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

Attachment D

Asbestos Sample Summary Table

Asbestos Sample Summary Table
XGFG182006 – F35: Parking Structures

Sample	Layer	Material	Location	Lab Description	Asbestos Content
1AS	Caulk	Gray caulk around seams	Alert Shelter	Gray/Non-Fibrous	None Detected
2AS	Foam	Foam seal	Alert Shelter	Gray/Non-Fibrous	None Detected
1AT	Fabric	Exterior fabric	Tent	White/Non-Fibrous	None Detected
2AT	Weather Strip	Black weather strip-door	Tent	Gray/Non-Fibrous	None Detected
3AT	Foam	Door foam seal	Tent	White/Non-Fibrous	None Detected
4AT	Caulk	Gray caulk around door window	Tent	Gray/White/Non-Fibrous	None Detected
5AT	Caulk	Door window caulk	Tent	White/Non-Fibrous	None Detected
6AT	Foam	Door foam core	Tent	Beige/Non-Fibrous	None Detected

Attachment E

WDNR Form 4500-113, WDNR Asbestos Publications, and Information on Identifying, Handling, and Properly Disposing of Hazardous Materials (WDNR Guidance WA-651)

State of Wisconsin
Department of Natural Resources
Air Management
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Notification for Demolition and/or Renovation and Application for Permit Exemption

Form 4500-113 (R 8/11)

State of Wisconsin
Department of Health Services
Division of Public Health
Bur. of Environmental & Occupational Health
P.O. Box 2659, Madison, WI 53701-2659

Notice: Completion of this information is mandatory under ch. NR 406.04, 410.05 and 447.07, Wis. Adm. Code. Penalties for failure to provide complete information requested include forfeitures of $10 to $25,000, fines of up to $25,000 and imprisonment for up to six months [s. 285.87, Wis. Stats.]. This form may be used to meet the notification requirements for the Department of Health Services, ch. DHS 159, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31-19.39, Wis. Stats.].

Instructions: Notification to the Department of Natural Resources (DNR) or the Department of Health Services (DHS) may be submitted using Form 4500-113, online system (http://dnr.wi.gov/topic/demo/asbestos.html) or this paper version. Return completed form to the appropriate office listed on page 4. The DNR does not accept FAXed copies of original or revised notifications.

Postmark	Date Received

1. Project Information

Notification Type

◯ After-the-Fact ◯ Cancellation ◯ On Hold ◯ Original ◯ Revised

Contractor Project No.	Notification ID

Project Type

◯ Abatement/Demolition
◯ Abatement/Renovation
◯ Demolition
◯ Emergency Renovation/Abatement (See page 2, 4a)
◯ Enclosure, Encapsulation or Repair (DHS)
◯ Fire Training Burn
◯ Ordered Demolition (See page 2, 4b)
◯ Planned Renovation/Abatement (Annual-DNR)
◯ Planned Renovation Project (DHS)
◯ Planned Renovation Subproject (DHS)

2. Date of DNR Required Pre-Project Asbestos Inspection

Start (mm/dd/yyyy)	End (mm/dd/yyyy)

Inspector Certification Information

Name	WI Inspector No.

Asbestos present? ◯ Yes ◯ No

3. Dates of Asbestos Abatement and Renovation/Demolition

a. Abatement Start (mm/dd/yyyy)	Abatement End (mm/dd/yyyy)	b. Reno/Demo Start (mm/dd/yyyy)	Reno/Demo End (mm/dd/yyyy)

Work Days ☐ Mon. ☐ Tues. ☐ Wed. ☐ Thurs. ☐ Fri. ☐ Sat. ☐ Sun. Work Hours: Start ____ : ____ End ____ : ____

Describe the project location (building or room), project schedule or other site specific information.

4. Facility Information

Facility Name	County

Address Line 1	City	State	ZIP Code

Address Line 2	Age (yrs.)	Size (square ft.)	Stories (#)	Living Units (#)

Prior and Current Uses

	Prior	Current		Prior	Current		Prior	Current
Bridge	☐	☐	Industrial	☐	☐	Residence	☐	☐
Commercial/Business	☐	☐	Miscellaneous	☐	☐	K-12 School	☐	☐
Farm Building	☐	☐	Office	☐	☐	Ship/Boat	☐	☐
Hospital	☐	☐	Public Building (Church, Library, etc.)	☐	☐	University/College	☐	☐
						Vacant	☐	☐

During abatement the structure will be: ◯ Vacant ◯ Occupied *If occupied, complete and post an Asbestos Occupant Protection Plan, Form DPHF-44016.*

Single family home/garage/less than 5 living/apartment units? ◯ Yes ◯ No

Does the project have one or more houses that are part of an urban renewal, city/county condemnation, highway construction project or project to develop a shopping mall, industrial facility or other private development? ◯ Yes ◯ No

a. If an emergency abatement/renovation, complete the following information (attach additional sheets if necessary):

Date (mm/dd/yyyy)	Time (12-hour clock) ◯ am ◯ pm

Description of sudden, unexpected event.

Explanation of how event caused unsafe condition, potential equipment damage or an unreasonable financial burden.

b. If an ordered demolition, identify the government agency issuing the order and attach a copy of the order. To meet the requirements of an ordered demolition under NR 447, the building must be in imminent danger of collapse.

