June 14, 2006

NYS Dept of Transportation
Environmental Analysis Bureau, Pod #41
50 Wolf Rd
Albany NY 12232

RE: File No. 06-0339

Dear Sir/Madam:

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH

The attached is a copy of Decision, dated 6/14/2006, which I have compared with the original filed in this office and which I DO HEREBY CERTIFY to be a correct transcript of the text of the said original.

If you are aggrieved by this decision you may appeal within 60 days from its issuance to the Industrial Board of Appeals as provided by Section 101 of the Labor Law. Your appeal should be addressed to the Industrial Board of Appeals, Empire State Plaza, Agency Building 2, 20th Floor, Albany, New York, 12223 as prescribed by its Rules and Procedure, a copy of which may be obtained upon request.

WITNESS my hand and the seal of the NYS Department of Labor, at the City of Albany, this 14th day of June Two thousand six

Blaise Thomas, P.E.
Associate Safety and Health Engineer
Engineering Services Unit
The Petitioner, pursuant to Section 30 of the Labor Law, having filed Petition No. 06-0339 on April 27, 2006 with the Commissioner of Labor for a variance from the provisions of Industrial Code Rule 56 as hereinafter cited on the grounds that there are practical difficulties or unnecessary hardship in carrying out the provisions of said Rule; and the Commissioner of Labor having reviewed the submission of the petitioner dated April 26, 2006; and

Upon considering the merits of the alleged practical difficulties or unnecessary hardship and upon the record herein, the Commissioner of Labor does hereby take the following actions:

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<tr>
<th>Case No.</th>
<th>Rule Reference</th>
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<tbody>
<tr>
<td>Case No. 1</td>
<td>ICR 56-11.6(b)(1)</td>
</tr>
<tr>
<td>Case No. 2</td>
<td>ICR 56-11.6(b)(3)</td>
</tr>
</tbody>
</table>

VARIANCE GRANTED. The Petitioner's proposal to follow the procedures delineated in the attached 17 page submittal to remove various non-friable ACM materials from surfaces and substrates on Bridges, Highways and Right of Ways statewide is accepted; subject to the Conditions noted below:

THE CONDITIONS

1. As written with modifications noted.
In addition to the conditions required by the above specific variances, the Petitioner shall also comply with the following general conditions:

**GENERAL CONDITIONS**

1. A copy of this DECISION and the Petitioner's proposals shall be conspicuously displayed at the entrance to the personal decontamination enclosure.

2. This DECISION shall apply only to the removal of asbestos-containing materials from the aforementioned areas of the subject premises.

3. The Petitioner shall comply with all other applicable provisions of Industrial Code Rule 56-1 through 56-12.

4. The final say as to interpretation of this variance rest solely with the NYS Dept of Labor Engineering Services Unit. Any deviation from variance conditions shall render this variance Null and Void pursuant to 56-12.2.

5. This DECISION shall terminate on June 30, 2009.

Date: June 14, 2006

PREPARED BY: Edward A. Smith, P.E.
Senior Safety and Health Engineer

REVIEWED BY: Christopher G. Alonge, P.E.
Senior Safety and Health Engineer

LINDA ANGELLO
COMMISSIONER OF LABOR

By

Thomas Bläise, P.E.
Associate Safety and Health Engineer
Petition for Variance or Other Relief

Description of Work:
Demolition, renovation and maintenance of bridges and highways

Affected Structures:
State and County owned bridges and highways throughout New York State

Affected Agencies:
New York State Department of Transportation (NYSDOT)
New York State Thruway Authority (NYSTA)
New York State Canal Corporation (NYSCC)
County Highway Departments Statewide

Nature of Work:
Removal of nonfriable asbestos-containing materials from surfaces and substrates on bridges and highways

SH-751 Box 25 - Reason for Request for Variance

NYSDOT, NYSTA, NYSCC and County level Highway Departments Statewide encounter a wide variety of nonfriable asbestos-containing materials as part of maintenance and construction programs in connection with demolition, renovation and maintenance of bridge and highway facilities. These include various bond breakers, joint fillers, caulks, grouts, sealers, coatings, utility conduits and similar type applications, and make up greater than 90% of asbestos abatement work associated with bridge and highway work each year.

In 1997, 2000 and 2003 NYSDOT petitioned and received approval for Blanket Variances (File Numbers 9701065, 001228 & 030708) which have been greatly successful in simplifying bridge and highway asbestos project design and facilitating abatement associated with construction and maintenance work. These variances have been necessary due to both infeasible engineering controls required in 12 NYCRR 56 and associated economic burden in applying the asbestos regulation to exterior abatement on active bridge and highway projects.

This new blanket variance petition is proposed as a means to continue to incorporate safe, effective abatement methods for the multitude of nonfriable asbestos applications NYSDOT, NYSTA, NYSCC and County Highway Departments Statewide encounter during bridge and highway work. This new variance is also necessary due to the January promulgation of the amended Industrial Code Rule whereby all previously granted Blanket Variances will expire in September of 2006.

