

# Division Approved Direct Load-out System

As of June 14, 2011

## Related Work Specified Elsewhere:

Installation of negative pressure differential system as described in Section III.J. Temporary Pressure Differential and Air Circulation System.

Construction of Critical and Primary Barriers, and Work Area, Section III.N.

## Submittals:

Before Start of Work: Submit the following to the Owner's Representative for review. Do not start Work until these submittals are reviewed by the Owner's Representative.

Drawing showing location, size, and placement of the transfer chamber and waste trailer in relation to the Work Area.

Product data identifying the dimensions and construction of waste trailer bag.

## PART 1- PRODUCTS

Waste Trailer Bags: Provide a pre-manufactured waste disposal bag specifically designed for use in direct waste load-out. The bag shall be approximately 29' long x 7' tall x 7' wide and open on one end only. Support loops shall be integrated into the bag on minimum 4' centers along the top of the bag. The bag will be constructed of seamless poly sheeting; taped poly will not be permitted. The bag will be constructed as follows:

**Outer Bag- constructed of 3 ounce un-coated woven polypropylene Primary Bag- 6 mil thick sheet polyethylene film**

**Secondary Bag- 6 mil thick sheet polyethylene film**

Polyethylene Sheet: A single polyethylene film in the largest sheet size possible to minimize seams, 6 mil thick, clear, frosted, or black as required by job conditions.

Duct Tape: Provide Nashua 357 brand duct tape in 2" or 3" widths.

Plywood: Provide full sheets of ½" thick CDX plywood in good condition for the construction of the transfer chamber.

Framing: Provide 2"x4" wood framing member for the construction of the transfer chamber.

Flooring Protection: Provide new sheets of cardboard in the largest size possible to protect the sheet polyethylene floor in the transfer chamber and waste trailer bag.

Rope: Provide solid braid nylon rope minimum ½" diameter with a minimum tensile strength of 1,250 lbs.

Waste Trailer: Provide a clean enclosed roll-off type waste trailer sized to accommodate the waste trailer bag described above.

Steel Strapping: Provide minimum 5/8" x .017: cold-rolled, medium carbon steel strapping with a break strength of 1,830 lbs for sealing the ends of the waste trailer bags when full. Use seals, sealing tools, and strapping tensioner compatible with the specified steel strapping.

Airless Sprayer: Provide an airless sprayer for the application of amended water or removal encapsulants. A water hose and nozzle may not be substituted for an airless sprayer.

## PART 2- EXECUTION

Transfer Chamber: Provide a transfer chamber to directly connect the waste trailer and work area. The transfer chamber shall be a minimum of 6' long x 6'6" wide x 6'6" tall. The opening of the transfer chamber shall not exceed the dimensions of the opening of the waste trailer bag. Construct the transfer chamber from 2" x 4" wood framing and 1/2" thick plywood sheeting. Construct the chamber weather tight and in a manner that maintains building security independent of the waste trailer. Install hinged doors that will swing 180 degrees to close the opening at the connection point with the waste trailer during separation.

Line transfer chamber with critical, primary, and secondary barriers as described in diagram.

At opening of transfer chamber and Work Area install a flapped doorway consisting of 2 layers of alternating sheets of poly. This flapped doorway may be taped open during periods of active wasted load out.

At opening of transfer chamber and Waste trailer, Install 2 layers of sheet poly. These poly barriers are to be rolled up at all times except for periods when the waste trailer is separated from the transfer chamber. Refer to the Separation and Tie- In Sequences in this Section for Details.

At the floor opening of the transfer chamber at the waste trailer install a threshold constructed from 2" x 4" wood framing.

Protect the poly floor of the transfer chamber from load out operations with cardboard.

### Waste Trailer and Waste Trailer Bag:

**Line waste trailer with 6-mil poly prior to installing waste trailer bag.**

Attach rope through closed end of dumpster and run through loops in waste trailer bag. Pull rope tight to support waste trailer bag and tie off to the transfer chamber.

**Line the bottom of the waste trailer bag with cardboard to protect during waste load out.**

### Waste Trailer Bag to Transfer Chamber Tie- In Procedure:

Open hinged doors to transfer chamber and direct waste trailer driver to backup and deposit the opening of the waste trailer to within 2" of the opening of the transfer chamber.

From the outside attach the 3 ounce un-coated woven polypropylene outer bag to the opening of the transfer chamber. Secure using staples and duct tape.

Enter the Work Area and proceed to the transfer chamber. Roll-up and secure the 2 layer, 6 mil curtain at the opening of the transfer chamber/ waste trailer. When complete, the curtain should be rolled up between the outer bag and primary bag of the waste trailer bag.

Attach the primary bag to the primary layer in the transfer chamber with a minimum overlap of 12". Seal this joint with spray glue and duct tape. Install layers so that the primary bag is the innermost layer in the transfer chamber.

Attach the secondary bag to the secondary layer in the transfer chamber with a minimum overlap of 12". Seal this joint with spray glue and duct tape. Install layers so that the secondary bag is the innermost layer in the transfer chamber.

Install a plywood ramp to bridge the opening between the transfer chamber and the waste trailer. Use caution to not damage the poly sheeting and immediately repair and damage.

#### Waste Handling Procedures:

Remove asbestos containing material according to work plan. In lieu of immediately bagging the material as described in Regulation No. 8, the Contractor shall immediately place the material into a cart, wheelbarrow, or similar, and transport to the waste trailer bad via the transfer chamber.

Deposit the material into the waste trailer bag. At all times the debris in the waste trailer bag shall be maintained adequately wetted.

Continue the process until the waste trailer bag is full, and then proceed with Waste Trailer Separation as described below.

#### Waste Trailer Separation Procedures:

Close flapped doorway between Work Area and Transfer Chamber.

Remove plywood ramp, cardboard sheeting, and all gross debris from the transfer chamber.

Confirm that the debris in the waste trailer bag is adequately wet and continuously mist the air in the transfer chamber during the separation sequences.

Wet wipe and HEPA vacuum all debris from the secondary layer of the transfer chamber.

Remove the secondary bag from the transfer chamber, wrap and seal using the metal strapping. Seal with duct tape and fold the secondary bag into the waste trailer.

Remove the secondary barrier layer from the transfer chamber and pass back into the Work Area through the flapped doorway.

Wet wipe and HEPA vacuum all debris from the primary layer of the transfer chamber.

Remove the primary bag from the transfer chamber, wrap and seal using the metal strapping. Seal with duct tape and fold the primary bag into the waste trailer.

The transfer chamber shall be final cleaned, visually inspected, and cleared as identified in Section III.P.3 of Regulation No 8. Part B.

Unroll the 2-layer 6 mil curtain and seal to the opening of the transfer chamber.

From outside the Work Area, open the plywood hinged doors at the transfer chamber and disconnect the outer bag from the transfer chamber, wrap and seal using the metal strapping. Seal with duct tape and fold the out bag into the waste trailer.

Label the outside bag with the four labels as per Section III.R.2. - Disposal of Asbestos Containing Waste Materials.

Remove the rope supporting the bag from the transfer chamber and from within the waste trailer.

Attach the waste trailer to the waste hauler's truck and carefully pull away from the transfer chamber and building.

Close the plywood doors to the transfer chamber and look until beginning a new tie- in sequence.