Name	Title	
Authority	Date of Order (mm/dd/yyyy)	Date Order to Begin (mm/dd/yyyy)

5. Owner Information

Owner Name

Address Line1	Address Line 2	
City	State	ZIP Code
Contact	Telephone Number ( )	Email

6. Asbestos Information

a. No. of Structures to be Demolished

Will mechanical means be used for abatement or is the material in poor condition? ◯ Yes ◯ No If yes, see 6b.

b. Removal Methods and Conditions: If any Cat I or II nonfriable materials on this project will be removed by mechanical chipping or drilling, cutting or sawing, abrading or grinding, add these material amounts to the Friable/RACM Surface Area box. If any Cat I or II nonfriable materials are in "poor condition" meaning the material is peeling, cracking or crumbling, add these material amounts to the Friable/RACM Surface Area box.

Amount of Asbestos, including: A. Regulated Friable Asbestos/RACM to be removed. B. Category I & II ACM TO BE removed. C. Category I & II ACM NOT removed.	A. Friable Asbestos/RACM TO BE removed	B. Nonfriable Asbestos Material TO BE removed		C. Nonfriable Asbestos Material NOT removed before demolition	
		CAT I	CAT II	CAT I	CAT II
Pipes (linear feet)					
Surface (square feet)					
Volume (cubic feet)					

c. Indicate the inspection procedure, including analytical methods, used to detect the presence of the ACM.

d. Description of the asbestos material involved and its location in the facility to be demolished/renovated.

e. Description of abatement, renovation and/or demolition work, including specific abatement/demolition methods to be used.

f. Description of abatement work practices/engineering controls and waste handling procedures, specific to this site, used in preventing ACM emissions.

g. Description of procedures to be followed if asbestos not previously identified is found or not previously nonfriable asbestos becomes crumbled, pulverized or reduced to a powder.

7. Asbestos Contractor Information

Contractor Name

Address Line 1	County		
Address Line 2	City	State	ZIP Code
Contact			
Telephone Number ( )	Email		

8. Fee Information

Based on the values in Table 1, use the charts below to determine the fee for the notification. Fees are payable to the appropriate agency, DNR OR DHS.

a. DNR Fees

Project Type	Quantities to be Abated * Refer to the table in Section 6 to determine fee submittal amount * Make checks payable to WI Dept. of Natural Resources	Check Amount Due	Amount Rec'd By DNR
Demolition	Fire department training exercise on a single residential structure	☐ $100	
Demolition	Less than 160 square and 260 linear feet of friable or any amount of nonfriable ACM	☐ $135	
Reno/Demo	Original notification estimate of **friable asbestos/RACM** has changed by at least 20% during the project	☐ $100	
Reno/Demo	At least 160 sq. or 260 ln. ft. **friable asbestos/RACM** but less than 1000 combined feet	☐ $400	
Reno/Demo	Combined square & linear feet **friable asbestos/RACM** quantities of at least 1000 feet but less than 5000 feet	☐ $700	
Reno/Demo	Combined square & linear feet **friable asbestos/RACM** quantities of at least 5000 feet	☐ $1,325	
Reno/Demo	**After-the-Fact** notifications require double the appropriate fee listed above.	☐ $____	

Asbestos Renovation/Demolition Fees - ***Check or money order must be submitted with notification to DNR Asbestos Coordinator***

b. DHS Fees

TYPE AND AMOUNT OF ASBESTOS: Location: ☐ Interior ☐ exterior

Total Amount of Asbestos

☐ **Friable** - Submit notification for: ☐ < 260 linear feet ☐ < 160 square feet ☐ < 35 cubic feet

☐ Any amount of asbestos in residential buildings with fewer than 5 units

Type: ☐ Pipes/ducts ☐ Surfacing ☐ Other friable ACM: _____ Linear Feet

☐ **Non-Friable** - Submit notification for asbestos projects involving:

☐ Flooring: ☐ Any amount, intact manual methods, or, ☐ < 160 square feet, mechanical chipping

☐ Roofing: ☐ Any amount, intact manual methods, or, ☐ < 5,580 square feet, mechanical chipping Square Feet

☐ Siding: Any amount, intact methods only

☐ Other non-friable ACM: _____ Cubic Feet

For payment methods see Instructions and fees. ☐ No Fee Required			Fee	Received
☐ Original notice, 2 or more working days	☐ Sub-project	☐ Revision, less than 2 working days	☐ $50	
☐ Original notice, 2 or less than working days	☐ Planned renovation project notice		☐ $100	

PROJECT NOTIFICATION AFFIDAVIDT -- I am an authorized representative of the abatement company named above. I certify that the information provided on this form is correct to the best of my knowledge and that this project complies with Ch. DHS 159.Wis. Adm. Code.

Signature	DHS Certification Number	Date Signed

If DHS fees apply, this notification is complete. Fax notification and credit card payment to 608-266-9711. To mail, see address on page 4.
If DNR fees apply, complete page 4.