It is the intention of NYSDOT, NYSTA, NYSCC and County Highway Departments Statewide to provide an equivalent, if not higher, level of protection for removal workers and the general public, while permitting the proper removal of the nonfriable asbestos materials in a cost effective manner. The proposed procedures will not expose removal workers or the general public to unacceptable levels of asbestos fibers, and are a reasonable approach for the careful and controlled removal of nonfriable asbestos-containing materials from bridges and highway right-of-way.
The following work procedures for small and large projects shall always apply during abatement of any nonfriable asbestos-containing transite, tars, bond breakers, joint fillers, caulks, grouts, sealers, coatings, utility conduits or similar type applications from bridges and highway right-of-way.

1. Regulatory relief is requested from provisions of ICR 56 Subpart 56-11.6 (b) (1). The portion(s) of the bridge or highway right-of-way actively being worked on shall be considered to be the asbestos work area(s). Delineation of the asbestos work area(s) shall consist of construction fencing a minimum of 1.8 meters in height. For bridge work, this delineation shall apply to either the above or below deck portion of the bridge, depending on where the actual abatement is taking place. Asbestos work area(s) shall be internal to any and all necessary traffic control. All traffic control shall conform to the NYSDOT Standard Specifications, the Manual of Uniform Traffic Control Devices (MUTCD) and the project contract documents. Traffic control not including concrete safety shape barrier shall include use of stationary shadow vehicle(s) in accordance with §619-1.02 Basic Maintenance and Protection of Traffic of NYSDOT Standard Specifications. In areas where it is possible to access the nonfriable materials from the ground when working below a bridge deck, or from equipment on the ground (scaffold or mechanical lift), the work area will be considered that which is delineated by the construction fence. In areas where a work platform must be suspended from the bridge, the work area will be considered to be the area between the platform and the underside of the bridge deck. The area inside the construction fence shall be considered to be the asbestos work area. The asbestos work area shall be accessible through only one entrance/exit. The vacation of the asbestos work area(s) and use of warning signs shall comply with Industrial Code Rule 56 -7.4 (a, b & c). Work area access shall be limited to NYSDOL certified personnel during abatement activities.

2. Regulatory relief is requested from provisions of ICR 56 Subpart 56-11 (b) (3). A remote personal decontamination enclosure system, sited as close as practicable to the asbestos work area and otherwise complies with ICR 56 Subpart 56-7.5, shall be utilized.

3. A waste decontamination enclosure system shall be utilized in conformance with ICR 56 Subpart 56-7.5 (f).

4. Where high volume traffic conditions do not allow partial or entire bridge or highway closure for the entire duration of the asbestos removal involving nonfriable asbestos materials located within or directly below the bridge deck, approach or highway, procedures including plasticizing with 2 layers of 6 mil polyethylene under steel plating may be used to temporarily isolate the work area prior to re-opening the affected travel lane(s) to traffic. Thereafter, when traffic volume decreases and asbestos removal operations can resume, work area isolation of the bridge will again be in accordance with methods in place prior to temporary isolation.
The additional following procedures/requirements shall apply to removal of concrete-encased, nonfriable utility conduits:

1. Construction fence will be placed along both sides of the work area where utility conduits are being removed from medians and bridge sidewalks.

2. Due to removal techniques requiring partial demolition of the concrete in order to access the utility conduit(s), plasticizing of the affected median or sidewalk will be limited to critical coverage (i.e., drains, grates, etc.) with four layers of 6 mil fire retardant polyethylene.

3. Due to hardships incurred in manual demolition of concrete in order to access the encased utility conduit(s), it is proposed that jack-hammers and/or concrete saws be utilized to initially break up the concrete and isolate the area surrounding the conduits using wet methods.

4. Nonfriable utility conduits will be physically removed as intact as possible from the area of initial mechanical access using manual means and wet methods. Additional following procedures/requirements shall apply to removal of concrete-encased, nonfriable conduits:

   - Construction fence will be placed along both sides of the work area where utility conduits are being removed from medians and bridge sidewalks.
   - Due to removal techniques requiring partial demolition of the concrete in order to access the utility conduit(s), plasticizing of the affected median or sidewalk will be limited to critical coverage (i.e., drains, grates, etc.) with four layers of 6 mil fire retardant polyethylene.
   - Due to hardships incurred in manual demolition of concrete in order to access the encased utility conduit(s), it is proposed that jack-hammers and/or concrete saws be utilized to initially break up the concrete and isolate the area surrounding the conduits using wet methods.
   - Nonfriable utility conduits will be physically removed as intact as possible from the area of initial mechanical access using manual means and wet methods.
   - Additional following procedures/requirements shall apply to removal of concrete-encased, nonfriable conduits:

5. Cleaning methods shall include HEPA vacuuming and wet wiping of the entire access area and any debris and/or contamination shall be disposed of as asbestos contaminated waste.

