

B. Grinding Flange Edges (QCP #2) . All exposed bottom flange edges of longitudinal rolled and welded beams shall be rounded to a radius of 1/8 inch plus or minus 1/16 inch (3 mm plus or minus 1.5 mm) before abrasive blasting. This work may be done without weather and temperature restrictions.

C. Containment/Waste Disposal (QCP #3). Waste material generated by abrasive blasting operations is a solid waste and shall be handled as follows:

- (1) Contained, (2) Collected, (3) Stored, (4) Evaluated, (5) Properly disposed.

All equipment shall be parked on ground covers free of cuts, tears or holes to prevent contamination of pavement or soil and to protect area under and around equipment.

The Contractor shall erect an enclosure to completely surround (around and under) the blasting operations. The ground cannot be used as the bottom of the enclosure unless completely covered with plastic or tarps.

The enclosure shall be constructed of flexible materials such as tarpaulins or containment screens (specifically designed for this purpose), or of rigid materials such as plywood. All materials shall be maintained free of tears, cuts or holes; however, flexible material used for the sides of the enclosure only may be weaved to contain a maximum of 15 percent holes and a minimum of 85 percent material. All seams shall be overlapped a minimum of 6 inches (150 mm) and fastened together at 12 inch (300 mm) centers, or fastened and overlapped in a manner that insures a seal which does not allow openings between the screens in the containment. The vertical sides of the enclosure shall extend completely up to the bottom of the deck on a steel beam bridge. All blasting operations on a truss type bridge shall be completely enclosed, including top side. Bulkheads shall be used between beams to enclose the blasting area.

Vacuum blasting may be used in lieu of containment, providing that the vacuum blasting equipment is manufactured and marketed for this purpose and is equipped with controls which automatically shut down the blasting operation if the blast head brushes are not held in contact with the surface being cleaned.

All debris collected by these operations, removed from equipment or filters, or that has fallen to the ground, shall be collected and stored at the bridge site, if practical, for testing, evaluation and disposal. If not practical, an alternate location shall be mutually agreed upon by the Engineer and Contractor. Additionally, centralized cleaning stations for recyclable steel, ferric oxide, or aluminum oxide grit (if used) shall be set up at a location mutually agreed upon by the Contractor and Engineer. Storage shall be in steel containers and shall have lids which shall be locked at the end of each workday.

The Contractor shall obtain the services of a testing laboratory to obtain directly from the project site and evaluate a composite representative sample of the abrasive blasting debris for each bridge site. The person taking the sample will be an employee of the testing laboratory.

The composite sample shall consist of individual samples taken from all containers which are on the site at the time of the sampling. These individual samples shall be blended together to comprise one composite sample. The individual samples shall be of equal size. There shall be one individual sample taken from each drum and four randomly spaced individual samples taken from each container other than drums.

The individual samples shall be taken with stainless steel tools and placed into either clean glass or plastic containers.

All sampling shall be done in the presence of the Engineer. In addition to the above mentioned requirements, the sampling shall also comply with the requirements of U.S. EPA Publication SW 846.

A Chain of Custody must also accompany all composite samples. Included in this document shall be in the name of the person taking the sample, the Company for which he works, the date and time which the sample was taken, the bridge from which it was taken, the Township and Municipality where the bridge is located and signatures of all persons involved in the Chain of Custody, including dates of possession.

The sampling shall be done within the first week of production blasting at each bridge. If the sampling is not done within the time allotted above, all blasting and painting operations on the bridge from which waste was generated, shall promptly cease.

The composite sample shall be tested for lead and chromium in accordance with U.S. EPA Publication SW 846. The test results and Chain of Custody records shall immediately be forwarded to the Director. If the material is hazardous, the Contractor shall also forward the names of the hauler and treatment facility to the Director. Any additional testing required by the hauler, treatment facility, or landfill will be paid for by Contractor.

All federal, state and local environmental protection laws, regulations and ordinances including, but not limited to, air quality, waste containment and waste removal must be observed during the performance of this contract.

In respect to enforcement of the above mentioned laws, bidders are advised that various governmental bodies have this responsibility. It is the responsibility of the bidders to comply with those laws as enforced by those various governmental bodies.

The existing paint being removed from these bridges may contain lead or chromium. The Contractor is responsible to assure that workers take proper safety precautions when working in this environment (see bid proposal note entitled "Safety").

Hazardous Waste: If the tests reveal that the maximum concentration of either lead or chromium exceeds 5.0 milligrams per liter, the waste shall be treated as a hazardous waste and the steel containers shall be labeled as a hazardous waste. The Director will then obtain a generator number assigned to the State.

All containers of waste material which have been classified as hazardous shall be stored in a secured location until proper disposal. The storage site shall be surrounded with 5 foot (1.5 m) high chain link fence fabric supported by traffic sign drive posts at 10 foot (3 m) center to center. Drive posts shall be embedded into the ground at least 2 feet (0.6 m) deep. The fencing shall be secured with padlocks at the end of each day. Signs shall be posted in obvious locations on the enclosure warning of the hazardous material.

The Contractor shall then arrange for hauling, treating and disposal of all hazardous waste. All hazardous waste shall be disposed of after the Director has obtained a generator number. In every case, any and all hazardous waste shall be disposed of within 60 days after it is generated. Failure to comply with the 60 day disposal requirement shall be considered by the Department as a breach of contract by the Contractor and all abrasive blasting and painting of structural steel on the project shall immediately cease until the hazardous waste is properly disposed. Upon such breach, the Department shall cease processing all pay estimates and notification of the breach shall be sent to the Contractor's surety. Further, any fines or liens assessed by any governmental agency which has jurisdiction over the disposal of this material shall be the responsibility of the Contractor. The hauling and disposal shall be by a firm licensed by U.S. EPA and who shall also be responsible for providing the Uniform Hazardous Waste Manifest (EPA Form 8700-22A).

The Contractor shall decontaminate or dispose of all collection/ containment equipment in accordance with EPA guidelines.