Notification for Demolition and/or Renovation and Application for Permit Exemption

Form 4500-113 (R 8/11)

9. Demolition Contractor Information

Contractor Name

Address Line 1	County		
Address Line 2	City	State	ZIP Code
Contact			
Telephone Number ( )	Email		

10. Transporter Information

Name

Address Line 1	County		
Address Line 2	City	State	ZIP Code
Contact			
Telephone Number ( )	Email		

11. Disposal Information

Disposal Site

Address Line 1	County		
Address Line 2	City	State	ZIP Code
Contact			
Telephone Number ( )	Email		

12. DNR Certification

I certify that the above submitted information is correct to the best of my knowledge.

Printed Name	Company and Title
Signature	Date Signed

13. Agency Notification

Indicate which of the following agencies/offices were sent a copy of the demolition/renovation notification. DNR has been delegated notification authority-- USEPA no longer requires a copy of the notification. Note: Dry asbestos removal requests must be pre-approved by DNR, prior to required notification.

☐ Department of Natural Resources
Asbestos Coordinator, AM/7
Bureau of Air Management
P.O. Box 7921
Madison, WI 53707-7921

☐ Department of Health Services
Division of Public Health
Asbestos/Lead(Pb) Section
P.O. Box 2659
Madison, WI 53701-2659

WISCONSIN DEPT. OF NATURAL RESOURCES

WA-651 (Revised 2013)

PLANNING YOUR DEMOLITION OR RENOVATION PROJECT:

A Guide to Hazard Evaluation, Recycling and Waste Disposal

(Formerly called Pre-Demolition Environmental Checklist)

INFORMATION ON IDENTIFYING, HANDLING AND PROPERLY DISPOSING OF HAZARDOUS MATERIALS

PLANNING YOUR PROJECT

1. ☑ Conduct a walk-through of the project building(s) and grounds to **identify items that contain harmful materials** and other site-related concerns.
2. ☑ **Identify and quantify harmful materials at your job site** with specialized inspectors or contractors, if necessary
3. ☑ **Notify the DNR of** demolition or renovation activities prior to starting any demolition or renovation work.
4. ☑ **Hire specialized consultants, contractors or transporters** to remove and properly manage harmful materials prior to starting your project.
5. ☑ **Request and file all receipts** for the disposal of harmful and non-harmful materials related to the project to avoid potential enforcement action.

Before beginning any demolition or renovation project, it is important to know about harmful materials that may be present on your project site.

This guide walks contractors and building owners through the steps to identify harmful materials commonly found at project sites and to handle and dispose of them safely. It also offers proper ways to manage recyclable and reusable materials and other wastes that are common in demolition and renovation projects.

The Resources section on the last page has links to websites with more information.

Note: This document is not intended as a substitute for reading the rules, regulations, and statues related to handling demolition and renovation debris. It is simply a guide to assist you in determining how they apply to your demolition or renovation project.

COMMON HARMFUL MATERIALS

Buildings can contain a number of harmful materials that may expose workers and the public to serious health risks and pollute the air, land and water if handled or disposed of in an unsafe way. Five of these harmful materials are common on project sites and need special care in identification and handling:

- **Asbestos**
- **CFCs (chlorofluorocarbons) and halons**
- **Lead**
- **Mercury**
- **PCBs (polychlorinated biphenyls)**

FIVE STEPS TO A SUCCESSFUL DEMOLITION OR RENOVATION PROJECT

1 STEP 1. Conduct a walk-through of the project building(s) and grounds to identify items that contain harmful materials and other site-related concerns.

Identifying hazardous materials before starting work on a project site protects worker health and safety, building occupants, and the financial viability of the project. Doing this up front can help you choose the appropriate inspectors, consultants and contractors and avoid costly change orders or project delays.

Before you begin any demolition or renovation project, thoroughly inspect and inventory the project site for the following items:

- **Appliances:** Appliances may contain CFCs, mercury or PCBs. Appliances that contain CFCs or PCBs must be processed by an appliance de-manufacturer registered with the DNR.
- **Building materials and fixtures that may contain asbestos:** All layers of materials, behind walls, ceiling spaces, etc., should be inspected and sampled unless they are assumed to contain asbestos. The following building components may contain asbestos, but this list is by no means all-inclusive:
    - **Caulking:** Used around windows, doors, corrugated roofing and other places where two materials are joined. PCBs have also been found in caulking materials. Schools and industrial buildings constructed or renovated between 1950 and 1979 are suspected to contain PCB-containing caulk.
    - **Ceilings:** Including acoustical tiles and adhesives, and the materials listed under “Interior and exterior walls” below. All ceiling layers and any spaces above the ceiling where drop ceilings are present should be checked. Insulation debris may also be lying on top of ceiling tiles.
    - **Electrical systems:** Insulators; spark arrestors and transite panels in electrical boxes; wiring insulation; ducts/conduits (transite pipe); and light fixtures.
    - **Flooring:** All sizes of vinyl floor tile, sheet flooring, and linoleum, and felt paper used under hardwood floors.
    - **HVAC systems:** Duct, pipe, and joint insulation because elbows/joints are often coated with asbestos; fiberglass insulation on the straight runs; forced air dampers; wall, floor and chimney penetrations; lining and mortar; fire brick; fire-proofing materials such as transite sheets or heavy paper; boiler insulation; flexible fabric connectors; packing/gaskets and adhesives; paper backing; mastic/adhesives (floor tile, carpet, etc.); and grout and felt paper under hardwood floors.
    - **Insulation in ceilings and walls:** Blown-in, spray-applied, and block.
    - **Interior and exterior walls:** Wall plaster; joint compound; patches; transite wallboard and siding; fire doors; window putty/glazing/caulking; mortar; asphalt shingles/siding; felt under siding, stucco, textured paint, and other spray-applied materials. Paint containing asbestos is rare except in commercial applications, where it was usually applied as a very thick, often silver-colored coating or added to textured paints.
    - **Miscellaneous:** Appliances with a heating element, especially older models; fire curtains and blankets; laboratory tabletops; fume hood linings; blackboards; and fire-resistant clothing like gloves, hoods, aprons, etc.
    - **Plumbing:** Pipe wrap, pipe joints, transite counter tops in bathrooms, faucets, packing gaskets, and adhesives.
    - **Roofing:** Asphalt shingles; tar-type coatings which are often around vents, chimneys, etc.; transite shingles; roofing felts that are often under a layer of other material; flashings; and mag-block type material found under other material. Check all roof areas and roofing layers.
- **Lighting fixtures/ballasts and bulbs/lamps:** Switches for lighting may use mercury relays. Look for any control associated with exterior or automated lighting systems, such as “silent” wall switches. Several types of light bulbs or lamps contain mercury and must be properly legitimately recycled or disposed of as hazardous waste. These include:
    - **Fluorescent lights:** Even the newer lamps with green-colored ends contain mercury.
    - **High intensity discharge:** metal halide, high pressure sodium, mercury vapor.
    - **Neon**
- **Meters and switches:** Mercury may be found in thermometers, barometers, thermostats, blood-pressure devices, and fluorescent and other types of light bulbs. Any equipment used for measurement of vacuum, pressure, fluid level, temperature, or flow rate could contain mercury. These devices are

