
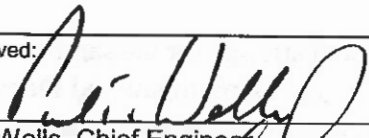
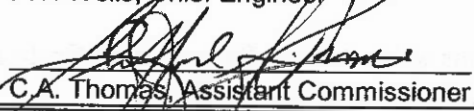


To: SUPERSEDED BY EB 21-057 EFFECTIVE 11/24/21		New York State Department of Transportation ENGINEERING INSTRUCTION	EI 02-016
Title: ASBESTOS IN BRIDGE COATINGS			
Distribution: <input type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33) <input checked="" type="checkbox"/> Main Office (30) <input checked="" type="checkbox"/> Consultants (34) <input checked="" type="checkbox"/> Local Govt. (31) <input type="checkbox"/> Contractors (39) <input checked="" type="checkbox"/> Regions/Agencies (32) <input type="checkbox"/> _____ ()	Approved:  P.T. Wells, Chief Engineer  C.A. Thomas, Assistant Commissioner		6/19/02 Date 6/19/02 Date

ADMINISTRATIVE INFORMATION:

- **Effective date:** Date signed.
- **Superseded issuance:** No previous issuances are superseded.

PURPOSE: Consolidation of existing asbestos-containing bridge coating guidance documents issued previously as memos from Environmental Analysis Bureau (EAB), Construction Division, Structures Design & Construction Division and Employee Safety and Health. Implementation of internal Department actions for compliance with State and Federal asbestos regulations associated with Construction, Bridge Maintenance and Structural Inspection activities.

TECHNICAL INFORMATION:

● **Policy change:** Historic Department guidance (memos, e-mails, EPM) associated with screening suspect structures for asbestos-containing coatings on steel members has included sampling and laboratory analysis following record plan review and visual confirmation by a NYSDOL asbestos certified building inspector. Several inspections conducted in 2001 and 2002 indicate that some residual material may not be visually discernable in all cases and that steel preparation and painting work conducted subsequent to application may be inhibiting efforts to visually screen suspect steel bridges for this material. In accordance with this recent assessment information, all pre-1981 paint applied to structural steel members should be assumed to be asbestos-containing unless confirmed otherwise by laboratory analysis.

● **Updated policy & actions:** Each Regional Director will designate one person to act as coordinator of the Region's efforts to sample, test, and disseminate information on the existence of asbestos in bridge coatings. This person shall work with bridge maintenance, bridge project designers, bridge inspectors, and construction to prioritize the order of sampling and testing for asbestos in bridge coatings. This person shall coordinate the sampling and testing efforts using in-house and consultant personnel as appropriate. Test results shall be made available to affected regional operating units in a timely manner and shall be submitted for incorporation in BIIS.

The Structures Division will develop a temporary system for collecting and reporting data concerning the existence of asbestos containing coatings on a bridge and shall incorporate said data into the new version of the Bridge Inventory and Inspection System (BIIS).

The Regions will arrange for the sampling and testing of all suspect bridges that are owned, maintained, or inspected by the Department and Department contracted Consultants. Regions shall also develop a comprehensive suspect bridge list, schedule and plan for overall testing completion within 2 years.

The Regions will establish Project Identification Numbers (PINs) for tracking all sampling and analysis activities associated with this effort.

Main Office Contracts Management Bureau will procure additional asbestos consultant term agreements in order to provide for necessary testing projected for 2003 and 2004.

Main Office Environmental Analysis Bureau will incorporate guidance contained herein and all referenced materials (regulatory variances, available specifications, special note examples, etc.) into a future update of the Environmental Procedures Manual, Chapter 1.3.

● **Interim guidance:** In-house or contracted staff performing scheduled or emergency bridge maintenance or inspection/assessment work on suspect bridges shall assume paint on structural members is asbestos-containing unless prior sample analysis results, available from the designated Regional Coordinator, has confirmed that it is not.

