




10:  <b>SUPERSEDED BY EI 90-030 EFFECTIVE 10/25/90</b>	<b>ENGINEERING INSTRUCTION</b> NEW YORK STATE DEPARTMENT OF TRANSPORTATION				
SUBJECT: DISPOSAL OF PAINT REMOVAL WASTE  Subject Code: 7.27-1-570	<table border="1"> <tr> <td data-bbox="73 436 1101 520">           Distribution:            30 Main Office    32 Regions    34 Special         </td> <td data-bbox="1101 436 1471 520">           Code: EI89-33         </td> </tr> <tr> <td data-bbox="73 520 1101 655">           APPROVED:    <u>J. R. LAMBERT, Deputy Chief Engr. (Fac. Design Div.)</u> </td> <td data-bbox="1101 520 1471 655">           Date: 12-13-89             Supersedes: EI86-19            Modifies EI88-36         </td> </tr> </table>	Distribution: 30 Main Office    32 Regions    34 Special	Code: EI89-33	APPROVED:  <u>J. R. LAMBERT, Deputy Chief Engr. (Fac. Design Div.)</u>	Date: 12-13-89  Supersedes: EI86-19 Modifies EI88-36
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**SUMMARY.** This EI revises the current bridge paint waste accumulation and disposal procedures; supersedes EI 86-19 Bridge Cleaning and Painting, Environmental Protection; modifies EI 88-36 Specifications for Bridges Removal of Lead Based Paints - New Department Paint System for Structural Steel by discontinuing item 18570.09XXXX, Temporary Storage of Paint Removal Waste (including variations of this item); and issues pay item 15570.11XXXX, Disposal of Paint Removal Waste.

**BACKGROUND.** Spent abrasives and paint removed by blast cleaning operations are currently accumulated, tested, and disposed of in accordance with the department's approved "Lead Base Paint Removal Action Plan".

At present, it is accumulated in metal 55 gallon drums for sampling and testing by Department consultants. If found to have less than five (5) parts per million (ppm) lead, it is surrendered to the painting contractor for disposal as industrial waste. If the material has more than five (5) ppm, it is retained by the Department to be disposed of as hazardous waste by a waste disposal contractor.

**PROBLEMS.** There have been a number of difficulties with this arrangement. One difficulty has been that land fill operators generally refuse to accept leaded paint wastes as industrial waste. Of all the landfills in New York State, only five have been found that are willing to take sand blast debris containing less than 5 ppm lead as ordinary industrial waste. Even at these five sites, disposal contractors have encountered difficulty in satisfying the landfill operator's requirements for waste testing beyond the determination of lead content. It's also been difficult, sometimes, to comply with the EPA's requirement that hazardous waste be removed from the site within 90 days of its generation.



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CHANGES. Because of the above, the following policy will be applicable for structure painting and rehabilitation contracts where surface preparation involves the removal of lead paint: For contract work, the Department will require the Contractor to accumulate, and dispose of paint removal waste containing lead in the same manner as that required for a hazardous material.

Starting with the letting of 3-29-90, all operations which require the removal of lead paint under a Department contract will require environmental protection and the appropriate disposal of the waste generated by the paint removal as though it were hazardous. Thus, unless otherwise directed, contracts should include pay items 570.07XXXX Environmental Ground Protection and/or 570.08XXXX Environmental Waterway Protection. The waste thus collected will be accumulated in accordance with appropriate federal and state regulations by the Contractor. The designer should state either in the Plans or in the Proposal how much room, if any, exists at the site or sites for accumulation of the waste. Within 45 days after generation the waste will be removed from the site by the Contractor to disposal facilities permitted to receive hazardous waste.

The attached, Item 15570.11XXXX, Disposal of Paint Removal Waste should be used for this purpose. It will be a Main Office insert. Currently the estimated price is \$1000 per cubic yard although the designer may use different pricing if based on experience.

The following factors may be used to estimate the number of cubic yards of waste generated by ordinary sandblasting activities:

Brushoff Blast Cleaning ....2400\* SF/CY  
Commercial Blast Cleaning ...1000\* SF/CY

\*where the square footage is the surface area of the steel to be sandblasted. The designer should follow EI 79-11 Maintenance Cleaning and Priming of Structural Steel with respect to indicating in the PS&E the percentage of each structure to be commercially blast cleaned.