most commonly associated with commercial and industrial equipment systems, including tanks, boilers, furnaces, heaters, electrical systems, water cleaning systems, and systems for the movement or pumping of gas (air) or liquids (water). In addition, mercury containing devices are also common in certain agricultural operations such as dairy, and may be present in older model consumer appliances and residential properties, especially larger multi-unit properties.

- **Oil:** Used oil in containers or tanks, hydraulic oils in machinery, electrical transformers and capacitors, and elevator shafts. These oils may contain PCBs and may need to be tested to determine if the oil can be recycled or must be properly disposed of.
- **Paint:** Residential and industrial paints may contain lead, solvents or asbestos. Some industrial paints may contain PCBs.

In addition to the items listed above, be aware of these other site-related concerns:

- **Abandoned wells:** Unused and improperly abandoned wells are a significant threat to groundwater quality. If not properly filled, abandoned wells can directly channel contaminated surface water into the groundwater. State law requires that all wells and drill holes be properly filled prior to any demolition or construction work on the property.
- **Batteries (non-lead-containing):** Batteries may be found in smoke detectors, emergency lighting systems, elevator control panels, exit signs, security systems and alarms. Batteries should be separated from other wastes and taken to a recycling facility or a business that accepts batteries for recycling.
- **Computers and other electronics:** Most electronics are banned from Wisconsin landfills and must be recycled. These can contain hazardous materials such as lead, cadmium, chromium, and mercury and, if not recycled, may be regulated as hazardous waste.
- **Exit signs:** Many self-luminous exit signs contain tritium, a radioactive material. All self-luminous exit signs must have a permanent label that identifies it as containing radioactive material. The label will also include the name of the manufacturer, the product model number, the serial number, and the quantity of tritium contained. It is illegal to abandon or dispose of these signs except by sending them to the manufacturer or to others licensed by the U.S. Nuclear Regulatory Commission.

▶ HAZARDOUS AND UNIVERSAL WASTES

Some wastes, such as used or unused solvents, sanitizers, paint wastes, chemical wastes, pharmaceuticals, gas cylinders, aerosol cans and pesticides, may be hazardous waste and regulated by the EPA and DNR. Hazardous wastes must be removed from a project site prior to demolition or renovation and be disposed of according to specific rules. Read the DNR publication “Is Your Waste Hazardous?” (WA-1152) at http://dnr.wi.gov/files/pdf/pubs/wa/wa1152.pdf to determine if a waste is hazardous. *See Handling and Disposal Choices on page 7 for information on how to dispose of hazardous wastes on a project site.*

Universal wastes are hazardous wastes that can be collected and transported with fewer regulations. Universal wastes include hazardous waste batteries, certain pesticides, mercury thermostats and other mercury-containing equipment and some lamps (light bulbs). In Wisconsin, antifreeze can also be managed as a universal waste if it is recycled. See chapter NR 673 of Wisconsin Administrative Code for more details on recycling and reusing universal waste.

- **Painted concrete:** Walls and foundations often contain painted concrete. With prior DNR approval, contractors can grind the concrete and use it on-site or nearby under a new building or road.
- **Smoke detectors:** The smoke detectors that contain a small amount of radioactive material will be labeled and should be returned to the manufacturer for disposal. Otherwise, smoke detectors may go in the trash**.**
- **Soil contamination:** A qualified environmental consultant can conduct environmental property assessments including identification of contaminated soil.
- **Spills:** In Wisconsin, all spills of hazardous substances that negatively affect or threaten to negatively affect public health, welfare or the

▶ REUSE AND RECYCLING OF MATERIALS

Many materials, fixtures and components can be donated or sold for reuse or recycled prior to demolition. As you inventory the project site for harmful materials, take note of materials that can be reused or recycled and remove them from the project site before demolition work begins.

