SUPERSEDED BY EB 15-031 EFFECTIVE 9/28/15		*New York State Department of Transportation* **ENGINEERING INSTRUCTION**	**EI** **12-013**

Title: **REVISED STANDARD SPECIFICATION SECTION 571 – DISPOSAL OF PAINT REMOVAL WASTE**

Target Audience:
- ☐ Manufacturers (18)
- ☒ Local Govt. (31)
- ☒ Agencies (32)
- ☐ Surveyors (33)
- ☒ Consultants (34)
- ☒ Contractors (39)
- ☐ _____( )

Approved: Phillip Eng, P.E., Chief Engineer — 5/9/12 Date

ADMINISTRATIVE INFORMATION:

- This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of 09/06/12.
- This EI is being issued concurrently with EI 12-012 *Interim Design Guidelines for Revised Standard Specification Section 571 – Disposal of Paint Removal Waste.*
- The revisions issued with this EI will be incorporated into a future update of the Standard Specifications.
- Superseded Issuances: EI 95-014, EI 05-008

PURPOSE: This EI revises Section 571 – TREATMENT AND DISPOSAL OF PAINT REMOVAL WASTE of the Standard Specifications.

TECHNICAL INFORMATION:

- Updated Design Guidance for these items are being issued concurrently with EI 12-012.
- Typical Lead-Based Paint Information has been incorporated into the revised Section 571.
- Typical Lead-Based Paint Containing Asbestos Waste Information has been incorporated into NYSDOT Blanket Variance 14 (NYSDOT Environmental Manual Section 4.4.19, Appendix G.)
- Cost Impact: Savings will be realized from reduced disposal costs, reduced annual NYSDEC generator fees and overall Department liability by selecting appropriate structures included in steel painting or rehabilitation work for disposal of paint removal waste as non-hazardous industrial solid waste.

IMPLEMENTATION: Main Office Design Quality Assurance Bureau will insert the Standard Specification revisions into contract proposals beginning with projects submitted for the letting of September 6, 2012.

- The following contract pay items are approved:

U.S. Customary

- Item 571.03 - Disposal of Hazardous Paint Waste Containing Lead (pound)
- Item 571.04 - Disposal of Non-Hazardous Industrial Solid Paint Waste (pound)

Metric
- Item 571.03 - Disposal of Hazardous Paint Waste Containing Lead (kilogram)
- Item 571.04 - Disposal of Non-Hazardous Industrial Solid Paint Waste (kilogram)

The following contract pay items are disapproved:

U.S. Customary
- Item 571.01nnn - Treatment and Disposal of Hazardous Paint Removal Waste (cubic yard)
- Item 571.01nn0011 - Treatment and Disposal of Paint Removal Waste (SSPC-SP11) - LS
- Item 571.02nn0011 - Treatment and Disposal of Paint Removal Waste (SSPC-SP6) - LS
- Item 571.03nn0011 - Treatment and Disposal of Paint Removal Waste (Total Removal) - LS

Metric
- Item 571.01nnn - Treatment and Disposal of Hazardous Paint Removal Waste (cubic meter)
- Item 11571.01nn--11 - Treatment and Disposal of Paint Removal Waste (SSPC-SP11) - LS
- Item 11571.02nn--11 - Treatment and Disposal of Paint Removal Waste (SSPC-SP6) - LS
- Item 11571.03nn--11 - Treatment and Disposal of Paint Removal Waste (Total Removal) - LS

TRANSMITTED MATERIALS: Attached are revisions of Standard Specifications Section 571 – DISPOSAL OF PAINT REMOVAL WASTE in both Metric and U.S. Customary units.

BACKGROUND: The current Department bridge paint waste specification (Section 571) assumes all steel bridge painting, rehabilitation and demolition projects result in hazardous designation of any coating or spent abrasive waste produced. This is resulting in elevated bid costs by contractors, unwarranted annual NYSDEC generator fees and increased Department liability associated with unnecessary manifesting and disposal of non-hazardous paint waste as hazardous. The revised §571 and associated payment items are provided as a means to eliminate these costs and liability for paint removal work on non-lead painted and weathering steel bridges. Pay units for new payment items have also been changed from volume to weight in order to further reduce disposal costs and reflect units used by industry transporters, transfer stations and disposal facilities.

CONTACT: Direct questions regarding this issuance to Jonathan Bass at jbass@dot.state.ny.us or Carl Kochersberger at ckochersberger@dot.state.ny.us.

DISPOSAL OF PAINT REMOVAL WASTE

Make the following changes to the Standard Specifications dated May 4, 2006:

Page 417, **Delete** Section 571 *Treatment and Disposal of Paint Removal Waste* in its entirety and **Replace** it with the following:

SECTION 571 - DISPOSAL OF PAINT REMOVAL WASTE

571-1 DESCRIPTION. The work shall consist of managing, accumulating, packaging, labeling, loading, transporting, treating, and disposing paint removal waste.