6. Excess water generated from the removal or cleaning process will be disposed of as asbestos waste or filtered through a 5 micron filtration system prior to discharge.

The additional following procedures/requirements shall apply to the removal of nonfriable utility conduits buried in bridge approaches, highway right-of-way or similar feature:

1. Removal of asphalt and/or soil overburden to within close proximity of the nonfriable buried utility conduit(s) shall be performed by power shovel or similar mechanical means. Hand tools or other manual methods shall be used to expose the conduit(s) on all sides in the area designated for removal.

2. Areas of utility conduit at locations of proposed cuts/disconnections shall be removed within commercially available glovebags and negative pressure tent enclosures.

3. Earth surfaces within the removal area shall be scraped clean of any residual asbestos debris and/or contamination and be disposed of as asbestos contaminated waste.

4. A project monitor visual inspection, performed in accordance with ICR 56 Subpart 56-9.2 (e) (1), shall be conducted for each glovebag/tent operation and for each entire asbestos abatement regulated work area prior to tent or general work area tear down.
The additional following procedures/requirements shall apply to the removal of nonfriable suspended utility conduit(s) from bridge components or similar feature:

1. Areas of utility conduit at locations of proposed cuts/disconnections shall be removed within commercially available glovebags and negative pressure tent enclosures.

2. A project monitor visual inspection, performed in accordance with ICR 56 Subpart 56-9.2 (e) (1), shall be conducted for each glovebag/tent operation and for each entire asbestos abatement regulated work area prior to tent or general work area tear down.

The additional following procedures/requirements shall apply to the removal of structural steel components having nonfriable coatings during bridge rehabilitation and/or demolition:

1. Prior to any steel removal, nonfriable coatings which are loose and susceptible to falling off during steel removal shall be removed from the entire work area using manual methods.

2. Prior to any steel removal, nonfriable coatings shall be removed in localized areas where demolition or rehabilitation work requires steel cutting. This shall include an approximate 12 inch removal swath, spanning the entire length of each cut. Any mechanical removal methods used for this localized work shall include use of HEPA shrouded tools.

3. Removal of nonfriable coated structural members shall be performed without disturbance of the coatings and all dismemberment shall be directed by a licensed asbestos abatement contractor.

4. Any visible coating debris generated during the dismemberment, cutting or loading activities shall be cleaned up by the licensed asbestos abatement contractor. Earth surfaces within the removal area shall be scraped clean of any residual asbestos debris and/or contamination.

5. Personnel air samples, collected and analyzed for OSHA personal worker protection purposes, shall be collected every day during abatement activities. All results shall be included in the daily project log for the project.

6. A project monitor visual inspection, performed in accordance with ICR 56 Subpart 56-9.2 (e) (1), shall be conducted for each asbestos abatement regulated work area prior to work area tear down.

7. All loose asbestos and lead coating waste, accumulated during the steel removal activities, shall be packaged, transported and disposed of in accordance with NYSDOT ITEM 18571.9810-01 - Treatment and Disposal of Asbestos and Lead-Based Coating Waste (See Attachment A.)

8. Steel members with intact lead/asbestos coatings qualify for scrap metal exclusion under 6NYCRR Part 371.1 (g)(1)(iii)(b); if recycled. For all steel beam recycling, New York State Department of Environmental Conservation (NYSDEC) notifications, required under NYCRR Part 371.1 (c)(7), shall be made and copies posted onsite prior to any steel member removal from the site.
The additional following procedures/requirements shall apply to the removal of nonfriable coatings during bridge painting:

1. Enclosure and ventilation filtration of the asbestos work area shall conform with construction details as provided in the NYSDOT Class A Containment System For Paint Removal (See Attachment B.).

2. An internal single layer of reinforced, 6 mil polyethylene sheeting will also be provided on the walls and floor of the enclosure and sealed in accordance with 56-7.11 (e).

3. The enclosure shall apply to either the above or below deck portion of the bridge, depending on where the abatement is taking place. The area inside the enclosure shall be considered to be the asbestos work area.

4. The personal and waste decontamination enclosure system(s) shall be attached to the work area unless physical restrictions prevent attachment. Any necessary remote decontamination enclosure systems shall be sited as close as practicable to the asbestos work area.

5. Coating removal methodology shall include use of pneumatically delivered blast abrasive that includes water injection at the nozzle. The volume of water will be controlled at the nozzle and will include a maximum percentage ratio of abrasive to water of 75:25. Percentages will be adjusted accordingly in order to eliminate any abrasive emissions inside the enclosure. All nozzle delivery technology shall be proposed by the contractor and approved by the facility owner’s Project Engineer. Examples of nozzle technologies that would be considered acceptable for blast delivery are provided (See Attachment C.). Other equivalent technologies may be approved for the work based on review by the Project Engineer.

6. Personnel air samples, collected and analyzed for OSHA personal worker protection purposes, shall be collected every day during abatement activities. All results shall be included in the daily project log for the project.

