



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

BDE PROCEDURE MEMORANDUM

NUMBER: 10-05

**SUBJECT: Compliance with Asbestos Requirements
For Highway Bridges**

DATE: November 1, 2010

This memorandum supersedes BDE Procedure Memorandum 26-02A, dated June 7, 2002. The procedures contained herein shall govern the Department's compliance with the asbestos requirements in 40 CFR Part 61 for work on highway bridges under State jurisdiction until such time as the procedures are modified or rescinded. Note: The content did not change. The memorandum was merely renumbered for the 2010 Edition of the BDE Manual.

Background

In an October 19, 2001 letter, the Region 5 Office of the U. S. Environmental Protection Agency (USEPA) approved an IDOT request for a waiver from the asbestos notification requirements under 40 CFR Part 61.145 for highway bridges [as defined in 23 CFR 650.403(a)] determined not to involve asbestos in the bridge deck wearing surface or waterproofing membrane. The initial group of bridges covered by the waiver is included in a list for each District, provided as an attachment to this memorandum. USEPA Region 5 also has approved IDOT's proposed approach for addressing bridges in which involvement of asbestos in the bridge deck wearing surface or waterproofing membrane is unconfirmed. Application of this approved approach will allow for exempting other bridges from the asbestos notification requirements upon confirmation by IDOT that the bridge deck wearing surface and waterproofing membrane, if one is present, do not contain asbestos.

These procedures do not address the evaluation of asbestos in structures such as tender houses associated with bridges. Work affecting such structures should be coordinated with the Asbestos Abatement Unit in the central Bureau of Administrative & Facility Services for compliance with applicable inspection and notification requirements. This coordination should be initiated sufficiently in advance of the commencement of work that would affect the structures to allow time for accomplishing any necessary investigations and paperwork.

These procedures also do not address the evaluation of and response to asbestos in pipes, conduits, or other such utilities associated with bridges. The owners of the pipes, conduits, etc. shall be responsible for determining whether

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they involve asbestos and for ensuring compliance with applicable requirements for any work that could disturb regulated asbestos that the pipes, conduits, etc. may contain. If unexpected pipes or conduits are encountered (e.g., embedded in the concrete bridge components) work affecting the pipes or conduits shall be suspended until ownership has been determined and any necessary inspection, testing, and notification has been completed.

The following sections of this memorandum describe the procedures for documenting application of the notification waiver for bridges in the initial group and for applying and documenting the approved approach for addressing bridges with unconfirmed asbestos involvement. They also describe the notification procedures and special provision to be followed for bridges involving bituminous overlays and waterproofing membranes that are confirmed to contain asbestos.

Bridge lists coordinated with EPA for purposes of the asbestos notification waiver request were prepared in cooperation with the Bureau of Urban Program Planning, Planning Services Section on the basis of information provided by the Districts. If errors or omissions are found in the lists, they should be brought to the attention of the Planning Services Section in Urban Program Planning and the Bridge Planning Section in the Bureau of Bridges and Structures.

Applicability

The procedures in this memorandum are applicable to all highway bridges under State jurisdiction.

Procedures

For all projects that will involve bridge demolition (removal or wrecking of any load-supporting structural member), reconstruction, rehabilitation, or deck repair, the District must determine and document applicability of the asbestos notification requirements. The District will be responsible for complying with the asbestos notification requirements for any work that will disturb a bridge deck wearing surface or waterproofing membrane that contains asbestos. (See note in the "Background" section regarding structures such as tender houses and pipes or conduits associated with a bridge that may contain asbestos.) The asbestos notification determination should be completed as far in advance as practical of the anticipated date for beginning construction work to allow sufficient time for compliance with notification requirements, if applicable. The asbestos notification determination and documentation for highway bridges shall be accomplished in accordance with the following procedures. For purposes of documenting the asbestos determination finding, a single "Asbestos Determination Certification Form" (Attachment 1) can be used to

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cover multiple structures when the same asbestos determination finding applies. The group form would then be submitted to the Bridge Planning Section of the Bureau of Bridges and Structures and a copy included in the District files and Phase I Engineering Report for each project involving one of the covered structures, as described in these procedures.