571-1.01 Paint Removal Waste. Paint removal waste consists of removed paint particles combined with material used to remove the paint and any organic or inorganic materials from bridge surfaces, by either bridge washing or blast cleaning operations, without use of any added chemical solvents. All testing of the paint removal waste necessary to satisfy the requirements of the waste transporter or disposal facility shall be the responsibility of the contractor.

Paint removal waste does not include used tyvek suits, respirator filters, tarpaulins or incidental trash. These incidental wastes generated by the Contractor in completing the work are covered by §107-10 *Managing Surplus Material and Waste*.

A. Hazardous Paint Removal Waste Containing Lead. This shall apply to spent abrasives, coatings and paint chips removed from steel substrates on bridges designated in the contract documents as being lead-based. This does not include waste containing a mixture of lead and asbestos. Waste containing a mixture of lead and asbestos shall be disposed of in accordance with Section 210 *Removal and Disposal of Asbestos-Containing Material (Buildings, Bridges and Highways)*.

B. Non-Hazardous Industrial Solid Paint Removal Waste. This shall apply to spent abrasives and coatings removed from steel substrates on bridges designated in the contract plans as being non-lead-based.

571-2 MATERIALS. The Contractor shall use containers or roll-offs acceptable to the Waste Disposal Facility. The capacity of each container shall be clearly marked on each container in an easily visible location.

571-3 CONSTRUCTION DETAILS.

571-3.01 General. The Engineer will provide the Contractor with the Generator site identification number(s) issued by the USEPA. All paint removal waste shall be deposited and sealed in containers or roll-offs concurrent with generation. The paint removal waste shall be accumulated in clean, dry, weatherproof, watertight containers or roll-offs furnished by the Contractor and shall not be left exposed to the elements at the end of the working shift. All equipment and containers or roll-offs shall meet the requirements of USDOT for transport.

Paint removal waste shall be accumulated, handled, packaged, documented, loaded, transported, treated and disposed in accordance with all applicable Federal and State laws, rules, and regulations.

571-3.02 Paint Removal Waste Composition.

A. Hazardous Paint Removal Waste Containing Lead. Paint chips are known to contain lead and the combined paint removal waste stream is therefore categorized as hazardous waste. The Department has presumed that the waste will test as hazardous. The Contractor shall ensure that only solid paint removal waste is deposited into the containers or roll-offs. The determination has been

made that such waste contains less than 2% by weight of organic material. Disposal facilities may refuse to accept paint removal waste that is different than the Typical Paint Waste Composition. Paint removal waste containing additional contaminants added by the Contractor or by the Contractor's operations shall be the responsibility of the Contractor. All testing of the paint removal waste necessary to satisfy the requirements of the chosen Disposal Facility or Transporter shall be the responsibility of the Contractor.

Provided is typical lead-based paint waste information which provides typical chemical and physical properties of paint removal waste based on previous testing, as follows:

Lead-Based Paint Waste Profile: Lead-based paint waste generated by the removal of paint consists of a mixture of abrasive blast media such as boiler slag or steel grit and paint chips. This supplemental information about the waste is provided in accordance with Resource Conservations and Recovery Act (RCRA) regulations. This composition profile does not include waste resulting from removal by chemical strippers for which the resulting waste will contain components of the stripper. Based on the knowledge of the process and the resulting waste material, and on previous testing of typical waste by independent laboratories approved by the NYS Department of health, this composition waste material information has been developed for typical lead-based paint waste.

Process Generating Waste: The waste results from removal of lead-based coatings from painted structures, typically steel bridges, by abrasive blasting, manual, shrouded mechanical, or high-pressure (hp) water methods. The North American industry Classification System Code (NAICS) typically assigned for the site is 23731-Highway, Street, and Bridge Construction.

Composition: To the Department's knowledge, the waste does not contain PCBs, pesticides, cyanides, organic TCLP constituents, dioxins, asbestos, ozone depleting substances, volatile organics or greater than 1000 ppm halogenated organic compounds. The waste is not a RCRA reactive, corrosive or ignitable, or source-listed or chemical product-listed waste. It is not radiological, etiological, explosive, water reactive, or shock sensitive. The specific composition will vary based on the removal method used, abrasive used, the proportion of paint chips to abrasives and other variables determined by the Contractor's operation. For wastes resulting from any chemical stripping of paint, the Contractor shall consider the components and properties of the stripper and the resulting waste mixture to characterize the waste.

