

# **Protocol for Third Party Validation of Manufacturer's Certification**



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## **Corrugated HDPE Pipe (300 mm and larger) For AASHTO M 294/MP7 Applications**

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## 1.0 Introduction

This Certification Protocol is part of a third party certification program for HDPE virgin resin and HDPE corrugated pipe sponsored by Corrugated Polyethylene Pipe Association (CPPA), a division of the Plastics Pipe Institute, Inc., (PPI). This Certification Protocol constitutes part of the Agreements entered into by the Manufacturer, PPI, and the Administrator.

Under this program, a Manufacturer certifies that products (resin or pipe) it produces under this program meet or exceed the requirements in AASHTO M 294/MP7 (the Standard). The Administrator validates the Manufacturer's certification through appropriate testing and inspection of Manufacturer's virgin HDPE resin and HDPE corrugated pipe, and review of Manufacturer's QC program.

## 2.0 Definitions

**2.1 Administrator:** A third party agency designated and authorized by PPI to validate Manufacturer's certification on behalf of PPI in accordance with this Certification Protocol.

**2.2 Conformance:** Compliance with specified requirements.

**2.3 Control:** To exercise authority over and regulate.

**2.4 Corrective Action:** Measures taken to rectify conditions adverse to quality and to eliminate or prevent recurrence.

**2.5 Day or Days:** In measuring time, the term "day" or "days", as used in this Certification Protocol, refers to calendar and not business days.

**2.6 Documentation:** Recorded information.

**2.7 Manufacturer:** any organization producing Products or materials for certification under this third party Certification Protocol. For purposes of this Protocol Manufacturers shall be either pipe producers or resin producers.

2.7.a Pipe producer – An applicant who makes corrugated polyethylene pipe as specified

by AASHTO M 294, Standard Specification for Corrugated Polyethylene Pipe, 300- to 1200- mm Diameter, or AASHTO MP7, Standard Specification for Corrugated Polyethylene Pipe, 1350 and 1500 mm Diameter.

2.7.b Resin producer – An applicant who makes HDPE virgin resin in accordance with the requirements of AASHTO M 294, Standard Specification for Corrugated Polyethylene Pipe, 300- to 1200- mm Diameter, or AASHTO MP7, Standard Specification for Corrugated Polyethylene Pipe, 1350 and 1500 mm Diameter.

**2.8 Product:** Corrugated polyethylene pipe as defined in Section 4.2. Product types are corrugated (C), smooth (S) and profile (D). Perforated classes are Class II, Class I and non-perforated.

**2.9 Program Mark:** As used in this Certification Protocol, the term "Program Mark" refers to a permanent affixation or printing on a pipe, or labeling of a resin box, indicating that the resin or pipe is certified under this Protocol. The Program Mark may also be used in promotional literature as defined in Section 3.8. The PPI Certification Oversight Committee (PPI staff and selected members of PPI) determines the design and information in the Program Mark.

**2.10 Quality Assurance:** Those planned, systematic, and preventive actions that are required to ensure materials and Products will meet specified requirements.

**2.11 Quality Control:** Inspection, testing, or examination to ensure materials and Products were produced to conform to specified requirements.

**2.12 Quality Program:** An established, documented system to ensure quality.

**2.13 Validation:** The process by which a separate determination is made by the Administrator that Manufacturer's certification is in accordance with the Protocol requirements.

**2.14 Verify:** Determine that an activity or condition conforms to specified requirements.

### **3.0 General**

**3.1 Overview of Program:** The main features of the Protocol may be summarized as follows. Manufacturer enters into licensing agreements with PPI and the Administrator. Using AASHTO M 294/MP7 requirements, Administrator tests Manufacturer's product (resin or pipe) to verify compliance with the applicable Standard. Manufacturer will provide copies of test reports and other relevant information to the Administrator for review and verification of completeness and accuracy. Assuming that compliance with the Protocol requirement is demonstrated, Administrator will so notify Manufacturer and PPI. PPI will list Manufacturer in a directory of participating Manufacturers. The Manufacturer is then eligible to use Program Marks for his Administrator-validated product. Administrator will periodically inspect the applicant's place of manufacture to determine continuing compliance with the requirements of the program and the functioning of applicant's quality program. Administrator and PPI both agree to protect the confidentiality of information they receive as detailed in the agreement with Manufacturer.