7. A project monitor visual inspection, performed in accordance with ICR 56 Subpart 56-9.2 (e) (1), shall be conducted for each asbestos abatement regulated work area prior to work area tear down.

8. All asbestos/lead waste shall be removed from the enclosure utilizing PVC flex tubing directly to exterior enclosed containers by vacuum equipment equipped with HEPA filtration. All bulk waste material will be suctioned into an enclosed, lined container by vacuum methods. All other waste not able to be vacuumed up and contaminated tools/equipment shall pass through the waste decontamination enclosure system. All asbestos and lead waste shall be packaged, transported and disposed of in accordance with NYSDOT ITEM 18571.9810-01 - Treatment and Disposal of Asbestos and Lead-Based Coating Waste (See Attachment A.)

SH-751 Box 17 - Previously Granted Labor Law Asbestos Variances Considered In Connection With Development Of This Petition

NYSDOL File Numbers: 97-01065, 00-1228, 03-0708
ITEM 18570.98100XXM — TREATMENT AND DISPOSAL OF ASBESTOS AND LEAD-BASED COATING WASTE

DESCRIPTION

The work shall consist of accumulating, packaging, labeling, loading, transporting, treating, and disposing of lead-based paint and asbestos coating waste declared to be a hazardous waste containing lead and asbestos.

Paint/Asbestos Coating Removal Waste. For purposes of this item, paint removal waste is defined as removed paint and coating materials combined with any materials used to remove the waste. The paint and asbestos coating removal waste will be referred to throughout the item text as "waste". The waste contains the following:

Asbestos Coating: Asbestos fibers, titanium dioxide, chromium oxide, yellow iron oxide, lampblack, dried lung oil, fillers, driers and other miscellaneous materials.

Paint: Lead based paint containing basic lead silica chromate, titanium dioxide, chromium dioxide, magnesium silicate, linseed oil, alkyd resin, fillers, driers, and other miscellaneous materials.

Moisture: Water added during packaging to ensure wetting of asbestos.

Testing of the typical sample indicates asbestos fibers at approximately 10-20% by weight, thereby requiring handling and disposal as an asbestos containing material and adherence to 40 CFR Part 61. Also, based on testing of a typical waste sample by the Toxicity Characteristic Leaching Procedure (TCLP), the waste is considered a lead characteristic hazardous waste of EPA waste code number, D008. Although chromium is present in the waste, the results of the TCLP procedure indicated concentrations of chromium well below TCLP criteria for hazardous waste due to chromium. TCLP semi-volatiles and non-volatiles were all non-detectable. The analysis results are attached.

The waste is a DOT Hazardous Material; proper shipping description is as follows: Hazardous waste, solid, n.o.s., 9, NA3077, PG III, RQ (D008, Asbestos). Note: The RQ (reportable quantity) description is required for any containers containing more than the reportable quantity of 10 pounds listed on the hazardous substance list for hazardous waste code D008.

The waste does not contain PCB's, pesticides, cyanides, or greater than 1000 ppm halogenated organic compounds. The waste is not a RCRA reactive, corrosive or ignitable, or a source-listed or chemical product-listed waste. It is not radiological or etiological.

The waste shall be handled and disposed of following all of the requirements for both a RCRA hazardous waste of code D008 and an asbestos containing waste. All testing of the waste necessary to satisfy the requirements of the chosen Disposal Facility or Transporter shall be the responsibility of the Contractor.

Hazardous Waste Disposal Facility. Prior to generating any waste, the Contractor shall supply the Engineer with a letter from a legally permitted Hazardous Waste Disposal Facility, stating that the facility has agreed to accept the waste, containing both lead and asbestos, generated by the work requirements of this project; is authorized to accept the waste under the requirements of the State of residence; has the required capacity to treat and dispose of the material; and will provide, or assure the ultimate disposal method indicated on the Uniform Hazardous Waste Manifest and Asbestos Waste Shipping Record. The letter shall be signed by a representative of the Disposal Facility who is legally authorized to sign such an agreement. The Engineer shall be given the original signed letter; facsimile copies will not be acceptable.

Waste Transport. All waste resulting from paint/coating removal operations shall be in transit to the disposal site no later than 45 calendar days subsequent to 1000 kilograms of waste accumulated at the site, or two weeks following demobilization of the site, whichever occurs first.

January, 1998
ITEM 18570 98100XXM - TREATMENT AND DISPOSAL OF ASBESTOS AND LEAD-BASED COATING WASTE

Waste shall be accumulated, handled, packaged, loaded, transported, treated and disposed in accordance with all applicable Federal, State and local laws, rules, regulations, and codes. The Contractor's failure to comply with the aforementioned deadlines may result in actions described under Basis of Payment of this item.

Waste Transporter. Waste shall be transported by only permitted waste transporters holding current 6NYCRR Part 364 Waste Transporter Permits for transport of hazardous or industrial wastes to the selected facility. The Contractor must show evidence that they or their contracted hauler have current permits to remove the waste to the selected facility.