The waste typically contains the following:

	Approximate %	
Removal Method	Abrasive	Paint Chips
Boiler Slag (an amorphous mixture of Fe, Al and Ca silicates)	90-95%	5-10%
Steel Grit (% varies by degree of grit recycling)	40-90%	10-60%
No Abrasive (manual, shrouded mechanical and water methods)	0%	100%

Paint Chips: Paint chips contain basic lead silico chromate, titantium dioxide, chromate dioxide, magnesium silicate, linseed oil, alkyd resin, fillers, driers, and other miscellaneous materials.

Other Components: Water may be present from water used during removal. Iron oxide (rust, mill scale) may be present. Animal waste (i.e., feces, guano, nesting materials, etc.) and dirt/miscellaneous debris may also be potentially present.

RCRA Metals: The waste is presumed to contain lead at levels exceeding the regulatory limit of 5 milligrams per liter (approximately 5 ppm) by the Toxicity Characteristic Leaching Procedure

(TCLP) test for lead (unless contract documents provided for testing to determine lead toxicity characteristic). Chromium is considered present as an underlying characteristic.

Typical Physical Characteristics:

Physical State – Solid
Color – Black for boiler slag component, or metallic grey/black for steel grit component.
Color varies for paint chips.
Odor – None
pH – Not Applicable
Liquid Flash Point – Not Applicable
Specific Gravity – Approximately 2.7 (boiler slag) and Approximately 7.5 (steel grit)
Bulk Density – Approximately 75 lb/ft^3 (boiler slag)
Approximately 225 lb/ft^3 (steel grit)
Free Liquids – None (moisture may be present from water added during removal)

Consolidated Hazardous Waste Information: The following consolidated information for hazardous lead-based paint waste can be used in completing the required items needed for its proper shipment and disposal:

- USDOT Shipping Description – RQ Hazardous Waste, Solid, n.o.s. (D008); 9; NA3077; PG III
  n.o.s. = Not Otherwise Specified, PG = Packing Group
- Hazard Label on containers – Class 9
- Placard for shipments exceeding 1001 lbs. or bulk – Class 9
- Hazardous Waste due to the Characteristic Lead Toxicity, Waste Code D008
- Constituents of Concern – Lead and Chromium
- Treatability Group – Non-wastewater
- Treatment Standard – 0.75 mg/L Lead and 0.06 mg/L Chromium by TCLP test
- Reportable Quantity – 10 lbs. or greater
- Markings on Container –
  Hazardous waste, solid, n.o.s. (D008); NA3077
  HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the Environmental Protection Agency.
  Generator's Name: NYSDOT Region ( )
  EPA ID Number ( )
  Manifest Document Number ( )
  Accumulation Start Date ( )
- USDOT Emergency Response Guidebook Guide: 171, Substances (Low to Moderate Hazard)

B. Non-Hazardous Industrial Solid Paint Removal Waste. The Contractor shall ensure that only solid paint removal waste is deposited into the containers or roll-offs. All testing of the paint removal waste necessary to satisfy the requirements of the disposal facility or transporter shall be the responsibility of the Contractor.

571-3.03 Hazardous Paint Removal Waste Containing Lead - Management Requirements. Employees handling hazardous paint removal waste shall be trained in accordance with 6 NYCRR Part 373-3.2(g) in hazardous waste management procedures including hazardous waste accumulation, preparedness and prevention, contingency and emergency procedures. The Contractor's Preparedness and Prevention Plan, Contingency Plan and Emergency Procedures, and Personnel Training Records, as required by 6 NYCRR Part 373-1.1(d)(1)(iii), shall be submitted to the Engineer for acceptance prior to the generation of any hazardous waste. Containers in storage shall be inspected on at least a weekly basis in accordance with 6 NYCRR Part 373-3.9(b)-(d).

571-3.04 Containers and Labeling. No roll-off shall be filled to a capacity in excess of that marked on the roll-off as the maximum capacity. Once the Engineer determines the quantity within a specific container or roll-off, that container or roll-off 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 (except for analytical sampling). All containers or roll-offs shall be located in a place secured from traffic and in a manner acceptable to the Engineer. The Contractor shall take measures to prevent the blowing or dispersion of the waste during each loading operation and while being transported.

The Contractor shall label, mark, and placard all containers or roll-offs prior to shipment in accordance with USDOT and NYSDEC regulations. Each container shall have an appropriate label prior to filling with the applicable words identifying its contents as paint removal waste and providing the presumed waste classification of hazardous or non-hazardous industrial waste. The accumulation start date shall be completed at the time when waste is first deposited into each container. All label markings shall be permanent, printed in English, and displayed on a background of contrasting color un-obscured by other labels or attachments. Labeling shall be located away from other markings that could substantially reduce its effectiveness.

571-3.05 Document Preparation.

A. Hazardous Paint Removal Waste Containing Lead. The Contractor shall prepare and distribute all documentation including the Uniform Hazardous Waste Manifest. The Engineer will sign the Generator's Certification on the Uniform Hazardous Waste Manifest. The LDR (Land Disposal Restricted) certification shall be completed and attached to the manifest, as required by 40 CFR Part 268 *Land Disposal Restrictions*.

