NTPEP Utilization

A Tennessee DOT Story

Danny Lane
Tennessee Department of Transportation
Research & Product Evaluation
TTCD TECHNICAL COMMITTEE MEETING
2019 NTPEP ANNUAL MEETING
Big Sky, Montana

TTCD
1988 / 1989
TTCD TECHNICAL COMMITTEE MEETING
2019 NTPEP ANNUAL MEETING
Big Sky, Montana

BEFORE DATAMINE
During the performance cycle from November 1, 2018 through September 30, 2019-Oversee and manage the QA of materials and products used on projects by utilizing and implementing the NTPEP requirements. Complete NTPEP monitoring, testing, and reporting within the time periods required by AASHTO for High Friction Thin Overlay Treatments HFTO, and Temporary Traffic control Devices TTCD’s. Participate and oversee implementation of the NTPEP audit programs (NAP) for manufactured products throughout the 2018 and 2019 performance cycle such as Geosynthetics, HDPE, Polypropylene and PVC Pipe, Corrugated Metal Pipe and Bridge Bearing Pad. Participate and oversee the implementation and continued use of data from existing products already in use and of other product modules from NTPEP.
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EVALUATED PRODUCTS

TRAFFIC SAFETY
- Pavement Marking Materials
- Portable Changeable Message Signs and Flashing Arrow Panels
- Raised Pavement Markers
- Roll Up Signing Materials
- Sign Sheeting Materials
- Temporary Traffic Control Devices

MAINTENANCE
- Concrete Coating Systems
- High Friction and Thin Overlays
- PCC Joint Sealants and HMA Crack Sealers
- Rapid Set Concrete Patch Materials
- Spray Applied Pipe Liners
- Structural Steel Coatings

CONSTRUCTION
- Asphalt Release Agents
- Concrete Admixtures
- Concrete Curing Compounds
- Corrugated Metal Pipe
- Elastomeric Bridge Bearing Pads
- Epoxy and Resin Based Adhesive Bonding Systems
- Erosion Control Products/Sediment Retention Devices
- Geosynthetic Reinforcement
- Geotextiles and Geosynthetics
- Guardrail/Guiderrail
- Reinforcing Steel/Welded Wire Reinforcement
- Thermoplastic Pipe
- Warm Mix Asphalt Technologies

Using NTPEP DataMine, manufacturers can submit their products for evaluations while NTPEP testing facilities can enter online test results data. These test results can then be shared publicly by their respective manufacturers.
## PRODUCT LIST

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<tr>
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<td>Elastomeric Bridge Joints and Bridge Joint Systems</td>
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<td>Stressed Cable Grout</td>
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<td>Release Compounds for Asphalt Mixes</td>
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<td>Anti-Graffiti Products</td>
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<td>Pile Accessories</td>
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<td>Warm Mix Asphalt</td>
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<td>Pavement Sealers and Treatments</td>
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<td>Rockfall Mitigation</td>
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<td>Closure Pour Materials</td>
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<td>Workzone Traffic Control Products</td>
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<td>Miscellaneous</td>
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</table>

**TOTAL APPROVED PRODUCTS = 2959**
QPL 1  Raised Pavement Markers / Snowplowable Raised Pavement Markers (RPM/SRPM)
QPL 1  Delineators and Workzone Drums
QPL 1  Pavement Marking Materials (PMM)
QPL 3  Structural Steel Coatings/Concrete Coating Systems (SSC/CCS)
QPL 4  Concrete Admixtures/Concrete Curing Compounds (CADD/CCC)
QPL 8  Epoxy and Resin Based Adhesive Bonding Systems (ERB)*
QPL 10 Sign Sheeting Materials/Roll Up Signs (SSM/RUP)
QPL 13 Rapid Set Concrete Patch Materials (RSCP)
QPL 14 Portland & Blended Cement (PBC) *
| QPL 17 | Erosion Control Products (ECP) |
| QPL 21 | Asphalt Release Agents (ARA) |
| QPL 29 | Flashing Arrow Panels (PCMS/FAP) |
| QPL 30 | Portable Changeable Message Signs |
| QPL 23 & 31 | High Friction and Thin Overlays (HFTO) |
| QPL 36 | Geosynthetics (GTX & REGEO) |
| QPL 37 | Detectable Warning Systems (DWS) * |
| QPL 39 | Warm Mix Asphalt Technologies (WMA) |
| QPL 42 | Spray Applied Pipe Liners (SAPL) NEW 2019 |
Special Provision Regarding Spray Applied Pipe Liners (SPAL)

SP607SAPL

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SPECIAL PROVISION REGARDING:
SPRAY APPLIED PIPE LINERS (SAPL)

Description:
This specification shall govern all work, materials, and equipment required for pipe and culvert rehabilitation using a "spray applied method" for the purpose of eliminating infiltration and exfiltration, repair of voids, and restoration of the structural integrity of the pipe or culvert.