**3.2 Participation:** Any Manufacturer of HDPE resin or HDPE corrugated polyethylene pipe as defined in AASHTO M 294/MP7 may participate in the program to certify one or more products under this program. Applicants must enter into an Agreement with the Administrator and PPI. For a pipe Manufacturer having more than one facility, each facility producing certified Product(s) must participate in the program. As described elsewhere in this Certification Protocol, each participating facility is subject to inspection for the certified Product(s) produced on site.

**3.3 PPI Functions:**

- a. The PPI Certification Oversight Committee guides PPI activity in connection with the Protocol subject to the approval of the PPI Board of Directors, President, and legal counsel.
- b. PPI will license the Manufacturer to use the certification Mark on certified product provided the Manufacturer complies with all the requirements set forth in the licensing Agreements with both PPI and the Administrator as well as this Certification Protocol.
- c. A diligent effort has been made to select appropriate standards and conduct a reliable program. However, PPI makes no representation, warranty or guarantee in connection with the standard or the program and expressly disclaims any liability or responsibility for loss or damage resulting from participation, for any violation of federal, state, or municipal regulation with which the underlying AASHTO standard may conflict, or for the infringement of any patent resulting from the use of the AASHTO standard.
- d. PPI shall maintain a current list of certified HDPE resins and notify participating Manufacturers when changes are made. PPI shall also maintain a list of Manufacturers' certified Products. PPI shall promptly advise the Administrator and all participating Manufacturers when revisions or changes have been made to the Standard, and the effective date of implementation under this Protocol.
- e. The PPI Certification Oversight Committee shall review the Certification Protocol on an annual basis.
- f. The PPI Certification Oversight Committee shall designate the Administrator.

**3.4 Administrator Functions:** The Administrator shall perform the administration, testing and validation functions under the Protocol. Administrator will conduct in-plant inspections, sample and test pipe and virgin HDPE resin (or confirm resin certification) to validate Manufacturer's certification, develop and review test data and perform other administrative services. Administrator shall verify that an applicant has a functioning quality program. Administrator will notify program participants promptly as to how it will manage re-testing of certified Product(s) and validation of new Product(s).

**3.5 Applicable Standards:**

- a. The Standards designated for this Protocol are AASHTO M 294 and MP7. The requirements from these Standards are outlined in Section 4.2.
- b. Questions as to the applicability of the designated Standard to Manufacturer's Products are to be determined by Administrator. Administrator validation applies to the criteria as defined in AASHTO M 294/MP7; Administrator will disregard internal company criteria.

**3.6 Revisions to Standard:**

- a. When AASHTO revises the Standard, the Administrator, consistent with this Certification Protocol, shall notify program participants of how they will handle testing and validation of Products.

- b. When a revised Standard is published, a phase-in period as defined in Section 3.6 (c) will be allowed to accommodate compliance with any revision to the Standard. For the purposes of this Certification Protocol, a revision to the Standard shall be considered published when it is printed in its final form and generally available to the public through AASHTO.
- c. Testing will be consistent with the revised Standard upon its publication. Testing to the previous specifications or most recent prior revision will be accepted for a period of ninety (90) days after publication of the revision. All certifying Products must be produced in compliance with the latest revision of the Standard within six (6) months of the publication of the revision unless the Administrator notifies participants that a longer period is needed for testing. The Administrator can waive re-testing under the revised Standard when previous test results adequately demonstrate compliance with the revised Standard or if the revised Standard establishes less stringent criteria.

### **3.7 Program Mark (See Figure 1):**

- a. By affixing the Program Mark, the resin or pipe Manufacturer is certifying that its products (resin or pipe) have been manufactured, sampled, and tested in accordance with this Protocol and comply with its requirements. In addition, the use of the Program Mark indicates that resin or pipe Manufacturer has obtained approval from PPI to use the Program Mark.
- b. The Program Mark represents that the resin or pipe Manufacturer is producing a product that is a faithful representation of the tested and certified product in design, construction and fabrication. Neither PPI nor Administrator represents, warrants or guarantees that products bearing the Program Mark do in fact conform to AASHTO M 294/MP7 requirements.
- c. Program Marks are to be printed on or affixed to each length of pipe or box of resin for Manufacturer-certified Products. Manufacturer shall comply with applicable AASHTO marking requirements
- d. The Program Mark must be used as shown in Figure 1 and may not be modified. The Program Mark shall not be used or placed in such a manner as to imply any other endorsements or certifications by PPI or the Administrator.
- e. The Resin or pipe Manufacturer shall not knowingly release a product for sale with the Program Mark affixed to a product that does not meet the requirements of AASHTO M 294/MP7. If a resin or pipe Manufacturer knowingly releases such products for sale that do not comply with the requirements of AASHTO M 294/MP7, all previously certified product in the non-compliant facility will be automatically de-listed pending inspection and re-certification under Sections 5.5 or 7.5.