B. Non-Hazardous Industrial Solid Paint Removal Waste. The Contractor shall prepare and distribute all documentation, including the disposal record forms.

571-3.06 Paint Removal Waste Transport. All paint removal waste shall be in transit to the disposal site from the site of generation no later than 45 calendar days unless otherwise approved by the Engineer, but no longer than 90 days. Any additional required shipment information, including manifest number, shall be entered on the container label(s) prior to shipment offsite. The Contractor shall present evidence that the vehicle that will be used for the shipment is permitted to transport the designated waste in accordance with 6NYCRR Part 364.

Conditions for hazardous paint removal waste transporting vehicles to pick up paint waste debris, in bulk, from one or more bridge sites (multiple collection) for delivery to an authorized Treatment, Storage and Disposal Facility (TSDF) include the following:

A. Hazardous Paint Removal Waste Containing Lead.

- The materials picked up at each site shall be essentially identical in physical and chemical characteristics. No materials, other than paint waste debris, may be included if wastes from several individual generating sites are to be combined on the same truck.
- All of the component shipments are presumed to be D008 hazardous wastes, and disposed as such.
- A manifest is prepared for each generating bridge site. Each manifest shall reflect a bulk shipment, and all manifests being carried by the same transporting vehicle must express the quantity in kilograms. In sum total, the manifests accompanying the shipment shall account for the entire quantity transported.
- All component shipments are intended to be conveyed to the same TSDF, and the TSDF has agreed to accept consolidated bulk loads.

- All component shipments shall have originated at sites where the Department is the waste generator. No loads may be included that were generated at a site for which another agency is the waste generator.
- Measures shall be taken to prevent the blowing or dispersion of the paint removal waste during each loading operation and while being transported.
- The weight of waste from each individual site (BIN) shall be provided by the disposal facility.

B. Non-Hazardous Industrial Solid Paint Waste. Conditions for non-hazardous waste transporting vehicles to pick up paint waste debris, in bulk, from one or more bridge sites (multiple collection) for delivery to an authorized disposal facility include the following:

- The materials picked up at each site shall be essentially identical in physical and chemical characteristics. No materials, other than paint waste debris, may be included if wastes from several individual generating sites are to be combined on the same vehicle.
- All component shipments are intended to be conveyed to the same disposal facility, and the disposal facility has agreed to accept consolidated bulk loads.
- All component shipments shall have originated at sites where the Department is the waste Generator. No loads may be included that were generated at a site for which another agency is the waste Generator.
- Measures shall be taken to prevent the blowing or dispersion of the waste during each loading operation and while being transported.
- The weight of waste from each individual site (BIN) shall be provided by the disposal facility.

571-3.07 Conditionally Exempt Small Quantity Generator (CESQG) Exemption. Shipments of non- hazardous paint removal wastes of less than 227 kilograms shipped in a single load may be transported without a waste transporter permit as allowed by the Small Quantity Waste Transporter Exemption at 6 NYCRR Part 364.1(e). For activities with generation of hazardous paint removal wastes that meet Conditionally Exempt Small Quantity Generator (CESQG) status (generate less than 100 kilograms in any month and store less than 1000 kilograms on site at any time), no USEPA ID number is required, the waste can be shipped without a manifest, and a CESQG can self-transport up to 100 kilograms of waste in any calendar month to a disposal facility. CESQGs can dispose of their waste at a permitted hazardous waste facility or municipal or industrial solid waste facilities that are permitted to accept that type of waste.

571-3.08 Hazardous Paint Removal Waste Containing Lead Stabilization. Treatment of hazardous paint removal waste, as required by Federal regulations, is presumed to require stabilization of the waste such as mixing it with portland cement and water at a permitted Hazardous Waste Treatment or Disposal Facility. The stabilized waste shall meet the treatment standards of the Federal regulations prior to disposal in a permitted Hazardous Waste Disposal Facility.

571-3.09 Non-Hazardous Industrial Solid Paint Waste Sampling and Analysis. The Contractor shall conduct all sampling and analysis as required by the designated authorized disposal facility as soon as feasible upon waste generation at each non-hazardous designated bridge. Sampling shall be conducted by individuals thoroughly trained in sampling protocols, handling and chain of custody procedures, and laboratory requirements. Accepted sampling practices shall be used to obtain representative composite sample(s) as required for the specific analysis to be completed. Each composite sample shall include a minimum of four distinctly different sampling points. Analyses shall be completed at a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory using NYSDEC Analytical Services Protocols (ASPs). The analysis must include, at a minimum, the RCRA heavy metals analysis using the Toxicity Characteristic Leaching Procedure (TCLP) and a total weight analysis. If analytical results indicate that the waste is hazardous, the waste shall be disposed of as such and the hazardous waste pay item shall be used.