- The Wisconsin Business Materials Exchange is a web service that facilitates the reuse of surplus or unwanted items or materials among businesses, institutions, and organizations. You can use this tool to post items that are available and request an item you may need.
- Consider holding an auction as a way to reuse building materials, fixtures and components once all the harmful materials have been removed.
- Clean brick, building stone, concrete and asphalt can be stockpiled for crushing and reusing in future building projects.
- Clean, untreated wood can be recycled or chipped for mulch or ground cover.
- Many items such as appliances, electronics, paper and cardboard, glass containers and vehicle items are banned from Wisconsin landfills and must be recycled. For a complete list of these items, go to dnr.wi.gov and search “what to recycle.”
- The online Wisconsin Recycling Markets Directory contains a list of self-identifying businesses accepting recyclable materials. Make sure your chosen recycler meets local, state and federal regulatory requirements.
- Demolition debris may be taken to a construction and demolition recycling facility if all harmful materials, including all types of asbestos, are removed prior to demolition or renovation.

▶ OPEN BURNING

It is illegal to burn painted, treated or unclean wood, asphalt, plastics of any kind, oily substances, tires and other rubber products, garbage, recyclables, wet rubbish, and other materials. Demolition materials that cannot be burned include: roofing materials, all kinds of flooring materials, insulation, plywood and other composition board, electrical wiring, cabinetry and countertops, and plastic plumbing.

Burning of clean, unpainted and untreated wood is allowed with a DNR burning permit using DNR-approved methods. When burning this type of wood from demolition waste, you must separate out all of the illegal materials, including painted or treated wood, before any burning occurs. The DNR encourages chipping clean, untreated wood for mulch or ground cover.

If you do decide to burn clean, unpainted and untreated wood, it is your responsibility to know what restrictions apply in the area where you are burning. Remember, you must also follow local burning ordinances that may be more restrictive than state law. Contact your local fire department, town chairperson, or local municipal official for more information on local burning rules.

It is illegal to burn unwanted buildings in Wisconsin. The only exception is for a fire department training exercise. For more information on how to prepare a building for a fire department training exercise, contact the DNR asbestos program coordinator at (608) 266-3658.

environment *must* be immediately reported to the DNR via the Spills Hotline, 800-934-0003.

- **Tanks:** Chemical tanks (underground and aboveground) and septic tanks should be assessed, emptied and decommissioned.
- **Tires:**Tires should be reused or recycled. Your local landfill may collect them for recycling or you can check WisconsinRecyclingDirectory.com and search for “motor vehicle items” and then “tires.”

2 STEP 2. Identify and quantify harmful materials at your job site with specialized inspectors or contractors, if necessary

Asbestos and lead have specific requirements from the Department of Natural Resources and the Department of Health Services for their identification and testing on a project site. See the sections on asbestos and lead in this step for those requirements.

You can identify other harmful materials on a project site, such as CFCs and halons, mercury, and PCBs, by doing an inventory of the building systems and fixtures for the items listed here and in Step 1. You may need some testing to confirm the presence of these materials. The DNR recommends hiring an inspector or consultant who has sufficient experience identifying these materials and can collect samples, if necessary, that will help in identification.

If you have a large or complex project, it may make sense to hire a consultant to oversee the coordination of all waste identification and disposal activities.

▶ Asbestos

Health risks: Asbestos is a known human carcinogen that can cause serious health problems when disturbed and inhaled. Historically, asbestos was commonly used in industrial, commercial, and residential structures. Asbestos is still used today but to a lesser extent.

Location and/or materials: Asbestos is used in more than 3,000 building materials. Asbestos is commonly found in HVAC systems, electrical systems, interior and exterior walls, roofing materials, ceilings, plumbing, and flooring insulation. It is also found in appliances with a heating element, fire curtains and blankets, laboratory tabletops, fume hood lining, blackboards and fire resistant clothing. Refer to Step 1 for a detailed list of building materials and locations that may contain asbestos.

Identification and testing: The Department of Health Services requires licensed inspectors to identify asbestos. Inspectors can assume asbestos to be present, or they can identify it through testing. The DNR requires an asbestos inspection for certain projects and recommends it for others.

Required projects:

- Two or more contiguous single family homes
- Homes that are part of a larger demolition project
- Multi-family housing with five or more units
- Industrial, manufacturing or commercial buildings including bridges, farm buildings, and churches
- Any structure being prepped for a fire training exercise

Recommended projects:

- Single family homes
- Multi-family housing with 2–4 units

Inspection must be completed and asbestos materials must be removed before beginning any demolition or renovation activities.

▶ CFCs (chlorofluorocarbons) and halons

Health risks: CFCs and halons damage the earth’s protective ozone layer high in the atmosphere, allowing greater exposure to the sun’s dangerous ultraviolet rays. Some of the harmful effects of increased UV exposure include increased risk of skin cancer, eye cataracts, immune system deficiencies, and crop damage.