Bridges on Approved No Asbestos (Waiver) List

With this memorandum, each District is being provided a list of bridges covered by the notification waiver as of October 19, 2001, the date of USEPA approval of the waiver. This list is labeled "State Owned Bridges - No Asbestos" and is included as Attachment 4. For bridges included in this list, the District should complete the "Structure Identification" and "Certification" sections of the "Asbestos Determination Certification Form" (Attachment 1), and check box number 1 in the "Asbestos Determination" section. A copy of the completed form should be included in the District files and in the Phase I Engineering Report when a project is proposed involving demolition, reconstruction, or rehabilitation of the bridge, or repair of the deck on the bridge. This will document the basis for determining that the bridge does not contain asbestos in the bridge deck wearing surface or waterproofing membrane and is exempt from the asbestos notification requirements.

Bridges on Confirmed/Unconfirmed List

With this memorandum, each District also is being provided a second list of bridges that either are known to contain asbestos or for which the presence or absence of asbestos is unconfirmed. This list is labeled "Bridges Under Investigation for Asbestos" and is included as Attachment 5. For bridges listed as having known asbestos involvement, refer to the procedures in the section below on "Asbestos Involvement Confirmed." For unconfirmed cases, proceed with the following steps for evaluation.

Evaluation Based on Available Information

In accordance with the approach approved by USEPA, if a bridge is included in the list of bridges under investigation for asbestos and is unconfirmed for asbestos involvement, the District should first examine available information (e.g., file information, bridge plans) to attempt to verify whether asbestos is present in the bridge deck wearing surface or waterproofing membrane. If the District confirms on the basis of its information that asbestos is involved, refer to the procedures in the section below on "Asbestos Involvement Confirmed." If the District confirms on the basis of its information that asbestos is not involved, it should complete the "Structure Identification" and "Certification" sections of the "Asbestos Determination Certification Form," and check box number 2 in the "Asbestos Determination" section. The District shall submit a

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copy of the completed form to the Bridge Planning Section of the Bureau of Bridges and Structures at the time the asbestos determination is made. Bridges covered by a signed Asbestos Determination Certification Form indicating that no asbestos is present will be exempt from the EPA asbestos notification requirements upon submittal of the signed certification form to the Bureau of Bridges and Structures. These bridges will be re-coded as "Asbestos Investigation Status: Complete" and "Bridge Contains Asbestos: N" on the list of bridges under investigation for asbestos. The Bureau of Bridges and Structures will provide the affected District(s) and Illinois EPA (which administers the asbestos requirements in Illinois on behalf of USEPA) updates to the bridge list for any month in which changes occur. A copy of the completed Asbestos Determination Certification Form should be included in the District files and in the Phase I Engineering Report when a project is proposed involving demolition, reconstruction, or rehabilitation of the bridge, or repair of the deck on the bridge.

Evaluation Based on Sampling and Testing

If information available to the District is not sufficient to confirm whether or not a bridge involves asbestos, the procedures in Attachment 2, "Sampling and Testing Procedure for Asbestos in Bituminous Bridge Deck Wearing Surface or Waterproofing Membrane" should be applied. If the results of testing confirm that asbestos is not involved, complete the "Structure Identification" and "Certification" sections of the "Asbestos Determination Certification Form" and check box number 3 in the "Asbestos Determination" section. The District shall submit a copy of the completed form to the Bridge Planning Section of the Bureau of Bridges and Structures at the time the asbestos determination is made. Bridges covered by a signed Asbestos Determination Certification Form indicating that no asbestos is present will be exempt from the EPA asbestos notification requirements upon submittal of the signed certification form to the Bureau of Bridges and Structures. These bridges will be re-coded as "Asbestos Investigation Status: Complete" and "Bridge Contains Asbestos: N" on the list of bridges under investigation for asbestos. The Bureau of Bridges and Structures will provide the affected District(s) and Illinois EPA updates to the bridge list for any month in which changes occur. A copy of the completed Asbestos Determination Certification Form should be included in the District files and in the Phase I Engineering Report when a project is proposed involving demolition, reconstruction, or rehabilitation of the bridge, or repair of the deck on the bridge.