571-3.10 Waste Disposal Facility.

A. Hazardous Paint Waste Containing Lead. Prior to generating any hazardous paint removal waste, the Contractor shall provide the Engineer with a letter from a permitted Hazardous Waste Disposal Facility, stating that the Facility has agreed to accept the hazardous waste generated by the work requirements of this contract; is authorized to accept the hazardous waste under the laws 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. The letter shall be signed by a representative of the Disposal Facility who is legally authorized to sign such an agreement.

B. Non-Hazardous Industrial Solid Paint Waste. Prior to generating any non-hazardous paint removal waste, the Contractor shall provide the Engineer, in writing, the name and location of the permitted solid waste management facility selected for disposal.

571-4 METHOD OF MEASUREMENT.

571-4.01 Hazardous Paint Waste Containing Lead. The quantity of paint removal waste to be measured for payment will be in net kilograms of waste disposed of, based on disposal facility weight tickets of the waste as manifested, not including the weight of the containers.

571-4.02 Non-Hazardous Industrial Solid Paint Waste. The quantity of paint removal waste to be measured for payment will be in net kilograms of waste disposed of, based on disposal facility weight tickets, not including the weight of the containers.

571-5 BASIS OF PAYMENT

571-5.01 Hazardous Paint Waste Containing Lead. The unit price bid per kilogram of paint removal waste 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. 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, in addition to other remedies the Department may possess, said fine or penalty will be deducted from monies due the Contractor.

571-5.02 Non-Hazardous Industrial Solid Paint Waste. The unit price bid per kilograms of paint removal waste shall include the cost of all labor, materials, equipment, sampling, testing, and fees necessary to complete the work. If the Department is fined or penalized as a result of the Contractor's performance or lack thereof, in addition to other remedies the Department may possess, said fine or penalty will be deducted from monies due the Contractor.

Payment will be made under:

Item No.	Item	Pay Unit
571.03	Disposal of Hazardous Paint Removal Waste Containing Lead	Kilogram
571.04	Disposal of Non-Hazardous Industrial Solid Paint Removal Waste	Kilogram

DISPOSAL OF PAINT REMOVAL WASTE

Make the following changes to the Standard Specifications dated May 1, 2008:

Page 422, **Delete** Section 571 *Treatment and Disposal of Paint Removal Waste* in its entirety and **Replace** it with the following:

SECTION 571 - DISPOSAL OF PAINT REMOVAL WASTE

571-1 DESCRIPTION. The work shall consist of managing, accumulating, packaging, labeling, loading, transporting, treating, and disposing paint removal waste.

571-1.01 Paint Removal Waste. Paint removal waste consists of removed paint particles combined with material used to remove the paint and any organic or inorganic materials from bridge surfaces, by either bridge washing or blast cleaning operations, without use of any added chemical solvents. All testing of the paint removal waste necessary to satisfy the requirements of the waste transporter or disposal facility shall be the responsibility of the contractor.

Paint removal waste does not include used tyvek suits, respirator filters, tarpaulins or incidental trash. These incidental wastes generated by the Contractor in completing the work are covered by §107-10 *Managing Surplus Material and Waste.*

A. Hazardous Paint Removal Waste Containing Lead. This shall apply to spent abrasives, coatings and paint chips removed from steel substrates on bridges designated in the contract documents as being lead-based. This does not include waste containing a mixture of lead and asbestos. Waste containing a mixture of lead and asbestos shall be disposed of in accordance with Section 210 *Removal and Disposal of Asbestos-Containing Material (Buildings, Bridges and Highways).*

B. Non-Hazardous Industrial Solid Paint Removal Waste. This shall apply to spent abrasives and coatings removed from steel substrates on bridges designated in the contract plans as being non-lead-based.

571-2 MATERIALS. The Contractor shall use containers or roll-offs acceptable to the Waste Disposal Facility. The capacity of each container shall be clearly marked on each container in an easily visible location.

571-3 CONSTRUCTION DETAILS.

571-3.01 General. The Engineer will provide the Contractor with the Generator site identification number(s) issued by the USEPA. All paint removal waste shall be deposited and sealed in containers or roll-offs concurrent with generation. The paint removal waste shall be accumulated in clean, dry, weatherproof, watertight containers or roll-offs furnished by the Contractor and shall not be left exposed to the elements at the end of the working shift. All equipment and containers or roll-offs shall meet the requirements of USDOT for transport.

Paint removal waste shall be accumulated, handled, packaged, documented, loaded, transported, treated and disposed in accordance with all applicable Federal and State laws, rules, and regulations.

571-3.02 Paint Removal Waste Composition.