Material:
Products meeting this provision shall have been submitted and evaluated through AASHTO’s National Transportation Product Evaluation Program (NTPEP) or AASHTO Product Evaluation List (APEL). Only products that are on the TDOT Qualified Products List (QPL) 42, SPRAY APPLIED PIPE LINERS (SAPL), may be used.

Grouts for the reestablishment of pipe inverts and for filling voids shall meet the requirements of section 921.50- Type I of the Standard Specification. Alternate grout recommended by the SAPL manufacturer may be used upon approval of the Engineer.

Spray Applied Pipe Lining Method

The spray applied lining material shall be used to form structurally enhanced monolithic liners covering all interior surfaces of the structure, including bents and inverts of manholes.

The spray applied slip lining shall conform to the minimum physical requirements as tested and approved during the initial NTPEP Evaluation. The physical requirements must be verified by an independent, certified, third-party testing laboratory within the last five years.

Submit to the project engineer manufacturer’s detailed product data with complete information on liner; pipe materials (pipes, gaskets, ends, joints, fittings, etc.), physical properties, dimensions, installation minimum / maximum allowable parameters such as maximum recommended external grout pressure, actual compressive stress, minimum bending radius or maximum joint angular deflection.

The SAPL will include applying a self-leveling grout to repair eroded inverts followed by the application of a TDOT approved spray applied liner process.
QPL 43 Closure Pour Materials

Rapid Set Concrete Patch Materials (RSCP) DATA

THE EXTENDED PRODUCT SHALL MEET THE FOLLOWING CRITERIA:

1) AASHTO T106/ASTM C 109 – or - AASHTO T22/ASTM C39
   Compressive Strength:
   Age Compressive Strength
   8 hours 4,000 PSI
   24 hours For Information Only
   3 days For Information Only
   7 days For Information Only
   28 days 6,000 PSI

2) ASTM C157 - Length Change of Hardened Concrete (cured in air)
   Age Maximum Length Change
   28 days - 0.10 %

3) ASTM C882 - Bond Strength by Slant Shear (modified to test at early ages)
   Age Bond Strength
   24 hours 1,000 PSI
   7 days For Information Only
NTPEP 2019 Implementation

PCC Joint Sealants (JS) & Hot Mix Asphalt Crack Sealant (CS) *

Detectable Warning Systems (DWS) *

Epoxy and Resin Based Adhesive Bonding Systems (ERB) *

Portland & Blended Cement (PBC) *
Using NTPEP DataMine, manufacturers can submit a request for audit of their facilities locations. The test results for these audits can be shared publicly by respective manufacturers. However, the audit reports will be viewable by respective manufacturers and state DOTs only.
Audit Programs

- Corrugated Metal Pipe (CMP)
- Elastomeric Bridge Bearing Pads (EBB)
- Geosynthetics (GTX & REGEO)
- Guardrail/Guiderail (GRL)
- Reinforcing Steel/Welded Wire Reinforcement (REBAR/WWR)
- Thermoplastic Pipe (THP)
March 1, 2018

Reinforcements, Inc.
1230 Industrial Drive
Hometown, TX 77555

To Whom It May Concern,

TDOT Materials and Tests Division have recently updated the steel bar reinforcing requirements for the Department’s Producer List.

TDOT will utilize the National Transportation Product Evaluation Program’s (NTPEP) National Audit Program (NAP) in its approval process for Reinforcing Steel Manufacturing. Manufacturers will be required to submit NTPEP and Evaluation of Reinforcing Steel Manufacturing (RS) audit program reports annually. NTPEP certification will be required by December 31, 2018 in order for manufacturers to remain on the TDOT’s Producer List.

TDOT will use the audit results to determine inclusion of the manufacturer based on compliance with NTPEP and the evaluation of RS audit program. A review of the final audit report along with corrective actions and split sample test results will be considered in the evaluation.

For reinforcing that goes through a cold drawing process, the original mill certification must be supplied for each size of the original material. After the cold drawing process, an independent laboratory must verify each size for the tensile strength that meets the original certification of the material.

For other steel reinforcement (epoxy coated, welded wire fabric, etc.), please refer to the SOP 1-1.

Sincerely,

Brian Egan
Director of Materials and Tests Division

NTPEP
NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM

TDOT
Department of Transportation
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TDOT DIVISIONS
BENEFITTING FROM
NTPEP

Construction  Maintenance
Design  Materials & Tests  Safety
Occupational Health and Safety
Traffic Operations  Environmental
Structures
A Big Tennessee DOT
Thank You
TO
INDUSTRY
STATE AGENCIES
CHAIRS & VICE CHAIRS
COMMITTEES MEMBERS
TO
THE NEXT
25 YEARS