### **3.8 Manufacturer Literature:**

- a. Resin or pipe Manufacturers are permitted to use the Program Mark in their promotional materials and literature only after an appropriate agreement between the resin or pipe Manufacturer, PPI, and the Administrator is executed and the resin or pipe are certified under this Protocol.
- b. To avoid misunderstanding, references to certification in resin or pipe Manufacturer literature must specify the particular products that are certified, unless all of the products mentioned in the literature or advertising are certified under this Protocol.
- c. Participating resin or pipe Manufacturers shall provide PPI with copies of current literature and promotional materials that refer to this Certification Protocol. PPI shall review this resin or pipe Manufacturer literature and determine Protocol compliance.

## **4.0 Pipe Product Certification**

**4.1 Manufacturer's Request:** Manufacturer will contact Administrator to coordinate pipe Product testing for initial Product certification. The PPI designated Administrator and Manufacturer execute a valid licensing Agreement under this Protocol in order to conduct testing. A copy of the Manufacturer's quality control program complying with the Protocol Appendix 1 shall be provided to the Administrator at the time initial certification is sought, and shall be available for Administrator review during plant inspections or as requested by the Administrator.

### **4.2 Product Certification Requirements and Product Attribute Groupings:**

- a. Product requirements are in AASHTO M 294 and MP7. Pipe inside diameter requirements are for the minimum inside diameter.
- b. Each unique corrugated polyethylene pipe Product that a Manufacturer desires to be certified under this Protocol should be separately tested. For initial certification, and for future plant audits, Administrator will test every pipe diameter. Within each pipe diameter, each product type – corrugated (C), smooth (S) and profile (D) – must be tested. For initial certification only, within each product type, see table below to determine priority for testing perforated classes. When one perforated class passes, no further testing is required within that product type:

Priority	Perforated class
1	Class II Perforated
2	Class I Perforated
3	Non Perforated

For initial Product certification purposes, it does not matter at which of the Manufacturer's plants the Product is made, provided that the Manufacturer provides an assurance that each of the facilities that produce such Products use the same or similar manufacturing procedures.

Products with similar attributes that can logically be placed in a Product attribute group may be certified based on the testing of a representative Product or Products from the Product attribute grouping. Because it is not practical to define the term Product attribute grouping precisely and because the logical grouping of Products may vary based on the characteristic being assessed, Manufacturers should contact the Administrator to discuss and agree upon the propriety of the Manufacturer's definition of a particular Product attribute group and the necessary associated testing.

**4.3 Samples:** Pipe samples must be submitted to Administrator in a sufficient quantity to conduct all testing, with:

- a. Information showing Manufacturer's name and description of Product.
- b. Information demonstrating that the HDPE resin used to fabricate the Product has been certified in accordance with this Protocol.

### **4.4 Product Test Report:**

The Product test report will include the following information:

- a. Manufacturer's Name and Address
- b. Product Identification
  - (1) Product name

(2) Product series or model number

c. Product Description

(1) Product Type

(2) Product dimensions (minimum inside diameter, mm; wall thickness, mm; length, m)

(3) Perforation Class (if applicable)

d. Test Results

(1) For each test contained in the specification, the specification paragraph number, the test description, the reference paragraph number, the reference test method, the applicable criteria measurement for the specification, and the test results are to be listed.

(2) The following is the list of properties to be tested. The test report shall verify compliance achieved (pass/fail), or that the test was not performed where the laboratory does not complete the test. (Parenthetical references are to the relevant sections of AASHTO M 294/MP7).

(a) Minimum inside diameter (7.2.3)

(b) Liner thickness (7.2.2)

(c) Length (7.2.4)

(d) Perforations (7.3)

(e) Pipe stiffness (7.4)

(f) Pipe flattening (7.5)

(g) Environmental stress cracking (7.6)

(h) Brittleness (7.7)

(i) Joint integrity (9.6) (for fittings)

e. Related documentation submitted by Manufacturer.

f. An authorized laboratory representative signature.

