

BLOSSBURG MUNICIPAL AUTHORITY
241 MAIN STREET
BLOSSBURG, PA 16912
PHONE: 570-638-2452 #2
FAX: 570-638-5507

Date: 7/2/2024

From: Blossburg Municipal Authority

To: [REDACTED]

USDA Rural Development, Rural Utilities Services, Water and Environmental Programs
Washington, DC 20250

This is a formal request for an availability waiver from the American Iron and Steel requirements for a 2.5" and 3" backflow preventor for the Blossburg Municipal Authority (BMA) Wastewater Treatment Plant (WWTP) Project. The BMA WWTP is located at 93 East Creek Road, Blossburg, PA. Hose connections and yard hydrants located in the buildings and around the WWTP grounds are supplied with potable water to washdown equipment, floors, tanks etc. If an issue were to arise with the equipment, there is a possibility that contaminated water could back feed into the public water distribution system, potentially causing harm to water customers. Backflow prevention devices are installed on the water service line upstream of any plumbing connections to reduce the potential for contaminated water to backflow into the water distribution system. A 3" backflow preventor is called for in the Control Building and a 2.5" backflow preventor is called for in the Headworks building.

General Information:

This project includes the construction of a new Headworks Building, Filter Building, and SBR System along with upgrades to the existing Influent Pump Station. Construction began in December of 2022 with the SBR System being put online in April of 2024, a partial Substantial Completion Certificate was issued on 4/30/2024.

The price of the 2.5" Watts LF-007-QT-FDA Backflow preventor is \$5,988.68

The price of the 3" Watts LF-007-QT-FDA Backflow preventor is \$7,265.78

Watts Water Technologies, Inc.
815 Chestnut Street
North Andover, MA 01845-6098
T: (978) 688-1811

Key Product Information:

This waiver request is for the 2.5” and 3” backflow preventor meeting the attached specification.

During construction the contractor could not identify any manufacturer in the US that fabricated a 2.5” or 3” backflow preventor meeting the project specifications and AIS requirements. No brands were listed in the specifications. The backflow preventors in size 2.5” and larger are only offered across the industry in epoxy coated cast iron. Backflow preventors that are 2” and less are available with brass or bronze bodies. We have attached the product data sheet for the proposed WATTS valves that meet the specification and accommodate the project schedule.

Companies Contacted:

Company Name	Contact Name	Email/Phone Number	Response/findings (including lead times)
Winsupply of Elmira	Joel Bill	jbill@winsupplyinc.com 607-767-9040	Non AIS Compliant
Layden Company	Will Layden	will@laydencompany.com 610-363-6639 ext. 204	Non AIS Compliant
Kolstad Associates	Rebecca Kolstad	rebecca@kolstadassociates.com 585-288-2080	Non AIS Compliant
WMS Sales	Tammy Berghorn	tberghorn@wmssales.com 315-453-4230	Non AIS Compliant
MIFAB, Inc.	Ryan Moore	rmoore@mifab.com 872-222-0274	Non AIS Compliant
Flomatic Valves	Ray Smith	ray@flowmatic.com 800-833-2040	Non AIS Compliant

Additionally, RD’s third party consultant conducted market research by contacting 14 companies and none could provide an AIS-compliant backflow prevention valve that meets the project specifications.

Justification for the Use of Foreign Products:

After contacting multiple companies that manufacture or supply 2.5" and/or 3" backflow prevention valves, none were able to provide AIS-compliant backflow prevention valves.

WATTS indicated in their attached letter that they do not currently offer any backflow preventors that meet AIS requirements in the diameters needed for the project and to the best of their knowledge, none of their competitors offer 2.5" or 3" backflow preventors that meet AIS requirements either.