A. Hazardous Paint Removal Waste Containing Lead. Paint chips are known to contain lead and the combined paint removal waste stream is therefore categorized as hazardous waste. The Department has presumed that the waste will test as hazardous. The Contractor shall ensure that only solid paint removal waste is deposited into the containers or roll-offs. Provided in the contract

proposal is a Special Note entitled "Typical Lead-Based Paint Waste Information" which provides typical chemical and physical properties of paint removal waste based on previous testing. The determination has been made that such waste contains less than 2% by weight of organic material. Disposal facilities may refuse to accept paint removal waste that is different than the Typical Paint Waste Composition. Paint removal waste containing additional contaminants added by the Contractor or by the Contractor's operations shall be the responsibility of the Contractor. All testing of the paint removal waste necessary to satisfy the requirements of the chosen Disposal Facility or Transporter shall be the responsibility of the Contractor.

Provided is typical lead-based paint waste information which provides typical chemical and physical properties of paint removal waste based on previous testing, as follows:

Lead-Based Paint Waste Profile: Lead-based paint waste generated by the removal of paint consists of a mixture of abrasive blast media such as boiler slag or steel grit and paint chips. This supplemental information about the waste is provided in accordance with Resource Conservations and Recovery Act (RCRA) regulations. This composition profile does not include waste resulting from removal by chemical strippers for which the resulting waste will contain components of the stripper. Based on the knowledge of the process and the resulting waste material, and on previous testing of typical waste by independent laboratories approved by the NYS Department of health, this composition waste material information has been developed for typical lead-based paint waste.

Process Generating Waste: The waste results from removal of lead-based coatings from painted structures, typically steel bridges, by abrasive blasting, manual, shrouded mechanical, or high-pressure (hp) water methods. The North American industry Classification System Code (NAICS) typically assigned for the site is 23731-Highway, Street, and Bridge Construction.

Composition: To the Department's knowledge, the waste does not contain PCBs, pesticides, cyanides, organic TCLP constituents, dioxins, asbestos, ozone depleting substances, volatile organics or greater than 1000 ppm halogenated organic compounds. The waste is not a RCRA reactive, corrosive or ignitable, or source-listed or chemical product-listed waste. It is not radiological, etiological, explosive, water reactive, or shock sensitive. The specific composition will vary based on the removal method used, abrasive used, the proportion of paint chips to abrasives and other variables determined by the Contractor's operation. For wastes resulting from any chemical stripping of paint, the Contractor shall consider the components and properties of the stripper and the resulting waste mixture to characterize the waste.

The waste typically contains the following:

	Approximate %	
Removal Method	Abrasive	Paint Chips
Boiler Slag (an amorphous mixture of Fe, Al and Ca silicates)	90-95%	5-10%
Steel Grit (% varies by degree of grit recycling)	40-90%	10-60%
No Abrasive (manual, shrouded mechanical and water methods)	0%	100%

Paint Chips: Paint chips contain basic lead silico chromate, titantium dioxide, chromate dioxide, magnesium silicate, linseed oil, alkyd resin, fillers, driers, and other miscellaneous materials.

Other Components: Water may be present from water used during removal. Iron oxide (rust, mill scale) may be present. Animal waste (i.e., feces, guano, nesting materials, etc.) and dirt/miscellaneous debris may also be potentially present.

RCRA Metals: The waste is presumed to contain lead at levels exceeding the regulatory limit of 5 milligrams per liter (approximately 5 ppm) by the Toxicity Characteristic Leaching Procedure (TCLP) test for lead (unless contract documents provided for testing to determine lead toxicity characteristic). Chromium is considered present as an underlying characteristic.

Typical Physical Characteristics:

Physical State – Solid
Color – Black for boiler slag component, or metallic grey/black for steel grit component.
Color varies for paint chips.
Odor – None
pH – Not Applicable
Liquid Flash Point – Not Applicable
Specific Gravity – Approximately 2.7 (boiler slag) and Approximately 7.5 (steel grit)
Bulk Density – Approximately 1.2 kg/l (boiler slag)
Approximately 3.6 kg/l (steel grit)
Free Liquids – None (moisture may be present from water added during removal)

Consolidated Hazardous Waste Information: The following consolidated information for hazardous lead-based paint waste can be used in completing the required items needed for its proper shipment and disposal:

- USDOT Shipping Description – RQ Hazardous Waste, Solid, n.o.s. (D008); 9; NA3077; PG III
  n.o.s. = Not Otherwise Specified, PG = Packing Group
- Hazard Label on containers – Class 9
- Placard for shipments exceeding 455 kg or bulk – Class 9
- Hazardous Waste due to the Characteristic Lead Toxicity, Waste Code D008
- Constituents of Concern – Lead and Chromium
- Treatability Group – Non-wastewater
- Treatment Standard – 0.75 mg/L Lead and 0.06 mg/L Chromium by TCLP test
- Reportable Quantity – 4.54 kg or greater
- Markings on Container –
  Hazardous waste, solid, n.o.s. (D008); NA3077
  HAZARDOUS WASTE – Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the Environmental Protection Agency.
  Generator's Name: NYSDOT Region ( )
  EPA ID Number ( )
  Manifest Document Number ( )
  Accumulation Start Date ( )

USDOT Emergency Response Guidebook Guide: 171, Substances (Low to Moderate Hazard)

B. Non-Hazardous Industrial Solid Paint Removal Waste. The Contractor shall ensure that only solid paint removal waste is deposited into the containers or roll-offs. All testing of the paint removal waste necessary to satisfy the requirements of the disposal facility or transporter shall be the responsibility of the Contractor.