Location and/or materials: CFCs can be found in refrigerants in rooftop, room and central air conditioners, refrigerators, freezers, and chillers, dehumidifiers, heat pumps, water fountains and drinking coolers, walk-in coolers (refrigeration or cold storage areas), vending machines and food display cases. Halons are found in fire extinguishers and other fire control equipment.

▶ Lead

Health risks: Inhaling or swallowing lead dust can cause serious health effects, including kidney disease, neuropathy, infertility, heart and cardiovascular disease, stroke, memory problems, and Alzheimer’s disease.

Location and/or materials: Lead plumbing and lead-based paint are commonly found in many older buildings. Lead may be found in paint on woodwork and metal equipment, leaded glass, lead window-sash weights, lead flashing molds, roof vents, lead pipes and solder. Lead is found in both indoor and outdoor applications. Lead is also found in lead-acid batteries associated with older lighting, exit signs, and security systems.

Identification and testing: The Department of Health Services requires licensed inspectors and risk assessors to identify lead paint. When building surfaces or components are being renovated in any residential and child-occupied buildings built before 1978 (such as private homes, rental units, day care centers, and schools), lead paint must be assumed to be present or identified through testing.

Lead paint sampling is recommended on commercial and industrial projects. The US discontinued manufacturing lead paint for residential use by 1978, but lead is still used in specialty paints in commercial and industrial applications. Most buildings have multiple layers of paint, and all layers should be considered.

▶ Mercury

Health risks: Liquid mercury evaporates slowly at room temperature and gives off harmful vapors that are invisible and odorless. Breathing these vapors causes the most harm to people, but mercury can also be harmful when it comes in contact with broken skin or when it is swallowed. Women and children are most at risk from mercury poisoning, which can cause brain and nerve damage, resulting in impaired coordination, blurred vision, tremors, irritability and memory loss. Mercury poisoning also causes birth defects.

Location and/or materials: Mercury may be found in thermometers, barometers, thermostats, dental offices, blood-pressure devices, and fluorescent and other types of light bulbs. Any equipment used for measurement of pressure, fluid level, temperature, or flow rate could contain mercury. These devices are most commonly associated with commercial and industrial equipment systems, including tanks, boilers, furnaces, heaters, electrical systems, water cleaning systems, and systems for the movement or pumping of gas (air) or liquid (water). In addition, mercury containing devices are common in certain agricultural operations such as dairy, and may be present in older model consumer appliances, vehicle light switches and residential properties, especially larger multi-unit properties. Dental offices use mercury-containing amalgam that may be found in sink drain traps. Mercury can also be found as part of older wastewater treatment plant trickling filters.

▶ PCBs (polychlorinated biphenyls)

Health risks: PCBs may cause cancer in humans and can disrupt hormone and nervous system function. PCBs are persistent in the environment and stay in animals' and humans' systems. PCBs are a source of contamination in fish and have caused fish consumption advisories for humans.

Location and/or materials: PCBs can be found in electrical oils (e.g. transformers and capacitors in appliances) electronic equipment, heat transfer equipment, hydraulic fluids, light ballasts, industrial paints, specialty paints (e.g. swimming pools) and caulking materials. Sumps, oil traps and concrete flooring in facilities that used or manufactured PCBs may be contaminated with PCBs as well. Electrical devices manufactured prior to 1978 should be assumed to contain PCBs.

Identification and testing: You may be able to determine PCB concentrations in electrical equipment oil using identification labels, documents from the manufacturer indicating the PCB concentration at the time of manufacture, or service records showing the PCB concentration measured when the equipment was serviced. If a manufactured date and PCB content label are not found on a transformer or capacitor, the oil should be tested to determine the PCB content prior to dismantling and disposal. Oil-filled electrical equipment labeled "No PCBs" may still contain PCBs, but at a concentration lower than what the EPA regulates. The oils in this equipment should still be tested to see if they contain PCBs and then handled appropriately.

Testing of specialty paint, epoxies and caulks in buildings built or renovated between 1950 and 1979 is recommended. High levels of PCBs are being found in these materials across the country. Once testing is complete, boldly label all surfaces and items that were found to contain PCBs so they are handled appropriately during renovation or demolition.

STEP 3. Notify the DNR of demolition or renovation activities prior to starting any demolition or renovation work.

Notification to the DNR is required for all demolition projects meeting any of these categories:.

- Two or more contiguous single-family homes
- Homes that are part of a larger demolition project
- Multi-family housing with five or more units
- Industrial, manufacturing or commercial buildings including bridges, farm buildings, and churches
- Any structure being prepped for a fire training exercise

DNR notification is also required for renovation projects meeting any of these criteria, if asbestos removal is involved.

For demolition projects
All demolition projects meeting the previously listed criteria require DNR notification 10 working days before the project work begins.

For renovation projects involving asbestos
All renovation projects meeting the previously listed criteria that involve asbestos require DNR notification 10 working days before the project begins.

Note: While plans to demolish or renovate a single-family home do NOT require DNR notification, it is recommended you take the precautionary steps outlined in this publication.

▶ HANDLING AND DISPOSAL CHOICES

You have a few options for handling and disposing of lead, mercury, PCBs and other wastes from your project site that qualify as hazardous waste. Identifying these options prior to beginning the project can help you schedule transportation and disposal and maintain the overall project schedule.