Respectfully,

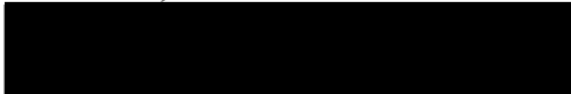
Michael R. Stoudt

Michael R. Stoudt, Chairman
Blossburg Municipal Authority

Enclosures:

Technical Specification: 22 11 19 Domestic Water Piping Specialties
WATTS Letter
Proposed WATTS DCBFP Product Data Sheet

CC: Yves Pollart, PE – HRG



Double Check Backflow Preventer

Purchased price of equipment supplied and installed at Blossburg WWTP

2 – ½” Watts LF-007-QT-FDA

3” Watts LF-007-QT-FDA



Vendors:

Winsupply of Elmira

Contact: Joel Bill

Email: jbill@winsupplyinc.com

Phone: (607) 767-9040

Layden Company

Contact: Will Layden

Email: will@laydencompany.com

Phone: (610) 363-6639 ext. 204

Brands: Conbraco & Apollo

Kolstad Associates

Contact: Rebecca Kolstad

Email: rebecca@kolstadassociates.com

Phone: (585) 288-2080

Brands: Zurn & Wilkins

WMS Sales

Contact: Tammy Berghorn

Email: tberghorn@wmssales.com

Phone: (315) 453-4230

Brands: Watts, Febco, Ames

Manufacturers:

MIFAB, Inc

Contact: Paul Lacourciere & Ryan Moore

Email: placourciere@mifab.com & rmoore@mifab.com

Phone: (872) 222-0274

Brands: Beeco

Flomatic Valves **

Contact: Ray Smith

Email: ray@flowmatic.com

Phone: (800)833-2040

Brands: Flowmatic

** Discontinued: Manufacturer no longer makes a DCBFP in the size required for the Blossburg WWTP or the Manufacturer has sold that division to a company who makes non-compliant DCBFP IE. Watts subsidiaries.

22 May 2024

RE: Large diameter backflows

To whom it may concern,

Watts Water Technologies and its subsidiaries Febco, Ames, and Backflow Direct do not currently offer any large diameter (2 ½" – 12") backflow preventers that meet the requirements of the American Iron and Steel Act. (AIS)

To the best of our knowledge none are offered by any of our competitors.

Should you have any questions or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink that reads "Andrew Rodenberg". The signature is written in a cursive, flowing style.

Andrew Rodenberg

Certification Engineer



May 14, 2024

Re: American Iron and Steel (AIS) Requirement Compliance

To Whom It May Concern:

Regarding the Blossburg Municipality WWTP Project, Zurn Water, LLC – Wilkins is unable to supply any 2-1/2” or 3” size backflow preventer assemblies that meet the American Iron and Steel (AIS) requirement. Products that contain more than 50% iron and steel content by cost are considered items predominantly of iron or steel as defined by EPA guidance dated 3/20/14.

Please contact the factory if you have further questions.

Best Regards,

A handwritten signature in black ink that reads "James A Cruz". The signature is written in a cursive, flowing style.

James Cruz
Product Compliance Engineer
www.zurn.com

Engineering Specification

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

LEAD FREE*

Series LF007 Double Check Valve Assemblies

2½" – 3"

Series LF007 Double Check Valve assemblies are installed at referenced cross-connections to prevent the backflow of polluted water into the potable water supply. Only those cross-connections identified by local inspection authorities as non-health hazard are allowed the use of an approved double check valve assembly. The valve body is fused with ArmorTek® technology to resist corrosion due to microbial induced corrosion (MIC) or exposed metal substrate. The series features Lead Free* construction to comply with Lead Free* installation requirements. Check with local authority having jurisdiction regarding vertical orientation, frequency of testing, or other installation requirements.

Smart and Connected technology comes standard on the Series LF007 assembly with NRS gate valves, Model IOT. The model includes sensors integrated at test cocks No. 2, No. 3, and No. 4 to measure pressure fluctuations at the three locations. This technology enables monitoring and assessment of certain aspects of backflow assembly performance and the water supply system.

NOTICE

An add-on monitoring connection kit is required to collect data from the pressure sensors. Without the connection kit, the sensors are passive components that do not communicate with any other device. The add-on connection kit communicates over wired serial (RS-485) interface and is compatible with most Building Management and Building Automation Systems. (The connection kit and pressure sensors are also available for existing installations. For more information, download RP-IS-LF007L.)



LF007-NRS-IOT

Features

- Modular, compact design concept to facilitate maintenance and assembly by retaining the spring load
- Advanced ArmorTek coating technology to resist corrosion of internals
- Fused epoxy coated cast iron body
- Top-mounted Lead Free* ball valve test cocks
- Sensors adapted to test cocks on Model IOT for measuring pressure fluctuations; activated with add-on monitoring connection kit (BMS/BAS only)
- Replaceable seats and seat discs
- Easier maintenance through a single, top-entry cover
- No special tools required for servicing
- Low pressure drop

NOTICE

Use of integrated pressure sensors and monitoring connection kit with Model IOT does not replace the need to comply with all required instructions, codes, and regulations related to installation, operation, and maintenance of the backflow preventer.