Each test report and its related documentation constitute the basic reference material for validation by the Administrator, through in-plant inspection of subsequent manufacture of the Product, that such production is a faithful reproduction in all respects of the certifying specimen and in compliance with the applicable specifications.

#### **4.5 Notice of Product Certification:**

a. A notice will be sent to Manufacturer stating the date on which certification has been granted and the Product designation.

b. The Notice of Product Certification shall contain the following information:

(1) Manufacturer's name, pipe diameter, pipe type and all appropriate classes as described in Section 4.2;

(2) Report number and date.

(3) A statement that the quality control program is satisfactory and meets minimum requirements.

#### **4.6 Notice of Product Failure to Certify:**

a. If the tested Product does not comply with all the requirements of the Standard, a notice will be sent to Manufacturer by certified mail, return receipt requested, stating that its Product(s) did not certify under the Protocol. De-certification based on unsatisfactory inspection is addressed separately in Section 7.0.

b. The notice will include:

(1) Manufacturer's name, pipe diameter, pipe type and all appropriate classes;

(2) Report number and date; and

(3) The specific test failure or failures on which non-compliance is based.

#### **4.7 Modification of Certified Products:**

- a. When design changes are made in a certified Product and Manufacturer believes that this change will still result in a Product equivalent to the certified Product, Manufacturer shall notify the Administrator. Manufacturer shall submit a summary of properties in Section 4.2 to the Administrator to demonstrate compliance.
- b. This process also applies to changes in Product formulation (raw materials), except that substitution of PPI listed resins from different suppliers is not considered a change in the Product. Equivalency can be established by supplier technical data, pipe producer testing, or generally recognized industry practices.
- c. The legal responsibility for the authenticity of submitted data rests on the Manufacturer.
- d. This procedure is only intended for use in cases of design changes or Product formulation changes deemed not to affect compliance.

#### **4.8 Recognition of Prior Tests:**

- a. At the discretion of Administrator, results from tests conducted before this Protocol became effective, or tests conducted before a revision to AASHTO M 294/MP7 is published, may be deemed to satisfy the applicable testing requirement provided that:
  - (1) The tests and reports fully comply with the Product Certification Requirements of Section 4.2 and provide the information needed by Administrator to validate Manufacturer's certification under AASHTO M 294/MP7;
  - (2) Administrator deems the testing laboratory to be certified to perform the tests conducted; and
  - (3) Manufacturer certifies that there has been no change in the Product or production processes that would affect the Product's compliance.
- b. The Administrator may request additional information or evidence supporting the request for recognition of prior test results.

## **5.0 Resin Certification**

### **5.1 Initial certification:**

- a. Resin Manufacturer contacts the Administrator to request that their HDPE resin be listed by PPI as a certified resin.
- b. Administrator conducts material testing per AASHTO M 294/MP7, Section 6.1 to assure compliance with these requirements. In addition, Administrator conducts SP-NCTL testing to assure resin meets the 15% yield stress/24 hour requirement.
- c. Administrator notifies resin Manufacturer and PPI that all requirements have been met. PPI will then include the resin on the certified HDPE resin list. A corrugated pipe Manufacturer must use a resin (or combination of resins) that is on the PPI certified resin list. This PPI Protocol does not include recycled or reclaimed HDPE resin. They are not allowed by the AASHTO standards.
- d. The corrugated pipe Manufacturer may also independently request PPI listing of their private formulation made by in-plant dry blending two or more virgin PE resins. The pipe Manufacturer must reveal to the Administrator and to PPI the specific resin components and their ratio for this formulation. Administrator tests a melt blend of the formulation to assure that all material requirements of AASHTO M 294/MP7 Section 6.1 have been met (while the individual components may not meet the AASHTO requirements, a melt blend of the components must meet the requirements). Administrator notifies pipe Manufacturer and PPI that all requirements have been met. PPI will then include this material formulation in the certified HDPE resin list. Only the pipe Manufacturer that owns this private formulation may use it for corrugated pipe production. The PPI listing is for this formulation only. A change in either of the HDPE resins, or the supplier used in the blend, would require another listing.