- **Hire a waste management contractor** to pick up and dispose of hazardous wastes. This takes the guess work out of handling these types of wastes. Contractors have properly trained personnel that will determine appropriate packaging, shipping and vehicle licensing and have established relationships with disposal facilities.

Other choices provide you with reduced regulation and may change depending on the amount of hazardous waste generated in a month. As a contractor, you may manage hazardous wastes you generate at temporary job sites only according to the following options. For more details on these options, see the DNR publication "Pilot Project for Management of Contractor Generated Hazardous Waste" (WA-654) at http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf.

- **Hire a licensed hazardous waste transporter** to transport the hazardous waste to a licensed or permitted hazardous waste treatment, storage and disposal facility. In this case, you must follow the applicable generator requirements in chapters NR 660-679 of Wisconsin Administrative Code.
- **Leave containerized hazardous waste for the site owner to properly manage.** In this case, the site owner must follow the applicable generator requirements in chapters NR 660-679 of Wisconsin Administrative Code. If you choose this option, be sure to include this in your contract with the site owner.
- **Transport the containerized hazardous waste yourself** directly from the temporary job site to a Household and Very Small Quantity Generator (VSQG) Hazardous Waste Collection Facility. This includes county or municipal Clean Sweep locations. If the total quantity of hazardous waste generated by your company in one month is less than 220 lbs. (about half of a 55-gallon drum), you would be a VSQG and your hazardous waste may be taken to a Clean Sweep location for handling and disposal. Contact your local Clean Sweep coordinator for information on possible fees, accepted materials, and other details.
- **Transport the containerized hazardous waste yourself to your central business location.** This option is currently available under a pilot project. Waste handled in this manner is subject to the pilot project conditions. See the publication referenced above for more information.

STEP 4. Hire specialized consultants, contractors or transporters to remove and properly manage harmful materials prior to starting your project.

Hiring the right consultant, contractor or transporter is important to ensure safe handling practices and disposal options. This section will help you determine who to hire. Links to lists of licensed consultants, contractors and transporters are on the last page under Resources.

▶ Asbestos

Handling practices: Asbestos professionals trained and certified by DHS are required to perform asbestos removal in most multi-unit residential and all commercial, industrial, manufacturing and government buildings. Most types of asbestos-containing materials must be removed from the building prior to demolition or renovation.

Disposal: The asbestos removal contractor is responsible for disposing of the asbestos materials at a licensed landfill approved to accept asbestos waste. Not all landfills accept asbestos materials, so contractors should call the landfill to find out what materials are accepted and the hours of operation.

In some situations, non-friable asbestos materials (materials that are resistant to crushing), such as floor tile and roofing, may remain in place during the demolition activities. When this is done, the debris must be taken to a municipal or construction and demolition landfill. Debris containing non-friable asbestos materials may not be taken to a construction and demolition recycling facility.

▶ CFCs (chlorofluorocarbons) and halons

Handling practices: Keep units that contain refrigerants in place for a certified transporter to remove them. Moving them may cause an accidental release of refrigerants. Certified transporters include waste haulers, community recycling programs, and appliance salvage businesses. State law requires that anyone transporting salvaged refrigeration units must certify to the DNR that they will transport items in a way that prevents refrigerant releases. Technicians who remove refrigerants from units must be registered with the DNR and use approved equipment.

Check both portable and installed fire suppression systems for labels indicating halons. Trained technicians are also needed to remove halons. Contact local fire suppression equipment companies or the Halon Recovery Corporation for more information. Do not discharge halon fire extinguishers; intentionally releasing these substances is prohibited under federal regulations.

Disposal: Once the refrigerants are recovered, the unit may be taken to a metal scrap recycling facility. If you send halon-containing equipment offsite for disposal, it must be sent to a manufacturer, fire equipment dealer or recycler operating in accordance with National Fire Protection Association standards.

▶ Lead

Handling practices: DHS-certified lead-safe contractors are required for any renovations, repairs, painting or other paint-disturbing services on or in the regulated buildings that contain lead paint. These contractors must use lead-safe practices at these properties.

State law prohibits the sale or transfer of any fixture or other object that contains lead-bearing paint if children would have ready access to the fixture or object in its new location.

Disposal: Dispose of in a landfill any painted wood or building components that contain lead paint. Do not burn or chip wood that contains lead paint or use it for landscaping.

Lead paint waste, such as lead paint chips or lead paint removed from commercial or industrial buildings, must be tested to determine if it is a hazardous waste for disposal purposes.

See Handling and Disposal Choices on page 7 for handling and disposal options.

▶ Mercury

Handling practices: You may collect intact mercury-containing devices and bring them back to your primary business location or bring them directly to an off-site mercury recovery facility. Do not remove mercury ampoules or free liquids from the device. Store devices in a covered plastic container to prevent them from breaking. Label the container to assist proper handling and disposal.

If any mercury is spilled or released during handling, report the spill immediately by calling the DNR 24-hour Spills Hotline: (800) 934-0003. Mercury spreads quickly, and even a small spill can cause big cleanup costs in a short period of time.

Disposal: Trained professionals and specific equipment are needed for safe removal of mercury from ampoules and devices. Mercury must be transported by a licensed hazardous waste transporter to a mercury facility to be recycled or reclaimed.

See Handling and Disposal Choices on page 7 for handling and disposal options.