Scheduled or emergency steel repair or inspection/assessment work performed by either in-house or contracted staff on either assumed or confirmed bridges for asbestos-containing coatings that involves disturbance of the coating shall be performed in accordance with NYSDOT Blanket Variance Petition for Bridge Inspection & Emergency Repairs (NYS DOL File no. 02-0404). Variance copies are available from the Regional Landscape/Environmental Units and/or Regional Safety & Health Representatives.

Two-hour asbestos awareness training as described in the OSHA Construction Standard 29 CFR 1926.1101 is immediately necessary for all affected Regional Bridge Maintenance and Structural Inspection/Assessment staff.

Waste disposal of loose or removed paint debris shall be packaged and disposed of in accordance with ITEM 18571.9810M Treatment & Disposal of Asbestos and Lead-Based Coating Waste. Specification copies are available from the Regional Design Units.

Steel members with intact lead/asbestos coating(s) qualify for scrap metal exclusion under 6NYCRR Part 371.1 (g), if recycled. For all steel beam recycling, NYSDEC notifications are required under 6NYCRR Part 371.1 (c). If not recycled, steel members shall be disposed of in accordance with 40 CFR Part 61 Subpart M.

With respect to ongoing and contracts to be let, those contracts that involve steel bridges painted prior to 1981 should be reviewed to confirm that they were evaluated for the existence of asbestos in paint. Capital construction contracts that involve disturbance of confirmed asbestos-containing coatings

Steel members with intact lead/asbestos coating(s) qualify for scrap metal exclusion under 6NYCRR Part 371.1 (g), if recycled. For all steel beam recycling, NYSDEC notifications are required under 6 NYCRR Part 371.1 (c). If not recycled, steel members shall be disposed of in accordance with 40 CFR Part 61 Subpart M.

With respect to ongoing and contracts to be let, those contracts that involve steel bridges painted prior to 1981 should be reviewed to confirm that they were evaluated for the existence of asbestos in paint. Capital construction contracts that involve disturbance of confirmed asbestos-containing coatings (painting, rehabilitation, demolition, etc.), not previously identified by sampling and analysis performed during project design, require incorporation of asbestos specifications, regulatory variances and special notes recommended and/or prepared by a NYSDOL certified asbestos project designer. Asbestos project design guidance is available in Chapter 1.3 of the Environmental Procedures Manual. Actual asbestos project design work should be coordinated through Regional Landscape/Environmental units by use of certified in-house or consultant staff.

Asbestos consultant services for sampling, project design and project monitoring are available through existing environmental term agreements managed by Main Office Consultant Management Bureau. Regional use of these term agreements is coordinated through Regional Landscape/Environmental Managers and/or Regional Environmental Contacts.

Construction staff performing inspection activities on affected projects shall follow the current work practices described in Safety Bulletin SB 95-7 and in MURK Part 1-C (Chapter III.M.1). Asbestos abatement project monitoring services are available through available term agreements if inspected by State forces or by supplemental agreement if inspected by consultant forces. Additional guidance on asbestos abatement management during construction is provided in the Environmental Procedures Manual (Chapter 1.3). Asbestos awareness training for Construction inspection staff should be coordinated with Regional Employee Safety and Health representatives.

● **Other information:** Information associated with Regional and Main Office coordinator designees is available from the Main Office contacts listed below.

TRANSMITTED MATERIALS: NYSDOT Sample & Laboratory Analysis Guidance/Protocol for Asbestos in Bridge Paint is attached hereto. Also provided is a current list of NYSDOH ELAP certified laboratories located in New York State capable of providing asbestos analysis for nonfriable organically bound bulk samples.

BACKGROUND: Identification of the presence of asbestos in paint coatings applied as waterproofing and corrosion protection on the steel of various 1950 and 1960 constructed bridges in New York State has been confirmed in several Regions.