### **5.2 Non-compliance:**

If any listed HDPE resin fails to comply with the requirements of the specification when tested by the Administrator during a pipe plant audit, the following provisions will apply:

- a. Administrator will report this to the resin Manufacturer and the pipe Manufacturer and identify the part of the specification the HDPE resin does not comply with.
- b. Resin Manufacturer must take corrective action as soon as possible and reply with an action plan within fourteen (14) days of notification that the corrective action has or will be taken.
- c. A retest for the HDPE resin that was not in compliance will be scheduled as soon as reasonably possible after corrective action is taken, but no longer than thirty (30) days after the corrective action.
- d. If the resin Manufacturer and Administrator do not agree on the retest results, PPI may select another laboratory to conduct the test on the suspect HDPE resin – see Section 8. PPI will make the final decision on these discrepancies. Any issues related to rounding will follow the guidelines of ASTM E 29. If the HDPE resin is determined to be in non-compliance, PPI will remove that resin from the certified list. PPI will notify all pipe Manufacturers in the program that this resin is no longer certified. The Administrator and pipe Manufacturer shall determine the extent of non-compliance for affected Product in inventory and determine what action, if any, should be taken with respect to its disposition.
- e. For the resin Manufacturer to be reinstated on the PPI certified list with the resin deemed to be in non-compliance, that resin is treated as if it were a new product.

## **6.0 Administrator Inspection of Pipe Manufacturing Facilities**

### **6.1 Frequency:**

- a. Administrator will conduct its first pipe plant inspection within ninety (90) days after the pipe Manufacturer has been certified.
- b. Each year including the first year Administrator will perform a minimum of one (1) in-plant inspection per Manufacturer.
- c. Administrator shall inspect each Manufacturer's pipe plant at least once during a five-year period.
- d. If the Manufacturer has more than four plants, the Administrator shall not inspect more than 25% of the Manufacturer's plants in a given year (rounded up to higher whole number). If a plant has not been audited in a given calendar year, they shall submit either an internal audit summary or results of another 3rd party audit to the Administrator by April 1 of the following year to demonstrate that plant's conformance to the PPI Protocol.
- e. The Administrator shall test each Manufacturer's Product at least once in a five-year period. If the Manufacturer has more than four Products, the Administrator shall not test more than 25% of the Manufacturer's Product line in a given year (rounded up to higher whole number). A Product is defined as each pipe diameter and each pipe type (C, S and D). At least one Product shall be tested each plant audit, regardless of the 25% limit.

These inspections will be unannounced visits made during normal business hours. Manufacturer will provide Administrator with a schedule of normal business hours and holidays, along with Product size range produced at each plant. In the event that Administrator makes an unannounced visit for the purposes of this program during normal business hours, and the pipe plant is closed, Manufacturer will be billed, at the discretion of Administrator, for the visit and revisit.

### **6.2 Scope:**

Administrator's representative will be equipped with copies of the current AASHTO M 294/MP7, other standards or references referred to by AASHTO M 294/MP7, this Certification Protocol, test reports, documentation and other data on Manufacturer's certified Products and any other necessary materials. An integral part of each in-plant inspection will be an examination of Manufacturer's in-house quality program and records. It is the responsibility of Manufacturer to maintain an in-house quality program as outlined in Section 9.0 and Appendix 1 of this Certification Protocol.

### **6.3 Inspection Testing:**

- a. Inspection testing will be performed on a sample or samples selected at random by Administrator from the Product line either in production (with corresponding resin) or in inventory at pipe Manufacturer's facility (with corresponding production records). Administrator's inspector will select test samples, appropriately mark them, and see that they are prepared for testing without alteration.
- b. Administrator shall use the criteria specified in Sections 4.4.d.2 and 5.2 to verify compliance.
- c. The Product samples selected may be transported to the Administrator's laboratory. If Manufacturer has its own test facilities that are acceptable to Administrator, testing of Manufacturer's own pipe in its own facility is permissible provided that Administrator's inspector or representative witnesses it.
- d. The cost of these inspection tests will be borne by Manufacturer.

#### **6.4 Immediate Corrective Action:**

If the Administrator determines that a Product is not in compliance during a plant inspection, the pipe Manufacturer will be given the opportunity to correct it immediately. The pipe Manufacturer must take immediate corrective action, and must formally inform the Administrator within seven (7) days from the date of the receipt of a notice of non-compliance (date of plant inspection) of the immediate remedy. If the Administrator approves this immediate remedy, the Manufacturer may continue marking the Product as certified. If the Administrator does not approve the immediate remedy, or if the Manufacturer does not notify the Administrator within seven (7) days, the Administrator will send a notice of de-certification consistent with Section 4.6 and/or 7.0 to the Manufacturer with a copy to PPI.