If the test results indicate that the bridge deck wearing surface and/or waterproofing membrane do contain asbestos, refer to the procedures in the "Asbestos Involvement Confirmed" section, below.

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Asbestos Involvement Confirmed

For bridges that are confirmed to involve asbestos in the bridge deck wearing surface and/or waterproofing membrane, if one is present, complete the "Structure Identification" and "Certification" sections of the "Asbestos Determination Certification Form" and check box number 4 in the "Asbestos Determination" section. A copy of the completed form should be included in the District files and in the Phase I Engineering Report when a project is proposed involving demolition, reconstruction, or rehabilitation of the bridge, or repair of the deck on the bridge. For structures that the "Asbestos Investigation Status" is shown as "Not Complete" in the list of bridges under investigation for asbestos (Attachment 5), the District also should submit a copy of the completed form to the Bridge Planning Section of the Bureau of Bridges and Structures at the time the asbestos determination is made. The information in the list will be re-coded to indicate "Asbestos Investigation Status: Complete" and "Bridge Contains Asbestos: Y" and updates will be provided to the affected District(s) and Illinois EPA for any month in which changes occur in the list.

The District will be responsible for ensuring compliance with the asbestos notification requirements for demolition or renovation of bridges involving deck wearing surfaces or waterproofing membranes containing asbestos. A completed "Notification of Demolition and Renovation" form (available at <http://www.epa.state.il.us/air/asbestos/index.html>) must be submitted to Illinois EPA at least 10 working days prior to commencing any work that would disturb any of the bituminous materials containing asbestos. A sample notification form is attached (Attachment 3) to provide guidance on the type of information that should be entered. Illinois EPA has advised that the start date and complete date for demolition and asbestos removal are key items of information for the notification. If exact dates are not known at the time the initial notification form is submitted estimated dates may be used. Revised notification must then be submitted to correct the information when the actual start and complete dates have been determined. The revised notification still must satisfy the requirement for submittal at least 10 working days prior to commencing any work that would disturb any of the bituminous materials containing asbestos. Since the notification forms generally will require information from both the contractor and the District, it is suggested that, where practical, the notification forms should be prepared at the pre-construction conference.

The District also will be responsible for ensuring that the special provision for "Asbestos Waterproofing Membrane and Asbestos Bituminous Concrete Surface Removal (BDE)" is included in the contract for work involving removal of bridge deck wearing surfaces or waterproofing membranes containing asbestos. The District also may wish to include a general note in the project plans or in the project commitment file to indicate that asbestos is present and will be subject to a special provision.

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At such time as removal operations are completed for all asbestos bituminous concrete surface and asbestos waterproofing membrane on a bridge, the District should complete the "Structure Identification" and "Certification" sections of the "Asbestos Determination Certification Form," check box number 5 in the "Asbestos Determination" section, and submit a copy of the completed form to the Bridge Planning Section in the Bureau of Bridges and Structures. The information in the bridge list will be re-coded to indicate "Bridge Contains Asbestos: N" and updates will be provided to the affected District(s) and Illinois EPA for any month in which changes occur. Bridges covered by a signed Asbestos Determination Certification Form indicating that all asbestos-containing materials have been removed will be exempt from the EPA asbestos notification requirements upon submittal of the signed certification form to the Bureau of Bridges and Structures. A copy of the completed form should be included in the District files. For bridges that remain in place following removal of the asbestos-containing materials, a copy of the form also should be included in the Phase I Engineering Report for future work involving demolition, reconstruction, or rehabilitation of the bridge, or repair of the deck on the bridge.

