Introduction to AASHTO’s NTPEP Audit Program for Thermoplastic Pipe

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Introduction

What *is* AASHTO?

- Nonprofit association, founded 1914
- Members include:
  - Transportation departments of the 50 states, the District of Columbia, and Puerto Rico
  - 50 Associate Members from Federal, State, and Local agencies and other countries
- Covers all modes: Aviation, Rail, Highways, Transit, Water, and Active Transportation
AASHTO supports members in the:

• development of transportation solutions that…
• create economic prosperity,
• enhance quality of life, and
• improve safety in our communities, states, and the nation as a whole.
Introduction – cont’d

• Policy development
• Advocacy
• Technical services
• Leadership development
• Advancing partnerships
• Promoting innovation
2018-2019 Leadership

Patrick K. McKenna
President
Missouri Department of Transportation

Victoria F. Sheehan
Vice-President
New Hampshire Department of Transportation

Scott Bennett
Secretary-Treasurer
Arkansas Department of Transportation

Jim Tymon
Executive Director
Regional Associations

Northeastern Association of State Transportation Officials (NASTO)
Southeastern Association of State Highway and Transportation Officials (SASHTO)
Mid-America Association of State Transportation Officials (MAASTO)
Western Association of State Highway and Transportation Officials (WASHTO)
New Committee Structure

Board of Directors
- Executive Committee
- Strategic Management Committee

Councils:
- Aviation
- Water
- Rail
- Active Transportation

Enterprise/Cross-Discipline Committees:
- Safety
- Communications
- Performance-Based Management
- Data Management and Analytics
- Funding and Finance

Administration Committees:
- Agency Administration
- Human Resources
- Internal and External Audit
- Knowledge Management
- Civil Rights

Program Delivery and Operations Committees:
- Planning
- Environment and Sustainability
- Design

- Bridges and Structures
- Traffic Engineering
- Right of Way and Utilities

- Materials and Pavements
- Construction
- Maintenance

- Transportation System Operations

Policy Bodies:
- Transportation Policy Forum

Special Committees:
- AASHTOWare
- Research and Innovation

Approved, Board of Directors
11-15-16

NTPEP
What is NTPEP?

- NTPEP stands for the National Transportation Product Evaluation Program
- Established within AASHTO in 1994, as a technical service program, who reports to the Council on Highways and Streets
- A partnership between the AASHTO member agencies and industry participants
- Combines the professional and physical resources of the AASHTO member departments in order to evaluate materials, products and devices of common interest for use in highway and bridge construction
- Primary Goal- provide cost-effective evaluations for the AASHTO members (state DOTs)
• Simplify the product evaluation process
• Make it more cost-effective for both the manufacturer and the end user.
• Reduce duplication of effort by State DOTs.
• Serve as a “One Stop Shop” for Manufacturers of engineered products.
Goal:
To perform quality assurance audits of participating manufacturers and report on their compliance with the quality control and product testing requirements of the NTPEP program.

This document is available at www.ntpep.org in the “Documents” section.
NTPEP Audit Process

1st
- Desktop Review is performed - Manufacturer submits Pre-Audit Application to AASHTO for review of Quality Management System

2nd
- On-Site Audit is conducted

3rd
- Final Audit Report - accessible through NTPEP DataMine website
Overview of the NTPEP Audit Programs

Quality Management System (QMS) Desktop Audit

- Manufacturer must follow an established quality control program.
- QMS should provide assurance that products will meet the requirements of:
  - applicable AASHTO/ASTM standards
  - The appropriate NTPEP technical committee work plan
  - NTPEP Standard Practice for audits.
- NTPEP review of the manufacture’s QMS is performed prior to scheduling of the on-site audit.
Overview of the NTPEP Audit Programs

**NTPEP on-site Audits**

- NTPEP performs initial and annual quality control audit of each facility.
  - Evaluation of production and quality control testing
  - Review of QMS implementation, test reports, equipment calibration, verification of results, and a check of records.

- The NTPEP auditor welcomes participation from any member state.
Overview of the NTPEP Audit Programs

NTPEP on-site Audits

• On-site audits include:
  • Document review
  • Production inspection
  • Storage yard inspection
  • Quality control testing evaluation
  • Testing of products.
• NTPEP follow-up visits and testing.
• AASHTO Member Department surveillance visits and testing.
Overview of the NTPEP Audit Programs

Annual testing of products

- Random product samples tested for conformance during the annual audit.
- NTPEP selected samples from audit tested by NTPEP designated lab.
- NTPEP follow-up visits and testing as needed.
- AASHTO Member Department surveillance visits and testing.
- Test results are posted in the secured area (accessible by registered state users) of the NTPEP website.
Overview of the NTPEP Audit Programs

Resolution of testing/audit non-conformances and disputes

- Burden is on manufacturer to identify cause, correct issue, document resolution, and revise QMS.
- Additional testing to validate results.
- Corrective Action Reports.
- Documentation on secure area of NTPEP website.
NTPEP Audit Program For Thermoplastic Pipe

- Audits are conducted in accordance with:
  - AASHTO M294
  - Thermoplastic Pipe Technical Committee Work Plan
NTPEP Audit Program for Thermoplastic Pipe

Quality Management System (QMS) must include the following:

• Written procedure for documenting traceability of all material from the raw form to finished pipe.

• How product not manufactured by the facility is identified, tracked, and documented on mill test reports.

• Written procedure for labeling and storage of finished product.
NTPEP Audit Program for Thermoplastic Pipe

Samples are randomly selected for traceability and testing

- Resin tested for:
  - Density
  - Melt Index

- Finished pipe tested for:
  - Carbon Content
  - Inside Diameter
  - Liner thickness
  - Stiffness/Flattening
  - Brittleness
  - NCLS
  - Markings
  - Perforations
  - OIT
  - Elongation at Break
  - Density Melt Index
  - UCLS
Compliance Authentication

This authenticates:
Advanced Drainage Systems, Inc
Muncy, PA, US

successfully complies with AASHTO’s NTPEP Thermoplastic Pipe Technical Committee Work Plan.

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Date of Expiration

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To obtain information concerning AASHTO NTPEP’s auditing program, please visit www.ntpep.org
Questions?

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www.ntpep.org
http://data.ntpep.org
www.transportation.org