Pipeline and Hazardous Materials Safety Administration, DOT

§ 192.283 Plastic pipe: Qualifying joining procedures.

(a) Heat fusion, solvent cement, and adhesive joints. Before any written procedure established under §192.273(b) is used for making plastic pipe joints by a heat fusion, solvent cement, or adhesive method, the procedure must be qualified by subjecting specimen joints made according to the procedure to the following tests:

(1) The burst test requirements of—
   (i) In the case of thermoplastic pipe, paragraph 6.6 (sustained pressure test) or paragraph 6.7 (Minimum Hydrostatic Burst Test) or paragraph 8.9 (Sustained Static Pressure Test) of ASTM D2513 (incorporated by reference, see §192.7);
   (ii) In the case of thermosetting plastic pipe, paragraph 8.5 (Minimum Hydrostatic Burst Pressure) or paragraph 8.9 (Sustained Static Pressure Test) of ASTM D2517 (incorporated by reference, see §192.7); or
   (iii) In the case of electrofusion fittings for polyethylene pipe and tubing, paragraph 9.1 (Minimum Hydraulic Burst Pressure Test), paragraph 9.2 (Sustained Pressure Test), paragraph 9.3 (Tensile Strength Test), or paragraph 9.4 (Joint Integrity Tests) of ASTM Designation F1055 (incorporated by reference, see §192.7);

(2) For procedures intended for lateral pipe connections, subject a specimen joint made from pipe sections joined at right angles according to the procedure to a force on the lateral pipe until failure occurs in the specimen. If failure initiates outside the joint area, the procedure qualifies for use; and

(3) For procedures intended for non-lateral pipe connections, follow the tensile test requirements of ASTM D638 (incorporated by reference, see §192.7), except that the test may be conducted at ambient temperature and humidity if the specimen elongates no less than 25 percent or failure initiates.

(a) No person may make a plastic pipe joint unless that person has been qualified under the applicable joining procedure by:

1. Appropriate training or experience in the use of the procedure; and
2. Making a specimen joint from pipe sections joined according to the procedure that passes the inspection and test set forth in paragraph (b) of this section.

(b) The specimen joint must be:

1. Visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure; and
2. In the case of a heat fusion, solvent cement, or adhesive joint:
   i. Tested under any one of the test methods listed under § 192.283(a) applicable to the type of joint and material being tested;
   ii. Examined by ultrasonic inspection and found not to contain flaws that would cause failure; or
   iii. Cut into at least 3 longitudinal straps, each of which is:
      A. Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and
      B. Deformed by bending, torque, or impact, and if failure occurs, it must not initiate in the joint area.
(c) A person must be requalified under an applicable procedure, if during any 12-month period that person:

1. Does not make any joints under that procedure; or
2. Has 3 joints or 3 percent of the joints made, whichever is greater, under that procedure that are found unacceptable by testing under § 192.513.
(d) Each operator shall establish a method to determine that each person making joints in plastic pipelines in