When the bridge list indicates that all of the asbestos bituminous concrete surface and asbestos waterproofing membrane has been removed from all highway bridges in the State, the Bridge Planning Section in the Bureau of Bridges and Structures will advise the Bureau of Design and Environment (BDE). BDE will notify the Illinois EPA in writing and request approval to discontinue the asbestos determination and tracking procedures for highway bridges. Upon receipt of approval from IEPA/USEPA, the procedures in this memorandum will be rescinded.

Engineer of Design and Environment



Attachments



Asbestos Determination Certification

Structure Identification

Structure Number(s) (000-0000):

Asbestos Determination

- 1. The identified structures were included in the list that the USEPA exempted from the asbestos notification requirements in its letter of October 19, 2001.
2. The identified structures were unconfirmed for asbestos involvement as of October 19, 2001 but have subsequently been determined, on the basis of information available in the District office, not to involve asbestos in a bituminous bridge deck wearing surface or waterproofing membrane.
3. The identified structures were unconfirmed for asbestos involvement as of October 19, 2001 but have subsequently been determined, through testing, not to involve asbestos in a bituminous bridge deck wearing surface or waterproofing membrane.
4. The identified structures have been determined to involve asbestos in a bituminous bridge deck wearing surface and/or waterproofing membrane.
5. The identified structures had been determined to involve asbestos in a bituminous bridge deck wearing surface and/or waterproofing membrane.

Certification

Name: _____ Position Title: _____

Office Address: _____

Phone Number: () _____

Signature

Date

**Sampling and Testing Procedure for Asbestos in
Bituminous Bridge Deck Wearing Surface or Waterproofing Membrane**

Applicability

The following sampling and testing procedures shall be applied to State and local highway bridges that have in place a bituminous bridge deck wearing surface or bituminous waterproofing membrane and available information is insufficient to verify whether or not either of these components contains asbestos. Asbestos determination for applicable bridges must be completed prior to commencing any work that would disturb the wearing surface or waterproofing membrane. The determination must be made sufficiently in advance of the commencement of construction or demolition work to allow compliance with the notification requirements of the asbestos national emissions standards (40 CFR Part 61).

Sampling

The purpose of this sampling procedure is to obtain one or more representative samples of the bituminous wearing surface and/or waterproofing membrane, if one is present, for asbestos determination. At least one sample must be taken from each representative portion of the suspect bridge deck overlay material. If portions of a bridge deck involve overlay materials installed at different times, each such area must be sampled. If there is any reason to suspect that overlay materials might be different, even though they appear uniform, they should be sampled separately. Use of a licensed asbestos inspector for conducting the sampling is not required provided the protocol described below is followed.

Before initiating sampling, prepare a plan-view diagram of the bridge deck indicating the approximate dimensions, the area(s) of the deck surface to be sampled, and the sample location(s). If more than one sample will be taken, number the sample locations on the diagram and use the corresponding numbers when labeling each sample. The sampling diagram should be retained in the project files at least until testing of the samples has been completed and any areas of the bridge deck requiring application of the special provision for "Asbestos Waterproofing Membrane and Asbestos Bituminous Concrete Surface Removal (BDE)" have been identified.

Samples shall be removed with a minimum 2 inch diameter core drill. The depth of each sample shall be sufficient to include the full thickness of both the bituminous wearing surface and the waterproofing membrane, if one is present. For each sampling operation, sufficient water shall be applied before and during the core drilling to prevent generation of airborne dust as a result of the drilling and removal of the sample. Upon removal of the core sample, it shall immediately be placed in a resealable plastic sample bag. Each sample bag shall be labeled with the structure number (000-0000); route identification; county; water body or facility crossed; name and employer (if other than IDOT) of the person removing the sample, and sample number keyed to the diagram of the bridge deck showing the sample location(s).