Minimum Work Requirements. The Contractor is hereby notified that this work requires the following as a minimum:

A. Waste transporter identification number issued by USEPA.
B. Disposal facility identification number issued by USEPA. (This will be supplied by the disposal facility).
C. Generator site identification number issued by USEPA. (This will be supplied by the Department through the Engineer).
D. Conformance to 6NYCRR 364. Part 364 governs waste transporters. The Contractor shall furnish a copy of the Part 364 permit to the Engineer.
E. Conformance to 6NYCRR 372. Part 372 governs manifest requirements.
F. Conformance to 6NYCRR 373. Part 373 governs treatment, storage and disposal facilities and contains specific generator requirements.
G. Conformance to 40 CFR 268. Part 268 includes the Federal prohibitions for land disposal of untreated hazardous wastes. The disposal facilities must first treat the waste to meet uniform treatment standards.
H. Conformance to 40 CFR 61. Part 61 includes asbestos waste shipment records, marking, labeling, packaging and disposal requirements.
I. Conformance to 49 CFR 172-173. Parts 172-173 govern the transportation of hazardous materials.
J. Conformance to 12NYCRR 56 or approved variance for the project. Part 56 governs asbestos handling requirements.

NOTE: 6NYCRR regulations are administered by the N.Y.S. Department of Environmental Conservation, Albany, NY. 12NYCRR regulations are administered by the N.Y.S. Department of Labor. Title 40 of the Code of Federal Regulations (CFR) are administered by the US Environmental Protection Agency, Region II, N.Y., N.Y. Title 49 of the CFR is administered by the US Dept of Transportation, Washington, D.C.

MATERIALS

Waste containerization and onsite storage shall comply with the requirements of 12NCRR 56 and/or approved asbestos variances for the project as applicable and by the applicable sections of 6NYCRR Parts 372 and 373 for on site accumulation of hazardous wastes. The Contractor shall supply all containers, equipment and supplies for storage and disposal. Off-site transport of the wastes shall be in double-bagged 150 micron polyethylene bags that are placed within USDOT approved drums or rolloffs. The Contractor shall furnish the Engineer with a signed statement from the Disposal Facility that the containers proposed for use by the Contractor are acceptable to the Facility. All equipment and containers or rolloffs must meet the requirements for transport of both asbestos and hazardous wastes and shall be approved by the Engineer prior to use. The dry volume capacity of the containers, in cubic meters, shall be clearly marked upon each container, in a location easily readable by the Engineer.

January, 1998
CONSTRUCTION DETAILS

Containers. All generated waste shall be collected and sealed concurrent with generation. Containerization shall be double-bagged within two 150 micron polyethylene bags placed within containers or rolloffs that meet the requirements of 49 CFR 172-173 for transport on public roadways. Measures must be taken to prevent the blowing or dispersion of the waste during loading operations and while being transported. Drums and rolloffs shall be closed during storage and transport. Contractor shall inspect drums and rolloffs in storage, correct any deterioration, and document at least weekly inspection. No waste shall be left exposed to the elements at the end of the working day.

All containers and rolloffs shall be located in a place secured from traffic and in a manner acceptable to the Engineer.

Each container and rolloffs shall be labeled in accordance with US Department of Transportation regulations.

Each container or rolloff shall be permanently labeled as a hazardous waste in the following manner:

HAZARDOUS WASTE: Federal law prohibits improper disposal. If found, contact the nearest police, or public safety authority, or the US Environmental Protection Agency.

Generator's Name: NYSDOT

Manifest Document No

Date:

BIN:

Note: The date shall be the generation date. It shall be entered by the Engineer using permanent marking material supplied by the Contractor.

In addition, containers shall be permanently labeled as an asbestos dust hazard as required by 40 CFR Part 61.

Labeling. All labeling, marking (except mark date), and placarding shall be the responsibility of the Contractor and shall be done under the supervision of the Engineer. This work shall be completed to the Engineer's satisfaction prior to the filling or transportation of any particular container or rolloff. All label markings shall be permanent, printed in English, displayed on a background of contrasting color unobscured by other labels, or attachments. Labeling shall be located away from other markings that could substantially reduce its effectiveness.

Document Preparation. All document preparation and distribution, including any Uniform Hazardous Waste Manifests, Asbestos Waste Shipment Records, Land Disposal Restriction Notifications, and Shipping Emergency Response Information shall be the responsibility of the Contractor. The Engineer will sign the Generator's Certification on the Hazardous Waste Manifest. The LDR (Land Disposal Restricted) certifications shall be completed and attached to the manifest, as required by 40 CFR.
ITEM 18570.98100XXM - TREATMENT AND DISPOSAL OF ASBESTOS AND LEAD-BASED COATING WASTE

Part 268 "Land Disposal Restrictions". All waste shall be documented, transported, treated, and disposed as required by Federal, State, and local laws, regulations, and codes.