Watts is not responsible for data transmission failures due to power outages, connectivity issues, or improper installation.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Inquire with governing authorities for local installation requirements.

* The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Specification

A Double Check Valve assembly shall be installed at each noted location. The assembly shall consist of two positive seating check modules with captured springs and rubber seat discs. The check module seats and seat discs shall be replaceable. Service of all internal components shall be through a single access cover secured with stainless steel bolts. The Double Check Valve assemblies shall be constructed using Lead Free* cast copper silicon alloy. Lead Free* Double Check Valve assemblies shall comply with state codes and standards, where applicable, requiring reduced lead content. The assembly shall also include two resilient seated isolation valves; four top mounted, resilient seated test cocks. The assembly shall meet the requirements of ASSE Standard 1015 and AWWA Standard C510. The valve body shall use a coating system with built-in electrochemical corrosion inhibitor and microbial inhibitor. Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Assembly shall be a Watts Series LF007.

Model/Option

Prefix:

U Union connections

Suffix:

NRS Non-rising stem resilient seated gate valves
OSY UL Classified outside stem and yoke resilient seated gate valves
LF Without shutoff valves
IOT With pressure-sensing IoT test cocks and NRS gate valves

Materials

Check Valve Body: Lead Free* cast iron
Check Module: Captured spring and rubber seat disc
Access cover bolts: Stainless steel
Coating technology: Armortek

Pressure — Temperature

Temperature Range: 33°F – 110°F (0.5°C – 43°C) continuous,
140°F (60°C) intermittent

Maximum Working Pressure: 175 psi (12.1 bar)

Standards

ASSE Standard 1015, AWWA Standard C510
IAPMO PS31, CSA B64.5

Approvals



ASSE, AWWA, IAPMO, CSA, UPC

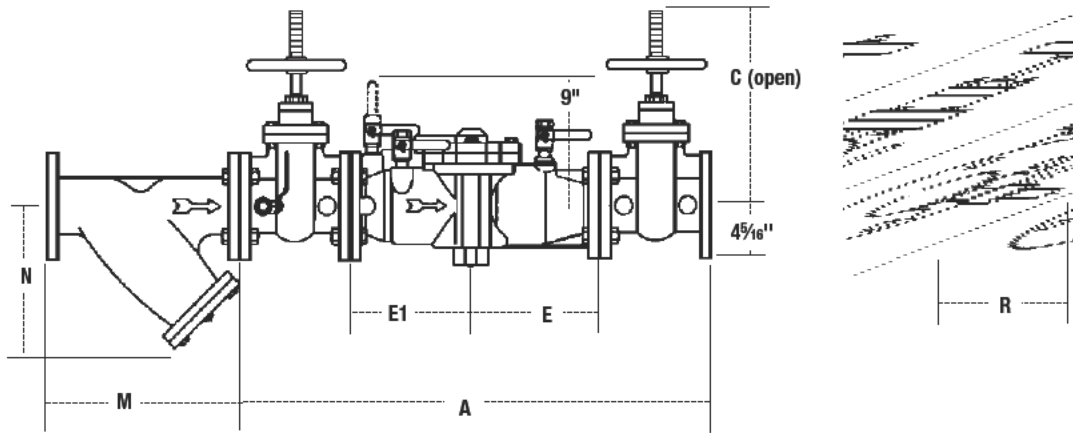
Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California

Option LF not listed

UL Classified with OSY gate valves (horizontal only)

Horizontal and vertical "flow up" approval on all sizes

Dimensions – Weights



Call customer service if you need assistance with technical details.