571-3.03 Hazardous Paint Removal Waste Containing Lead - Management Requirements. Employees handling hazardous paint removal waste shall be trained in accordance with 6 NYCRR Part 373-3.2(g) in hazardous waste management procedures including hazardous waste accumulation, preparedness and prevention, contingency and emergency procedures. The Contractor's Preparedness and Prevention Plan, Contingency Plan and Emergency Procedures, and Personnel Training Records, as required by 6 NYCRR Part 373-1.1(d)(1)(iii), shall be submitted to the Engineer for acceptance prior to

the generation of any hazardous waste. Containers in storage shall be inspected on at least a weekly basis in accordance with 6 NYCRR Part 373-3.9(b)-(d).

571-3.04 Containers and Labeling. No roll-off shall be filled to a capacity in excess of that marked on the roll-off as the maximum capacity. Once the Engineer determines the quantity within a specific container or roll-off, that container or roll-off 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 (except for analytical sampling). All containers or roll-offs shall be located in a place secured from traffic and in a manner acceptable to the Engineer. The Contractor shall take measures to prevent the blowing or dispersion of the waste during each loading operation and while being transported.

The Contractor shall label, mark, and placard all containers or roll-offs prior to shipment in accordance with USDOT and NYSDEC regulations. Each container shall have an appropriate label prior to filling with the applicable words identifying its contents as paint removal waste and providing the presumed waste classification of hazardous or non-hazardous industrial waste. The accumulation start date shall be completed at the time when waste is first deposited into each container. All label markings shall be permanent, printed in English, and displayed on a background of contrasting color un-obscured by other labels or attachments. Labeling shall be located away from other markings that could substantially reduce its effectiveness.

571-3.05 Document Preparation.

A. Hazardous Paint Removal Waste Containing Lead. The Contractor shall prepare and distribute all documentation including the Uniform Hazardous Waste Manifest. The Engineer will sign the Generator's Certification on the Uniform Hazardous Waste Manifest. The LDR (Land Disposal Restricted) certification shall be completed and attached to the manifest, as required by 40 CFR Part 268 *Land Disposal Restrictions*.

B. Non-Hazardous Industrial Solid Paint Removal Waste. The Contractor shall prepare and distribute all documentation, including the disposal record forms.

571-3.06 Paint Removal Waste Transport. All paint removal waste shall be in transit to the disposal site from the site of generation no later than 45 calendar days unless otherwise approved by the Engineer, but no longer than 90 days. Any additional required shipment information, including manifest number, shall be entered on the container label(s) prior to shipment offsite. The Contractor shall present evidence that the vehicle that will be used for the shipment is permitted to transport the designated waste in accordance with 6NYCRR Part 364.

Conditions for hazardous paint removal waste transporting vehicles to pick up paint waste debris, in bulk, from one or more bridge sites (multiple collection) for delivery to an authorized Treatment, Storage and Disposal Facility (TSDF) include the following:

A. Hazardous Paint Removal Waste Containing Lead.

- The materials picked up at each site shall be essentially identical in physical and chemical characteristics. No materials, other than paint waste debris, may be included if wastes from several individual generating sites are to be combined on the same truck.
- All of the component shipments are presumed to be D008 hazardous wastes, and disposed as such.
- A manifest is prepared for each generating bridge site. Each manifest shall reflect a bulk shipment, and all manifests being carried by the same transporting vehicle must express the quantity in pounds. In sum total, the manifests accompanying the shipment shall account for the entire quantity transported.

- All component shipments are intended to be conveyed to the same TSDF, and the TSDF has agreed to accept consolidated bulk loads.
- All component shipments shall have originated at sites where the Department is the waste generator. No loads may be included that were generated at a site for which another agency is the waste generator.
- Measures shall be taken to prevent the blowing or dispersion of the paint removal waste during each loading operation and while being transported.
- The weight of waste from each individual site (BIN) shall be provided by the disposal facility.