In 1996 several upstate bridges were identified as having an asbestos-containing coating applied to structural steel members for purposes of thermal protection above rail lines and as a waterproofing/salt protection below open drain grates. In addition, and to a lesser extent, this coating may have been applied beneath joints and on steel girders typically 5 to 10 feet back from piers and abutments. Historical application dates range from the 1950's to early 1970's. For purposes of this EI, all coatings on steel bridges constructed prior to 1981, unless determination otherwise by analytical testing, shall be considered asbestos containing. Requirements for

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analytical testing, data collection, asbestos certification and training, work practices, and personal protective equipment are contained herein or in NYSDOT Blanket Variance Petition for Bridge Inspection & Emergency Repairs (NYSDOL File no. 02-0404).

DISTRIBUTION: The NYSDOT Blanket Variance Petition for Bridge Inspection & Emergency Repairs (NYSDOL File no. 02-0404) will be distributed to Regional Asbestos Coordinators and Regional Safety & Health Representatives.

REFERENCES: 29CFR 1910.1001 - OSHA General Industry Standard for Asbestos
29 CFR 1926.1101 - OSHA Constuction Standard for Asbestos
40 CFR Part 61, Subpart M - National Emission Standards for Haz. Air Pollutants
12 NYCRR Part 56 - NYS Industrial Code Rule 56

CONTACT:

Brian Gibney-Employee Safety & Health Bureau, 518-457-2420, BGibney@gw.dot.state.ny.us

Jonathan Bass- Environmental Analysis Bureau, 518-485-5315, JBass@gw.dot.state.ny.us

Daniel Feeser - Structures Design & Construction Division, 518-457-5715, DFeeser@gw.dot.state.ny.us

Pete Weykamp - Transportation Maintenance Division, 518-457-8485, PWeykamp@gw.dot.state.ny.us

Ken Dodge - Construction Division, 518-485-1832, KDodge@gw.dot.state.ny.us

**NYSDOT SAMPLE & LABORATORY ANALYSIS GUIDANCE/PROTOCOL
ASBESTOS IN BRIDGE PAINT (Dum-Dum for Metal)**

March, 2002

All steel structures with existing paint applied prior to 1981 are suspect for having residual asbestos-containing paint unless sampling and analytical testing has confirmed otherwise. Likely application locations include the following:

1. Beneath open steel grates on interior girders, cross members and girder fascias
2. Beneath joints and on girders 5 to 10 feet back in a longitudinal direction from piers and abutments

Sample Collection

Separate bulk sampling strategies shall be executed for each suspect structure. Laboratory confirmation of suspect paint shall include a minimum of three (3) bulk samples per homogeneous area (material of similar texture & color/appearance). Samples collected shall be comprised of the entire coating application thickness and be approximately one (1) square inch in surface area size per sample. Homogeneous area determinations shall be made relative to the suspect coating being sampled and shall not be based on structural diversity of components (bearings, cross members, stringers, support towers, etc.). Locations for each homogeneous sample group shall be determined in a random manner and include varied structural components that have homogeneous application.

Sample Shipment

All bulk samples shall be maintained under Chain-of-Custody (COC) record from time of collection through laboratory analysis. In-house staff conducting sampling should obtain blank COC forms from the laboratory performing the asbestos analysis. Sample packaging shall be the preference of the sampler (ziplock bags, vials, etc.). In addition, laboratories may have special packaging requests and should be consulted prior to sampling or shipment. Sample numbering and location description shall be adequate to post-determine BIN, homogeneous area description and point of sample collection.