Multiple Collection. It is permissible for the transporting vehicle to pick up containerized paint waste debris from one or more bridge sites for delivery to an authorized treatment, storage and disposal facility (TSDF) if the following conditions are met:

1. The materials picked up at each site must be essentially identical in physical and chemical characteristics. No materials other than the NYSDOT paint and asbestos coating waste debris may be included if wastes from several individual sites are combined on the same vehicle.
2. All of the component shipment are presumed to be both a D008 hazardous waste and an asbestos waste and shall be disposed of as such.
3. A hazardous waste manifest and asbestos waste shipment record are prepared for each generating bridge site. Each manifest and record must reflect the quantity in cubic meters shipped from each bridge. In sum total, the manifests and records accompanying the shipment must account for the entire volume transported.
4. All component shipments are intended to be conveyed to the same TSDF, and the TSDF has agreed to accept the consolidated load.

Paint and Asbestos Coating Waste Stabilization.
For the purposes of this item, treatment of the lead in paint/coating waste as required by the Federal land disposal restriction regulations (40 CFR 268) is presumed to require stabilization of the waste such as mixing it with Portland cement and water as necessary at the permitted hazardous waste Treatment or Disposal facility. The stabilized waste shall meet the uniform treatment standards prior to disposal in a permitted hazardous waste landfill.

METHOD OF MEASUREMENT

The work will be measured as the number of cubic meters of waste accumulated, packaged, transported, treated, and disposed in accordance with the requirements of this item. The actual quantity within a single container or rolloff will be determined by the Engineer. Once the Engineer determines the quantity within a specific container or rolloff, that container or rolloff shall be sealed and not thereafter tampered with. No additional waste shall be placed in it, nor shall any be removed from it. Under no circumstances will a container or rolloff be measured as containing more than the maximum dry volume capacity marked on it.

BASIS OF PAYMENT

The unit price bid per cubic meter shall include the cost of all labor, materials, equipment, sampling, testing, and fees necessary to complete the work based on the assumption that treatment by stabilization will satisfy the applicable Federal regulations.

January, 1998
ITEM 18570.9810XXM - TREATMENT AND DISPOSAL OF ASBESTOS AND LEAD-BASED COATING WASTE

Should this prove not to be the case on an industry wide basis, as opposed to an individual treatment or disposal facility, the difference in cost between the cost of stabilization and the method subsequently found to be necessary shall provide the basis for an order on contract. Only waste for which manifest copies are returned to the Engineer by the Contractor and Disposal Facility will be authorized for payment.

If the Department is fined or penalized as a result of the Contractor's performance or lack thereof on this item, in addition to other remedies the Department may possess, said fine or penalty will be deducted from monies due the Contractor.

The extent of the Contractor's compliance with the provisions under timeliness of disposal will be considered as relevant in any future determination of an award to the Contractor as the lowest responsible bidder for any project under the supervision of the Department.

Payment will be made under:

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<th>Item No.</th>
<th>Item</th>
<th>Pay Unit</th>
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<tr>
<td>18571.9810nnM</td>
<td>Treatment and Disposal of Asbestos and Lead-Based Paint Waste</td>
<td>Cubic Meter</td>
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</table>

NOTE: nn denotes serialized pay item. See §101-53.
CONSTRUCTION DETAILS

Rigid or flexible materials may be used to construct the containment enclosure. Rigid materials shall be impermeable and may be comprised of plywood panels, or corrugated panels of steel, aluminum, reinforced fiberglass, or another suitable material. Flexible materials shall be impermeable and fire retardant. Flexible covers will be allowed for flooring only if the ground and paved surfaces are smooth surfaces from which debris can be collected by vacuuming. If a smooth ground surface is not available, rigid materials shall be used for the floor of the enclosure.

A rigid support structure comprised of scaffolding and framing or a flexible support structure comprised of a cabling system may be used as a framework for the enclosure. Containment materials shall be secured to the support structure.

All mating surfaces between the bridge structure and the containment enclosure, and all joints and seams formed in the fabrication of the enclosure shall be sealed. Joints and seams may be sealed by taping or caulking, or by overlapping materials, providing the other provisions of this specification are adhered to. Flexible materials shall be sealed by overlapping. The minimum overlap shall be 610 mm, and the overlapped materials shall be secured by clamping or taping or other suitable methods at intervals not exceeding 610 mm. Multiple overlapping door tarps shall be used for the entryway.

Dust collection equipment shall be 99.9% efficient against the passage of dust and particles 2 microns and greater in size. The size of the exhaust fan system supplied shall be designed to produce an average minimum crossdraft air velocity or an average minimum downdraft air velocity inside the containment enclosure. For enclosures designed with horizontal air flow, the exhaust fan shall have the capacity to produce an average minimum crossdraft velocity of 0.5 m/s, based on theoretical calculations.

Example: The maximum cross-section of the enclosure in the direction of air flow measures 5 m x 4 m (20 square meters). Minimum volume of air required for crossdraft is 10 m³/s (20 m² x 0.5 m/s).