B. Non-Hazardous Industrial Solid Paint Waste. Conditions for non-hazardous waste transporting vehicles to pick up paint waste debris, in bulk, from one or more bridge sites (multiple collection) for delivery to an authorized disposal facility include the following:

- The materials picked up at each site shall be essentially identical in physical and chemical characteristics. No materials, other than paint waste debris, may be included if wastes from several individual generating sites are to be combined on the same vehicle.
- All component shipments are intended to be conveyed to the same disposal facility, and the disposal facility has agreed to accept consolidated bulk loads.
- All component shipments shall have originated at sites where the Department is the waste Generator. No loads may be included that were generated at a site for which another agency is the waste Generator.
- Measures shall be taken to prevent the blowing or dispersion of the waste during each loading operation and while being transported.
- The weight of waste from each individual site (BIN) shall be provided by the disposal facility.

571-3.07 Conditionally Exempt Small Quantity Generator (CESQG) Exemption. Shipments of non- hazardous paint removal wastes of less than 500 pounds shipped in a single load may be transported without a waste transporter permit as allowed by the Small Quantity Waste Transporter Exemption at 6 NYCRR Part 364.1(e). For activities with generation of hazardous paint removal wastes that meet Conditionally Exempt Small Quantity Generator (CESQG) status (generate less than 220 pounds in any month and store less than 2205 pounds on site at any time), no USEPA ID number is required, the waste can be shipped without a manifest, and a CESQG can self-transport up to 220 pounds of waste in any calendar month to a disposal facility. CESQGs can dispose of their waste at a permitted hazardous waste facility or municipal or industrial solid waste facilities that are permitted to accept that type of waste.

571-3.08 Hazardous Paint Removal Waste Containing Lead Stabilization. Treatment of hazardous paint removal waste, as required by Federal regulations, is presumed to require stabilization of the waste such as mixing it with portland cement and water at a permitted Hazardous Waste Treatment or Disposal Facility. The stabilized waste shall meet the treatment standards of the Federal regulations prior to disposal in a permitted Hazardous Waste Disposal Facility.

571-3.09 Non-Hazardous Industrial Solid Paint Waste Sampling and Analysis. The Contractor shall conduct all sampling and analysis as required by the designated authorized disposal facility as soon as feasible upon waste generation at each non-hazardous designated bridge. Sampling shall be conducted by individuals thoroughly trained in sampling protocols, handling and chain of custody procedures, and laboratory requirements. Accepted sampling practices shall be used to obtain representative composite sample(s) as required for the specific analysis to be completed. Each composite sample shall include a minimum of four distinctly different sampling points. Analyses shall be completed at a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified laboratory using NYSDEC Analytical Services Protocols (ASPs). The analysis must include, at a minimum, the RCRA heavy metals analysis using the Toxicity Characteristic Leaching Procedure (TCLP) and a total weight

analysis. If analytical results indicate that the waste is hazardous, the waste shall be disposed of as such and the hazardous waste pay item shall be used.

571-3.10 Waste Disposal Facility.

A. Hazardous Paint Waste Containing Lead. Prior to generating any hazardous paint removal waste, the Contractor shall provide the Engineer with a letter from a permitted Hazardous Waste Disposal Facility, stating that the Facility has agreed to accept the hazardous waste generated by the work requirements of this contract; is authorized to accept the hazardous waste under the laws 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. The letter shall be signed by a representative of the Disposal Facility who is legally authorized to sign such an agreement.

B. Non-Hazardous Industrial Solid Paint Waste. Prior to generating any non-hazardous paint removal waste, the Contractor shall provide the Engineer, in writing, the name and location of the permitted solid waste management facility selected for disposal.

571-4 METHOD OF MEASUREMENT.

571-4.01 Hazardous Paint Waste Containing Lead. The quantity of paint removal waste to be measured for payment will be in net pounds of waste disposed of, based on disposal facility weight tickets of the waste as manifested, not including the weight of the containers.

571-4.02 Non-Hazardous Industrial Solid Paint Waste. The quantity of paint removal waste to be measured for payment will be in net pounds of waste disposed of, based on disposal facility weight tickets, not including the weight of the containers.

571-5 BASIS OF PAYMENT.

571-5.01 Hazardous Paint Waste Containing Lead. The unit price bid per pound of paint removal waste 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. 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, in addition to other remedies the Department may possess, said fine or penalty will be deducted from monies due the Contractor.

571-5.02 Non-Hazardous Industrial Solid Paint Waste. The unit price bid per pounds of paint removal waste shall include the cost of all labor, materials, equipment, sampling, testing, and fees necessary to complete the work. If the Department is fined or penalized as a result of the Contractor's performance or lack thereof, in addition to other remedies the Department may possess, said fine or penalty will be deducted from monies due the Contractor.

Payment will be made under:

Item No.	Item	Pay Unit
571.03	Disposal of Hazardous Paint Removal Waste Containing Lead	Pound
571.04	Disposal of Non-Hazardous Industrial Solid Paint Removal Waste	Pound