Laboratory Sample Analysis

Bridge paint samples for asbestos bulk analysis shall be considered Nonfriable Organically Bound (NOB) materials. Laboratories used for analysis of bulk paint samples shall be accredited by the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) for analysis of NOB asbestos samples. NOB analysis requires two levels of microscopy in order to report a sample group negative for asbestos (1% or less by weight). Initial analysis of all samples in a homogeneous group shall be by gravimetric reduction and Polarized Light Microscopy (PLM). Any individual positive sample result (>1% by weight) by PLM confirms the entire homogeneous area as asbestos-containing and no further laboratory analysis is required for that group. If all PLM analyses are negative in a single group, Transmission Electron Microscopy (TEM) confirmation analysis is required on the group. For paint samples it is recommended that if all PLM analyses are negative in a single group, then TEM confirmation be performed on all samples in the group.

Data Dissemination

Inventory lists of suspect structures that tested both positive and negative shall be maintained by each Region. Additional guidance is to be provided by the Structures and Transportation Maintenance Divisions. In addition, this data shall also be transmitted to Jonathan Bass in Main Office, Environmental Analysis Bureau for statewide inventory listing. Main Office data transmittal shall include BIN, homogeneous area description and group results (positive or negative), and date of sample collection.

Department Asbestos Standby Consultants

Existing term agreement consultants for asbestos management work currently are managed by Main Office, Consultant Management Bureau. Use of these agreements for asbestos bulk sampling and analysis should be coordinated through Regional Landscape/Environmental Manager or Regional Environmental Contact.

**ASBESTOS TRANSMISSION ELECTRON MICROSCOPY (TEM) LABORATORIES
IN NEW YORK STATE**

For Non-Friable Organically Bound (NOB) Asbestos Bulk Samples

Adirondack Environmental Services
900 Albany Shaker Road
Latham, NY 12110
Thomas Hare 518-785-0128

EMSL Analytical, Inc.
490 Rowley Road
Depew, NY 14043
Kenneth Najuch 716-651-0030

Chopra-Lee, Inc.
1815 Love Road
Grand Island, NY 14072
Kuldip Chopra 716-773-7625

Paradigm Environmental Services, Inc.
179 Lake Avenue
Rochester, NY 14608
Bruce Hoogesteger 585-647-2530

Electron Microscopy Services Labs
208 Stonehenge Lane
Carle Place, NY 11514
Michelle McGowan 516-997-7251

Ambient Laboratories
10 Morris Avenue
Glen Cove, NY 11542
William Esposito 212-463-7812

O'Brien & Gere Laboratories, Inc.
5000 Brittonfield Parkway, Suite 300
Syracuse, NY 13057
David Hill 315-437-0200

Athenica Environmental Services, Inc.
45-09 Greenpoint Avenue
Sunnyside, NY 11104
Spiro Dongaris 718-784-7490

The Department also has an existing procured laboratory that is capable of sending asbestos NOB samples out for analysis. That Laboratory and contact is as follows:

Hudson Environmental Services, Inc.

Mail To:

22 Hudson Falls Road
South Glens Falls, NY 12803

Sample Delivery To:

211 Ferry Blvd.
South Glens Falls, NY 12803
William Frawly 518-747-1060

Enviro Science Consultants, Inc.
2150 Smithtown Avenue
Ronkonkoma, NY 11779
Glen Neuschwender 631-580-3191

Eastern Analytical Services, Inc.
4 Westchester Plaza
Elmsford, NY 10523
Paul Stascavage 914-592-8380

EMSL Analytical, Inc.
175 Clearbrook Road
Elmsford, NY 10523
Robert Georgens 914-592-4688

Testwell Laboratories, Inc.
47 Hudson Street - Building B
Ossining, NY 10562
Deborah McCarl 914-762-9000

ATC Associates, Inc.
104 East 25th Street, 10th Floor
New York, NY 10010
Milena Lowd 212-353-8280

EMSL Analytical, Inc.
307 West 38th Street
New York, NY 10018
212-290-0051

Scientific Laboratories, Inc.
117 East 30th Street
New York, NY 10016
Paul Mucha 212-679-8600

Kam Consultants
35-40 36th Street
Long Island City, NY 11106
George Kouvaras 718-729-1997