For enclosures designed with vertical air flow, the exhaust fan shall have the capacity to produce an average minimum downdraft velocity of 0.25 m/s, based on theoretical calculations.

Example: The floor space of the enclosure measures 6 m x 5 m (30 square meters). Minimum volume of air movement required for downdraft is 7.5 m³/s (30 m² x 0.25 m/s).

Light intensity by natural or artificial means inside the containment enclosure shall be maintained at a minimum of 535 lx, on the steel surface, throughout surface preparation, inspection, and painting activities. Auxiliary lighting shall be provided as necessary. The contractor shall supply the Engineer with one (1) portable light meter, with a scale of 0 to 535 lx. The meter will be returned to the contractor at the completion of work.
ABRASIVE BLAST NOZZLES

Wet Abrasive Blasting Nozzles

The NLB Model NSB-25 Wet Abrasive Blasting System combines the force of a high-pressure water jet with the cleaning action of abrasive media... minimizing costly sand consumption and eliminating many of the health and environmental hazards often associated with dry sand blasting.

Wet abrasive blasting can clean steel to a white metal finish or remove tightly bonded paint from concrete, steel and masonry.

FEATURES/BENEFITS:
- Reduces dust in work area.
- Simple design for long life and low maintenance.
- Profiles metal surfaces.
- Various abrasive media can be used to fit specific applications.
- Water flow rates are variable, depending on the nozzle used.
- Abrasive flow rates are variable, using metering discs (see page 19).

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NSB-25

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<th>Rebuild Kit</th>
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<td></td>
<td>NSB-25-03-3</td>
<td>19 gpm (72 lpm)</td>
<td>1/2&quot; NPT Female</td>
<td>BV2177-3</td>
</tr>
<tr>
<td></td>
<td>NSB-25-03-4</td>
<td>6.5 gpm (25 lpm)</td>
<td>1/2&quot; NPT Female</td>
<td>BV2177-4</td>
</tr>
<tr>
<td></td>
<td>NSB-25-03-5</td>
<td>4.3 gpm (17 lpm)</td>
<td>1/2&quot; NPT Female</td>
<td>BV2177-5</td>
</tr>
<tr>
<td></td>
<td>NSB-25-03-6</td>
<td>10 gpm (38 lpm)</td>
<td>1/2&quot; NPT Female</td>
<td>BV2177-6</td>
</tr>
</tbody>
</table>

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NSB-25-20K

<table>
<thead>
<tr>
<th>Max. Pressure</th>
<th>Nozzle</th>
<th>Max. Flow</th>
<th>Inlet Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000 psi</td>
<td>S-7-0002-M</td>
<td>4.5 gpm (17 lpm)</td>
<td>Slip Fit/Set Screw</td>
</tr>
<tr>
<td></td>
<td>S-7-0003-M</td>
<td>6.5 gpm (25 lpm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S-7-0004-M</td>
<td>9.0 gpm (34 lpm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>S-7-0005-M</td>
<td>11 gpm (42 lpm)</td>
<td></td>
</tr>
</tbody>
</table>

---

*A 1/2" x 3/8" reducer bushing is required for 10,000 psi (700 bar) lances with a 3/8" NPT barrel. Order Part No. 04-03-RB-6-T-5.*
WIN® (WATER INDUCTION NOZZLE) SYSTEM FOR WET ABRASIVE BLASTING

The WIN (Water Induction Nozzle) System is a simple patented solution for high production, wet abrasive blasting that can be used with your existing pressure blast equipment. The system can be used with water from a tap or with rust inhibitors introduced through any simple pump. No special equipment is required. The WIN System offers the highest performance possible in wet abrasive blasting technology.

There are five sizes of WIN System nozzles available, with either metric or American threads. All of these nozzles use a standard 1” I.D. blast hose and all can be used as a wet or dry blast nozzle. Water consumption with these nozzles is much less than with other wet blast systems, only 3/4 to 6 quarts per minute depending on the level of dust suppression desired. All brass outer construction with tungsten liner.

### WIN System Series double venturi bore nozzles.

<table>
<thead>
<tr>
<th>Venturi Bore</th>
<th>WIN Series</th>
<th>1-1/4” - 1-1/2” N.P.S.M.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Model Number</td>
<td>3/16” (4.8mm)</td>
</tr>
<tr>
<td>1912535</td>
<td>WIN-3</td>
<td>1/4” (6.4mm)</td>
</tr>
<tr>
<td>1912545</td>
<td>WIN-4</td>
<td>5/16” (7.9mm)</td>
</tr>
<tr>
<td>1912555</td>
<td>WIN-5</td>
<td>3/8” (9.5mm)</td>
</tr>
<tr>
<td>1912565</td>
<td>WIN-6</td>
<td>7/16” (11.1mm)</td>
</tr>
<tr>
<td>1912575</td>
<td>WIN-7</td>
<td>1/2” (12.7mm)</td>
</tr>
<tr>
<td>1912585</td>
<td>WIN-8</td>
<td>19/32” (6.0mm)</td>
</tr>
</tbody>
</table>