#### **6.5 Inspection Reports:**

- a. Administrator will communicate with Manufacturer regarding any matters requiring clarification or other action on the part of Manufacturer. Administrator will discuss its findings with Manufacturer's personnel at the time of the on-site inspection; this is normally done at a closing conference. All official comments or decisions with respect to compliance or non-compliance of a certified Product will be confirmed in writing from the Administrator within thirty (30) days of the site visit.
- b. The inspection report is confidential and is mailed only to the pipe Manufacturer or designated representative, with the exception that a copy will be made available to the appropriate PPI staff or counsel upon request.

### **7.0 De-certification After Administrator Inspection and Re-certification**

**7.1 Administrator's Notice of Non-Compliance:** If the Administrator finds a Product to be in non-compliance after a pipe plant inspection, the Administrator will report this to the pipe Manufacturer via certified mail, return receipt requested with a copy to PPI, within ten (10) days after the determination of the non-compliance. Examples of non-compliance include, but are not limited to, failure to: (1) make faithful reproductions of tested Products, (2) follow this Certification Protocol or the underlying agreements, (3) meet the performance criteria in AASHTO M 294/MP7, and (4) maintain a QA/QC program. Administrator will completely describe the reasons for non-compliance of the Product and inform the Manufacturer of the problem and of the corrective action required. If the Manufacturer and Administrator do not agree on the test results, PPI may select another laboratory to conduct the test on the suspected Product – see Section 8. PPI will make the final decision on these discrepancies. Any issues related to rounding will follow the guidelines of ASTM E 29.

**7.2 Manufacturer Notice of Corrective Action:** Upon formal receipt of a notice of non-compliance, the pipe Manufacturer must cease applying Program Marks to the Product listed in the notice of non-compliance. The Administrator and Manufacturer shall determine the extent of non-compliance for this Product in inventory and determine what action, if any, should be taken with respect to its disposition. To resume participation in the program, the Manufacturer must take corrective action as soon as possible and reply within fourteen (14) days that the corrective action has been taken. In addition, a retest for this Product deemed to be in non-compliance must be scheduled within thirty (30) days after first receiving formal notification of this non-compliance. All costs for this extra Product testing will be borne by the Manufacturer. The Manufacturer may not resume marking the Product as certified under this Protocol until

the Administrator approves the corrective action and the retest is in compliance; any Product manufactured before this occurs shall not be marked as certified. If the Administrator does not approve the immediate remedy or if the retest still results in non-compliance, the Administrator will inform the Manufacturer with a copy to PPI and the de-certification notice will be consistent with Section 4.6. If the Product is determined to be in non-compliance, PPI will remove that Product from the certified Product list.

**7.3 Administrator's Notice of Intentional Non-Compliance:** This paragraph addresses findings of intentional non-compliance, which leads to immediate de-certification of all Products found to be intentionally non-compliant. Examples of intentional non-compliance are: 1) use of a non-PPI listed HDPE resin, 2) repeated non-compliance by the Manufacturer, or 3) falsification of records. The Administrator will report these findings via certified mail to the Manufacturer, return receipt requested, with a copy to PPI within twenty-four (24) hours after a determination of intentional non-compliance. The Administrator will outline the specifics of the findings of intentional non-compliance in the certified letter. Upon receipt of a Notice of Intentional Non-Compliance, the Manufacturer must cease applying Program Marks to all Products found intentionally non-compliant, and make a good-faith effort to recall all non-compliant Products. In addition, all intentionally non-compliant Products in the care and custody of the Manufacturer must have the Program Marks removed or obliterated. PPI will immediately remove all intentionally non-compliant Products from the list of certified Products.

**7.4 Suspension of Manufacturer Literature:** A final determination of intentional non-compliance will require suspension of the use of Manufacturer literature that represents the intentionally non-compliant Product as certified under this Protocol. Manufacturer will discontinue distribution or use of the literature and remove or obliterate all inappropriate references from literature in the Manufacturer's care, custody, and control.

**7.5 Requalification:** To re-certify the excluded Product following intentional non-compliance, the Manufacturer must reapply and submit the same full testing and inspection data that apply to new Products.