Testing

The samples of the bituminous bridge deck wearing surface and/or bituminous waterproofing membrane shall be tested for the presence of asbestos using the Polarized Light Microscopy (PLM) method specified in Section 1 of Appendix E, Subpart E, 40 CFR part 763. The testing shall be performed by a laboratory that has National Voluntary Laboratory Accreditation Program (NVLAP) or National Environmental Laboratory Accreditation Program (NELAP) accreditation for asbestos fiber analysis using the PLM method and is equipped for performing analysis of nonfriable organically bound asbestos using Gravimetric Reduction.* If a bituminous waterproofing membrane layer is present, testing shall be conducted on portions of the sample from both the waterproofing membrane layer and the wearing surface layer.

Materials which are determined, through application of the specified testing method, to contain more than one percent asbestos are classified as Category II nonfriable Asbestos Containing Materials (ACM). Work that would disturb Category II nonfriable ACM is subject to the notification requirements in 40 CFR part 61.145. Removal of such materials shall be accomplished in accordance with the Statewide special provision for "Asbestos Waterproofing Membrane and Asbestos Bituminous Concrete Surface Removal (BDE)."

- * A listing of laboratories that are accredited for asbestos testing through the NVLAP is available at <http://ts.nist.gov/ts/htdocs/210/214/scopes/plmtm.htm>. Information concerning laboratories that are accredited through the NELAP is available at <http://www.epa.gov/ttn/nelac/accredilabs.html>.



REC. NO.

NOTIFICATION OF DEMOLITION AND RENOVATION

IL 532 1296

APC 430 Rev.03/00

Illinois Environmental Protection Agency

P.O. Box 19276, Springfield, IL 62794-9276

THIS INFORMATION IS REQUIRED: NESHAP 40CFR-SUBPART M-61.145, Rev. Nov. 20, 1990			
ALL SECTIONS MUST BE COMPLETED TO AVOID NOTICE VIOLATION			
1. TYPE OF NOTIFICATION (O-Original/R-Revised/C-Canceled): [Enter appropriate letter.]			
2. TYPE OF OPERATION (R-Renovation/D-Demo/A-Annual/O-Ordered Demo/E-Emergency Renovation): [Enter R or D.]			
3. FACILITY DESCRIPTION (Building Name): Highway Bridge - Structure # _____			
Address: Bridge carrying [facility carried] over [feature crossed] - [Location]			
City: [Name of nearest town/city.]	County: [County name.]	State: IL	ZIP: [Enter it in town/city.]
Location of Asbestos Containing Material (ACM) in structure: [Indicate location - e.g., bituminous deck wearing surface.]			
Bldg. Size: N/A	# of Flrs. N/A	Age: [Age of bridge.]	Present Use: Highway Bridge
Prior Use: -	Future Use (Demo): -		
4. IS ASBESTOS PRESENT? <input checked="" type="radio"/> Y <input type="radio"/> N		5. WORK HOURS: * [Beginning hour] a.m. [Ending hour] p.m.	
6. SCHEDULED DATE DEMOLITION: (As applicable) Start: [mo/day/year] Complete: [mo/day/year]			
7. SCHEDULED DATE ASBESTOS REMOVAL: Start: [mo/day/year] Complete: [mo/day/year]			
8. REGULATED ASBESTOS CONTAINING MATERIAL TO BE REMOVED (RACM):		NONFRIABLE ASBESTOS NOT TO BE REMOVED (Demolition):	
		NONFRIABLE ASBESTOS TO BE REMOVED:	
		CATEGORY I CATEGORY II	
Pipes (Ln. Ft.)			
Surface Area (Sq. Ft.)	[Enter #]		[Enter #]
Volume (Cu. Ft.)			
9. ASBESTOS REMOVAL CONTRACTOR: [Identify Contractor or Sub-contractor performing asbestos bitum. removal.]			
Address: [Contractor / Sub-contractor Address]		City: [C/S-C City]	
State, Zip: [C/S-C State, Zip]	Contact: [C/S-C Contact]	Phone: [C/S-C Phone]	
10. DEMOLITION CONTRACTOR: [Identify Contractor or Sub-contractor performing bridge demolition.]			
Address: [C/S-C Address]		City: [C/S-C City]	
State, Zip: [C/S-C State, Zip]	Contact: [C/S-C Contact]	Phone: [C/S-C Phone]	
11. OWNER NAME: Illinois Department of Transportation			
Address: [Enter District Office Address]		City: [D.O. City]	
State, Zip: [D.O. Zip]	Contact: [D.E. Name or District Contact]	Phone: [D.O. Phone]	
12. WASTE TRANSPORTER: [Enter information provided by contractor.]			
Address: "		City: "	
State, Zip: "	Contact: "	Phone: "	
13. WASTE DISPOSAL SITE: [Enter information provided by contractor.]			
Address: "		City: "	
State, Zip: "	Landfill Permit #: "	Phone: "	
-AGENCY USE ONLY-			
Date Received:	Input to ACTS:	To Region 1 2 3	
Post Mark Date:	To Cook/City:	Champaign:	LaSalle:
Springfield:	Rockford:	Moline:	Marion:

[Guidance on the asbestos notification requirements is available under the Air/Asbestos topic on the web site for USEPA Region 5 (<http://www.epa.gov/region5/>).]

14. PROCEDURE, INCLUDING ANALYTICAL METHOD, USED TO DETECT THE PRESENCE OF ASBESTOS.

[Enter description of method - e.g., review of file information, sampling/testing using PLM.]

ILLINOIS LICENSE NUMBER OF INSPECTOR: Not required for highway bridges.

NAME OF ANALYTICAL TESTING LABORATORY: [Enter name of lab if testing was conducted.]

15. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK:

[Enter description.]

METHODS TO BE EMPLOYED INCLUDING DEMOLITION OR RENOVATION TECHNIQUES.

[Enter information - provided by contractor.]

16. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS AT THE DEMOLITION OR RENOVATION SITE:

Removal of bituminous bridge deck wearing surface and waterproofing membrane, if one is present, will be accomplished in conformance with the IDOT Special Provision for "Asbestos Waterproofing Membrane and Asbestos Bituminous Concrete Surface Removal (BDE)."

17. IS DEMOLITION ORDERED BY A GOVERNMENTAL AGENCY? Y N (If Yes, a signed copy of Order must be attached.)

Governmental representative ordering the activity:

Title:

Date of Order:

Ordered Demolition Date:

18. FOR EMERGENCY RENOVATIONS: N/A

Date and Hour of Emergency:

Description of the Sudden, Unexpected Event (e.g. structure in danger of eminent collapse):

19. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLLED, PULVERIZED, OR REDUCED TO POWDER.

If unexpected asbestos is found, work that would disturb the asbestos will be suspended until any necessary inspection, testing, and notification to IEPA has been completed and a course of action that complies with 40CFR 61, Subpart M, has been determined.

20. I CERTIFY THAT AT LEAST ONE REPRESENTATIVE, TRAINED IN THE PROVISIONS OF 40 CFR PART 61, SUBPART M, SHALL BE ON-SITE DURING DEMOLITION OR RENOVATION, HAVING IN HIS OR HER POSSESSION, FOR INSPECTION, EVIDENCE THAT THE REQUISITE TRAINING HAS BEEN ACCOMPLISHED.

I CERTIFY THE ABOVE INFORMATION IS CORRECT.

Signature of Owner/Operator _____ Date _____
(Original Signature Only, Photocopy Not Valid)

*Not required under NESHAPS.

Mail this form to: IL Environmental Protection Agency, Attn: Asbestos Unit, P.O. Box 19276, Springfield, IL 62794-9276

State Owned Bridges – No Asbestos

(A list for each district has been provided to the respective District Office.)

State Owned Bridges Under Investigation For Asbestos

(A list for each district has been provided to the respective District Office. Updates to the lists will be transmitted to the affected District Offices when changes occur.)