As part of the hazardous waste manifesting system, it is necessary for D.O.T. to obtain an EPA Generator Identification number. The Regional Construction Engineer is responsible for this but may delegate this to the EIC. Because all waste generated by the removal of lead paint will be treated as if it were hazardous, this step should be taken well prior to the actual generation of the waste. Sometimes as long as four (4) to six (6) weeks are required after application to receive the EPA identification number.

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SERIALIZATION OF PAY ITEMS. In order to monitor the cost of bridge painting, and in particular the increased cost due to environmental protection and waste disposal, cost data must be available on a bridge by bridge basis. To make it easier to access contracts estimates and bidding data, the serialized pay items for painting, environmental protection, and waste disposal in any contract should be unique for a particular bridge. This means each bridge in the contract should be assigned a single suffix for serialization of all the serialized pay items applicable to that bridge. If an item of work is not used for one of the bridges in a contract, the suffix associated with that bridge would not be assigned to that item for another bridge. For example, if the bridge assigned suffix 03 did not require waterway protection, item number 570.080003 would not be used in the contract even if three or more bridges required waterway protection items. By following this convention, the costs associated with painting each bridge can be determined by simply adding the costs of all serialized pay items which end in the same suffix number.

This instruction takes effect with the letting of  
The following items are disapproved as of that date:

- 18570.09
- 18570.0989
- 11570.10
- 16570.10
- 11570.11
- 16570.11
- 18570.11



ITEM 15570.11XXXX. DISPOSAL OF PAINT REMOVAL WASTE

DESCRIPTION. The work shall consist of accumulating, packaging, labeling, loading, transporting, and disposing of paint removal waste as if the waste met the legal definition for a hazardous waste containing lead. Because of this requirement, prior to generating any paint waste, the Contractor shall supply the Engineer with a letter from a legally permitted disposal facility, stating that the facility has agreed to accept the paint removal waste generated by the work requirements of this project; is authorized to accept paint removal waste under the laws of the State of residence; has the required capacity to dispose of the material; and will provide, or assure the ultimate disposal method indicated on the Uniform Hazardous Waste Manifest. 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 an original, signed letter. Facsimile copies will not be acceptable.

The Contractor shall also present evidence that he has a 6NYCRR Part 364 Waste Transporter Permit to haul to the selected facility or has contracted with a hauler permitted to remove the waste to the selected facility.

For purposes of this item, paint removal waste is defined as removed paint particles combined with the material used to remove the paint. Paint removal waste will be referred to throughout the item text as 'waste'. Designation of the waste as "hazardous" does not refer to whether waste actually meets a particular legal definition. The designation refers only to how the Contractor shall be required to accumulate, handle, package, load, transport and dispose of the waste.

All waste resulting from paint removal operations shall be in transit to the disposal site no later than 45 calendar days subsequent to generation or two weeks following demobilization of the site, whichever occurs first. Waste shall be accumulated, handled, packaged, loaded, transported and disposed of in accordance with all applicable Federal, State, and Local laws, rules/regulations, and codes. The Contractor's failure to comply with the aforementioned deadlines will result in the actions described under "Basis of Payment".

The Contractor is hereby specifically notified that this work requires the following as a minimum:

1. Waste transporter identification number issued by USEPA.

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2. Disposal facility identification number issued by USEPA.  
(This will be supplied by the Disposal Facility).
3. Generator site identification number issued by USEPA.  
(This will be supplied by the State through the Engineer).
4. Conformance to 6NYCRR364. Part 364 governs waste transporters. The Contractor shall furnish a copy of the Part 364 permit to the Engineer.
5. Conformance to 6NYCRR372. Part 372 governs manifest requirements.
6. Conformance to 6NYCRR373. Part 373 governs treatment, storage and disposal facilities.

NYCRR regulations are administered by the NYS Department of Environmental Conservation, Albany, NY. EPA regulations are administered by the US Environmental Protection Agency, Region II, N.Y. City, NY.

MATERIALS. The waste shall be accumulated in clean, dry, weatherproof, watertight containers or rollofs furnished by the Contractor. The Contractor shall furnish the Engineer with a signed statement from the disposal facility that the containers or rollofs proposed for use by the Contractor are acceptable to the facility. The dry volume capacity, in cubic yards or meters, of the container shall be clearly marked upon each container, in a location easily readable by the Engineer.

All equipment and containers or rollofs shall be approved by the Engineer prior to use.

CONSTRUCTION DETAILS. All generated waste shall be deposited, and sealed, in containers or rollofs concurrent with generation. No container or rolloff shall be filled to a capacity in excess of that marked on the container or rolloff as the maximum dry volume capacity. No waste shall be left exposed to the elements at the end of the working day.