### WIN 50mm Series double venturi bore nozzles.

<table>
<thead>
<tr>
<th>Venturi Bore</th>
<th>WIN 50mm Series</th>
<th>1-1/2” U.N.C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>Model Number</td>
<td>1912547</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1912557</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1912567</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1912577</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1912587</td>
</tr>
</tbody>
</table>

| 1/4” (8.4mm) | 5-3/4” (146.1mm) | 5-3/4” (146.1mm) | 6-1/4” (158.8mm) | 6-1/4” (158.8mm) | 8-1/4” (209.6mm) | 9” (228.6mm) |

Phone: 800-662-2131  Fax: 800-662-2132
### Sieve top for:
- Dry blasting media
- Wet blasting media
- Fast filling device

### At the remote control:
- Safety magnetic-switch
- Function "blasting"
- Function "cleaning"
- Function "drying"

### At the machine:
- Dosing equipment for blasting media
- Dosing equipment for additional water
- Dosing equipment for cleaning water
- Switching blasts to cleaning
- Setting for blasting pressure
- Setting for vessel pressure
- ON/Off- and Emergency-switch

### Quick-stop Q599 (integrated)

### Quick-stop QE99 (external)
- Compressor
- Watertank
- Hose reel for blasting hose
- Safety air reserve tank
- Filter for water and air

### torbo® Wet Abrasive Blasting systems are easily and reliably operated by one operator after only a short period of training. The remote control can be easily switched from blasting, cleaning with water, or cleaning with compressed air without any lost time.

### The tank may be filled with any blasting media heavier than water (i.e., most conventional blasting medias). The media (abrasive) may be dry, moist, or wet.

### The volume of air flow during blasting can be set from soft to powerful, while the percentage of water and the pressure of the air compressor can also be adjusted at the machine.

### The blasting media is coated with water right from the filling process, because of this, the development of dust during blasting is substantially reduced.

---

**Volume of vessel**  
<table>
<thead>
<tr>
<th>torbo®</th>
<th>torbo®</th>
<th>torbocar AC 52</th>
</tr>
</thead>
<tbody>
<tr>
<td>L200/XL200</td>
<td>L320/XL320</td>
<td></td>
</tr>
<tr>
<td>I (dm³) / Cu. ft.</td>
<td>200 / 7.0</td>
<td>320 / 11.4</td>
</tr>
<tr>
<td>bar / PSI</td>
<td>12 / 170</td>
<td>12 / 170</td>
</tr>
<tr>
<td>kg (circa)</td>
<td>215-300</td>
<td>240-320</td>
</tr>
<tr>
<td>lbs (circa)</td>
<td>470-660</td>
<td>525-710</td>
</tr>
<tr>
<td>kg / lbs.</td>
<td>1000 / 2200</td>
<td>1000 / 2200</td>
</tr>
<tr>
<td>Dimensions (height x width x depth)</td>
<td>1360 x 1100 x 750</td>
<td>1490 x 1200 x 750</td>
</tr>
<tr>
<td>inches</td>
<td>54 x 44 x 30</td>
<td>59 x 50 x 30</td>
</tr>
<tr>
<td>mm</td>
<td>38 / 49</td>
<td>38 / 49</td>
</tr>
<tr>
<td>type</td>
<td>1 1/2 / 2</td>
<td>1 1/2 / 2</td>
</tr>
<tr>
<td>mm</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>inches</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cu. ft. / min</td>
<td>2.0 - 11.0</td>
<td>2.0 - 11.0</td>
</tr>
<tr>
<td>bar</td>
<td>70 - 385</td>
<td>70 - 385</td>
</tr>
<tr>
<td>PSI</td>
<td>4.0 - 10.0</td>
<td>4.0 - 10.0</td>
</tr>
<tr>
<td>Volts / Watt</td>
<td>12 / 1.2</td>
<td>12 / 1.2</td>
</tr>
<tr>
<td>bar</td>
<td>56 - 140</td>
<td>56 - 140</td>
</tr>
<tr>
<td>PSI</td>
<td>0.0 - 170</td>
<td>0.0 - 170</td>
</tr>
<tr>
<td>mm / inches</td>
<td>32 / 1 1/4</td>
<td>32 / 1 1/4</td>
</tr>
<tr>
<td>l / h</td>
<td>29-288</td>
<td>29-288</td>
</tr>
<tr>
<td>Gu. ft. per h</td>
<td>0.9-9</td>
<td>0.9-9</td>
</tr>
<tr>
<td>Blasting media / water</td>
<td>80 % / 20 %</td>
<td>80 % / 20 %</td>
</tr>
<tr>
<td>Weight (empty)</td>
<td>215-300</td>
<td>240-320</td>
</tr>
<tr>
<td>Standard blasting media mixture (in vessel)</td>
<td>80 % / 20 %</td>
<td>80 % / 20 %</td>
</tr>
</tbody>
</table>