▶ PCBs (polychlorinated biphenyls)

Handling practices: The EPA recommends that caulk containing PCBs be removed during planned renovations and repairs (when replacing windows, doors, roofs, ventilation, etc.). It is important to ensure that PCBs are not released into the air during renovation or repair of affected buildings.

Oils with PCB content greater than 50 ppm are prohibited from being mixed with other materials to reduce the PCB content.

Disposal: PCBs must be transported either by your company, a licensed hazardous waste transporter or a full-service contractor. PCBs and PCB-containing wastes must be taken to a licensed disposal facility or directly to a licensed incineration facility. Arrangements for accepting PCBs must be made with these facilities ahead of time.

See Handling and Disposal Choices on page 7 for handling and disposal options.

▶ DEMOLITION AND RENOVATION WASTE

Disposal options for demolition and renovation wastes depend on the type of waste and, in some cases, the amount generated. Solid wastes such as trash, painted wood, and fiberglass insulation can be disposed of at solid waste transfer stations and landfills, including construction and demolition landfills.

If demolition wastes are going to a construction and demolition landfill, all non-building components, such as books, furniture and trash must be removed before you begin demolition (note that most of these non-building components can be reused or recycled). Non-building components may stay in the building if the demolition waste is going to a municipal solid waste landfill. Check with local landfills prior to demolition to determine how to manage your wastes.

Demolition debris may be taken to a construction and demolition recycling facility if all asbestos materials and other harmful materials have been removed prior to demolition or renovation.

To find a list of these facilities licensed in Wisconsin, go to dnr.wi.gov and search "licensed waste haulers and facilities."

STEP 5. Request and file all receipts for the disposal of harmful and non-harmful materials related to the project to avoid potential enforcement action.

As materials are removed from the project site, ask your contractors for disposal receipts to document the disposal or recycling of your wastes. This is an important step in protecting your company. If materials are illegally dumped, the DNR will investigate to determine where the materials came from. Part of the investigation process would be to identify projects in the area that may have been the source of the illegally dumped materials. Receipts show that your project wastes were disposed of appropriately and protect you from liability issues and fines and/or forfeitures.

Once the harmful materials have been removed from the project site and the notification to DNR is submitted with the appropriate dates of demolition, demolition may begin. This includes first removing materials for reuse or recycling. If all harmful materials, including all types of asbestos, have been removed from the building or structure before demolition, the resulting debris may be taken to a construction and demolition recycling facility.

RESOURCES

Asbestos

- DNR asbestos program requirements: dnr.wi.gov, search “asbestos”
- DHS Wisconsin Asbestos Program: www.dhs.wi.gov/asbestos/
- DHS-certified asbestos companies: at the link above, look for “certified company” in the left-hand margin

Brownfields

- DNR brownfields redevelopment: dnr.wi.gov, search “brownfield”

CFCs and halons

- DNR refrigerant recovery program: dnr.wi.gov, search “refrigerants”

Demolition debris, waste, transporters, landfills and other licensed facilities

- DNR demolition, construction & renovation information: dnr.wi.gov, search “demolition”
- DNR waste and materials management: dnr.wi.gov, search “waste”
- DNR list of licensed haulers and facilities: dnr.wi.gov, search “licensed waste haulers and facilities”
- Contact the DNR: 608-266-2111 or DNRWasteMaterials@wisconsin.gov

Hazardous and universal wastes

- DNR hazardous waste information: dnr.wi.gov, search “hazardous waste”
- “Is Your Waste Hazardous?” (DNR publication WA-1152): http://dnr.wi.gov/files/pdf/pubs/wa/wa1152.pdf
- Handling and disposal of hazardous wastes – “Pilot Project for Management of Contractor Generated Hazardous Waste” (DNR publication WA-654): http://dnr.wi.gov/files/pdf/pubs/wa/wa654.pdf.
- Wisconsin Administrative Code chapter NR 673 – Universal Waste Management Standards: http://docs.legis.wisconsin.gov/code/admin_code/nr/600/673/

Lead

- DHS Lead-Safe Wisconsin: www.dhs.wi.gov/lead/
- DHS-certified lead companies: at the link above, look for “certified company” in the left-hand margin
- DNR Application for Low Hazard Waste Exemption for Reuse of Concrete Coated with Lead-Bearing Paint -- Form 4400-274 (R 2/12) http://dnr.wi.gov/files/pdf/forms/4400/4400-274.pdf

Mercury

- EPA information on mercury: www.epa.gov/hg/consumer.htm

PCBs

- EPA information on PCBs: www.epa.gov/wastes/hazard/tsd/pcbs/
- Wisconsin Administrative Code chapter NR 157 – Management of PCBs and Products containing PCBs: docs.legis.wisconsin.gov/code/admin_code/nr/100/157/

Reuse & recycling

- DNR recycling program: dnr.wi.gov, search “recycling”
- WasteCapDIRECT – a centralized, online directory of construction and demolition recycling processors, haulers and end markets: www.wastecap.org
- Wisconsin Recycling Markets Directory: www.wisconsinrecyclingdirectory.com

Storage tanks

- Department of Safety and Professional Services storage tank database: http://dsps.wi.gov/online-services/storage-tanks

Wisconsin Administrative Code

- Wisconsin Legislative Documents: http://docs.legis.wisconsin.gov

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