In the event of an intentional non-compliance, the manufacturer's certification under this protocol shall be suspended for a period of six months. Upon conclusion of the six-month suspension, the manufacturer may apply for product certification under this protocol through the submittal of testing and inspection data as required for newly certified products.

## **8.0 Manufacturer-Administrator Disagreements**

A thorough understanding of this Certification Protocol and proper operation of the program should minimize any disputes or disagreements. If, however, a disagreement or dispute arises between a resin or pipe Manufacturer and Administrator concerning the certification of a Product or other aspects of this program, the resin or pipe Manufacturer may request that the PPI Executive Director review the Administrator's determination.

**8.1 Procedure and Timing of Review:** Manufacturer-Administrator disagreements shall be handled as follows:

1. On receipt of written notice of de-certification, the pipe or resin Manufacturer has seven (7) days to notify PPI and the Administrator that Manufacturer is seeking review of the Administrator's determination. The resin or pipe Manufacturer's notice must be in writing and contain sufficient information to accurately identify the factual background, the nature of

the dispute, and the decision or action sought.

2. After receipt of Manufacturer's notice, Administrator has seven (7) days to submit materials to PPI supporting the Administrator's determination.
3. Within fourteen (14) days of receiving resin or pipe Manufacturer's notice, PPI will form a review panel, whose members shall include the PPI Executive Director, PPI Counsel, and other neutral qualified individuals with pertinent laboratory, technical, or industry experience. The PPI Executive Director shall chair the review panel and determine the panel's composition in consultation with PPI Counsel.
4. The review panel may, at its discretion, hold hearing(s) on the issues raised in Manufacturer's notice. The PPI review panel will promptly inform the PPI Certification Oversight Committee of the disagreement, and seek any guidance or comments that the PPI Certification Oversight Committee might wish to make.
5. The review panel will strive to reach a determination within thirty (30) days after receipt of Manufacturer's notice.
6. If the review panel has not reached a determination within thirty (30) days after receipt of Manufacturer's notice, the PPI Executive Director shall so inform the President of PPI.
7. If the review panel has not reached a determination within forty-five (45) days after receipt of Manufacturer's notice, the PPI Executive Director, with advice of PPI Counsel, shall render a final determination on Manufacturer's request. In the event that the PPI Executive Director is unavailable or incapacitated, the person empowered to act as President will make a final determination, provided that person has no conflicting commercial interest, such as being employed by a competing company or being a past employee of the contesting Manufacturer. In this case, the Vice President will make the final determination.

**8.2 Marking During Review Process:** Except when it appears to the PPI Review Panel that the alleged defect or other deficiency may have a significant adverse effect on the quality or performance of the pipe in question, the resin or pipe Manufacturer may continue to mark the Product in question during the review process. If de-certification is sustained by PPI, Manufacturer will cease marking the de-certified product. Any master list of certified products will be changed promptly if de-certification is upheld.

## **9.0 Quality Program**

Manufacturer shall prepare and maintain a written (hard copy or electronic) QA/QC program to ensure that the quality of Products is in accordance with the requirements of the underlying agreements, this Certification Protocol Appendix 1 and AASHTO M 294/MP7. When establishing its quality program, each Manufacturer should include elements that it considers necessary to assure that Products meet the requirements of the standard and other quality criteria. The Manufacturer shall also provide information that demonstrates tracability of the pipe to the certified resin. A copy of the quality program shall be provided to the Administrator at the time initial certification is sought and shall be available for Administrator review during plant inspections or as requested by the Administrator.

## **10.0 Miscellaneous**

**10.1 Public Statements and Confidentiality:** PPI and the Administrator will not make any public comments on the status of a particular Manufacturer's Products or test results except to note whether Manufacturer's Products appear in the program directory of certified Manufacturers.

Special care must be taken to ensure that no comments are made concerning the status of any Manufacturer's Product during the testing and certification period. At no time shall public comments be made concerning Manufacturers who chose not to participate in this program. As used here, "public comments" include statements at PPI meetings. PPI and Administrator are obliged to maintain the confidentiality of proprietary information received from participating companies. This obligation is detailed in the formal agreement between PPI and the Administrator, and in the individual agreement between Manufacturer and the Administrator and PPI.