Each container or rolloff shall be labeled in accordance with US Department of Transportation regulations. Each container or rolloff shall be permanently labeled with 1" minimum height lettering 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.

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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.

All labeling, marking (except date mark), 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.

All document preparation and distribution, including the Uniform Hazardous Waste Manifest, shall be the responsibility of the Contractor. The Engineer will sign the Generator's Certification on the Uniform Hazardous Waste Manifest.

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

All waste shall be documented, transported, and disposed of as required by the current Federal, State, and Local laws, rules, and codes.

The Contractor is responsible to ensure that only dry paint removal waste is deposited into the containers or rolloffs.

Provided in the proposal is a note entitled "Typical Paint Removal Waste Composition" which provides typical chemical composition of paint removal waste based on previous chemical testing. The determination has been made that such waste contains less than 2% by weight of organic material.

The Contractor is specifically forewarned that disposal facilities perform spot tests and may refuse to accept waste in excess of 2% organic content or that is otherwise different than the Typical

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Paint Waste Composition. Waste contaminated in this manner will be the Contractor's responsibility. All penalties and costs associated with the refusal of a disposal facility to accept waste not meeting its requirements will be borne by the Contractor. All testing of the waste necessary to satisfy the requirements of the chosen disposal site or transporter shall be the responsibility of the Contractor.

METHOD OF MEASUREMENT. The work will be measured as the number of dry cubic yards of waste accumulated, packaged, transported, and disposed of in accordance with the requirements of this item. If the container or rolloff capacity has been established by means of the cubic meter, a factor of 1.308 shall be applied to the container volume by the Engineer to convert the measurement to cubic yards. One cubic meter is equivalent to 1.308 cubic yards. 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 properly sealed and not thereafter be 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 yard shall include the cost of all labor, materials, equipment, sampling, testing, and fees necessary to complete the work. Only waste for which manifest copies are returned to the Engineer by the Contractor and Disposal Facility will be authorized for payment.

Failure to place in transit any particular container or rolloff within the time period required by this item will be a material breach of contract and will result in the invocation of Article 11 of the Agreement.

Furthermore, the following will also result:

1. If the Department of Transportation becomes liable for any penalty or fine as a result of the Contractor's breach of contract, the amount thereof will be deducted from monies owed to the Contractor.
2. 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.

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Payment will be made under:

15570.11XXXX Disposal of Paint Removal Waste.

NOTE: XXXX represents numbers assigned by the designer and keyed to a particular structure. See elsewhere in these contract documents for list of structures and the numbers assigned to XXXX.

## TYPICAL PAINT WASTE COMPOSITION

Paint Removal Waste Material Profile. Paint removal waste generated by the abrasive blasting of painted steel bridges consists of a mixture of abrasive, typically boiler slag or silica sand, and paint chips. Based on tests performed by independent laboratories approved by the NYS Department of Health and the Department's knowledge of the material, the following waste material profile was developed for paint removal waste.

A. Physical Characteristics.

Color: black (boiler slag); or white or tan (silica sand)  
Odor: none  
Physical state: solid  
Specific gravity: 2.6 - 2.7 g/cc  
Free Liquids: none  
pH: not applicable  
Liquid flash point: not applicable

B. Chemical Composition. The waste contains no PCB's, cyanides, phenolics or sulfides to the Department's knowledge.

----- Constituent -----	----- Range -----
Abrasive :	
Boiler slag: Iron, aluminum and calcium silicates	
or	
Silica sand: Silicon dioxide	90 - 95%
Paint chips containing basic lead silico chromate, titanium dioxide, chromium oxide, magnesium silicate, linseed oil, alkyd resin	5 - 10%

C. Metals. By EP Toxicity testing the waste contains:  
Lead - less than 1.0 to greater than 900 parts per million  
Chromium - less than 5 parts per million.

D. Other Hazardous Characteristics. The waste is not a listed solvent waste, does not contain greater than 1000 ppm total halogenated organic compounds, and is not RCRA reactive, water reactive, explosive, shock sensitive, pyrophoric, radioactive, etiological, or pesticide manufacturing waste.

E. Transportation Information. This waste is to be treated as a DOT Hazardous Material.

Proper shipping name: Unlisted hazardous waste, solid, characteristic of EP toxicity, lead D008.

Hazard class: ORM-E

ID#: NA 9189

USEPA hazardous waste number: D008

NYSDEC hazardous waste number: D008