**10.2 Directory:** Administrator will report monthly to PPI on companies and Products certifying under the program as well as changes or de-certifications. PPI will prepare a list or directory of certified HDPE resins and Manufacturers whose Products are certified under the program. The directory will be revised periodically to add newly certified Products or Manufacturers and delete discontinued Products or decertified Manufacturers.

**10.3 Use of Non-participating Products:** This program is not intended in any way to inhibit the purchase or use of Products from companies not approved to use the Program Mark.

**10.4 Patent Rights:** Nothing contained in this program is to be construed as granting any rights, by implication or otherwise, for the manufacture, sale, or use in connection with any method, apparatus, or Product covered by patents, nor as insuring anyone against liability for infringement of patents.

**10.5 Fees:** Manufacturer is required to pay promptly any applicable fees due to PPI or the Administrator, or other costs as described in the underlying Agreement or this Certification Protocol. Failure to pay fees per invoice terms will subject Manufacturer to de-certification or exclusion from the program.

**10.6 Modification of Guidelines:** The PPI Board of Directors will approve all revisions to this Certification Program.

## APPENDIX I

### QUALITY CONTROL PROGRAM

#### **I.1 Quality Control Plan**

I.1.1 It is the responsibility of the Manufacturer to control the quality of the Products produced and to provide the quality control information needed for acceptance by the buyer/user. The Manufacturer is required to perform quality control sampling, testing and record keeping on all products they produce. All Products produced by the Manufacturer must meet all the requirements of the standard specifications, which for corrugated polyethylene pipe are AASHTO M294/MP7. Since each Manufacturer is knowledgeable about their manufacturing process and Product's history, each Manufacturer determines their appropriate quality control testing frequency. Suggested minimum frequencies for tests outlined in Section 4.4.d.(2) are:

(a) Minimum inside diameter	once per week
(b) Liner thickness	once per week
(c) Length	once per day
(d) Perforations	once per week
(e) Pipe stiffness	three times per week
(f) Pipe flattening	three times per week
(g) Environmental stress cracking	once per production run
(h) Brittleness	three times per week
(i) Joint integrity (for fittings)	once per production run

I.1.2 The Manufacturer must supply to the Administrator a written quality control plan that details how the Manufacturer will control the equipment, materials, and production methods to insure that the specified products meet the requirements of AASHTO M294/MP7. The following information must be included in this quality control plan:

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- I.1.2.1 Provide a list of manufacturing facilities and location of plants.
  - I.1.2.2 Provide a list of the applicable Products produced at each plant.
  - I.1.2.3 Provide the name and title of the individual responsible for the quality control program at each plant.
  - I.1.2.4 Identify the method of sampling and testing of raw materials and Product including the lot size and tests performed.
  - I.1.2.5 Designate the frequency for each test conducted by the Manufacturer.
  - I.1.2.6 Designate the methods used to identify each lot of material during manufacturing, testing, storage and shipment.
  - I.1.2.7 Identify program for handling nonconforming product (resin or pipe) and investigation and corrective action procedures to remedy the problem.

#### **I.2 Annual Update**

I.2.1 An annual update is required for all plants that were not subject to an Administrator audit during the calendar year. This update will assure the Administrator that all requirements of AASHTO M 294/MP7 were met for all the certified Products by summarizing results of QC tests in accordance with the Manufacturer's QC plan.

- I.2.2 The Manufacturer must submit this annual update to the Administrator by April 1 of the following year.
- I.2.3 The Administrator will review the Manufacturer's annual update to verify that the quality control plan has been implemented and is being followed.

### **I.3 Sampling and Testing**

- I.3.1 The quality control plan approved for each Manufacturer and/or Manufacturer's location shall detail the methods and frequency of sampling and testing for all raw materials and products purchased or manufactured at that location. All testing shall be in accordance with current specifications and procedures referenced in AASHTO M294/MP7.
- I.3.2 Samples of materials and pipe may be taken by the specifying agency.
- I.3.3 Specifying agency may require annual third party independent assurance tests.
- I.3.4 Samples must be identified for record keeping.
- I.3.5 Manufacturer's Quality Control samples are to be uniquely identified by producing plant.
- I.3.6 Quality Control and Quality Assurance data are to be retained by the Manufacturer for two years and made available to the specifying agency upon request.
- I.3.7 Quality Control test reports shall include the lot identification.
- I.3.8 Unless requested at the time of ordering, test reports do not have to be filed for specific projects.
- I.3.9 Reports shall indicate the action taken to resolve non-conforming product.