SIZE	DIMENSIONS								WEIGHT		
	A		B		E, E1		R		lb	kg	
	in.	mm	in.	mm	in.	mm	in.	mm			
LF007-NRS	2½	33⅞	841	9⅜	238	9¼	230	8¾	222	155	70
LF007-QSY	2½	33⅞	841	16⅜	416	9¼	230	8¾	222	158	72
LF007-NRS	3	34¼	870	10¼	260	9¼	230	8¾	222	185	84
LF007-QSY	3	34¼	870	18⅞	479	9¼	230	8¾	222	185	84

Strainer Dimensions

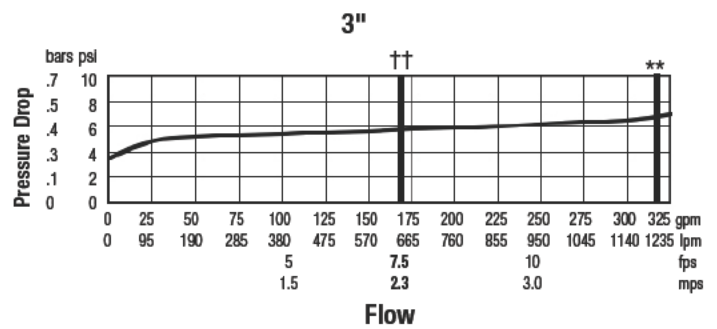
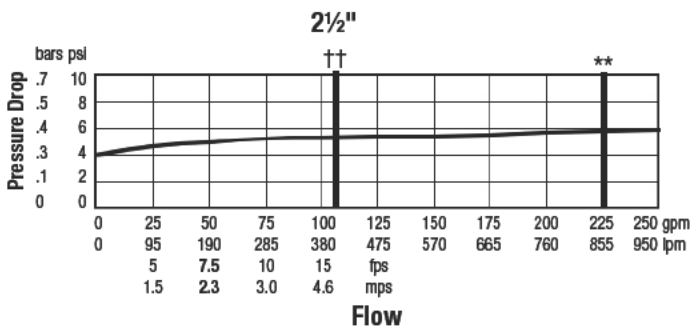
SIZE	DIMENSIONS				WEIGHT	
	M		N		lb	kg
	in.	mm	in.	mm		
2½	10	254	6½	165	28	13
3	10⅞	267	7	178	34	15

Capacity

As compiled from documented Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California lab tests.

†† Typical maximum system flow rate (7.5 ft/s, 2.3 m/s)

** UL rated flow



USA: T: (978) 689-6066 • Watts.com
 Canada: T: (888) 208-8927 • Watts.ca
 Latin America: T: (52) 55-4122-0138 • Watts.com

SECTION 22 11 19 - DOMESTIC WATER PIPING SPECIALTIES

GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. Section Includes:
 - 1. Vacuum breakers.
 - 2. Reduced Pressure Zone Backflow Preventers.
 - 3. Strainers for domestic water piping.
 - 4. Hose bibbs.
 - 5. Drain valves.
 - 6. Water-hammer arresters.
 - 7. Flexible connectors.
- B. Related Requirements:
 - 1. Section 22 05 19 "Meters and Gauges for Plumbing Piping" for thermometers, pressure gauges, and flow meters in domestic water piping.

1.03 DEFINITIONS

- A. AMI: Advanced Metering Infrastructure.
- B. AMR: Automatic Meter Reading.
- C. FKM: A family of fluoroelastomer materials defined by ASTM D1418.

1.04 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For domestic water piping specialties.
 - 1. Include diagrams for power, signal, and control wiring.

1.05 INFORMATIONAL SUBMITTALS

- A. Test and inspection reports.
- B. Field quality-control reports.

1.06 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For domestic water piping specialties to include in emergency, operation, and maintenance manuals.

PRODUCTS

1.07 GENERAL REQUIREMENTS FOR PIPING SPECIALTIES

- A. Domestic water piping specialties intended to convey or dispense water for human consumption are to comply with the SDWA, requirements of authorities having jurisdiction, and NSF 61 and NSF 372, or to be certified in compliance with NSF 61 and NSF 372 by an American National Standards Institute (ANSI)-accredited third-party certification body that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.

1.08 PERFORMANCE REQUIREMENTS

- A. Minimum Working Pressure for Domestic Water Piping Specialties: 125 psig unless otherwise indicated.

1.09 VACUUM BREAKERS

- A. Pipe-Applied, Atmospheric-Type Vacuum Breakers:
 - 1. Standard: ASSE 1001.
 - 2. Size: NPS 1/4 to NPS 3, as required to match connected piping.
 - 3. Body: Bronze.
 - 4. Inlet and Outlet Connections: Threaded.
 - 5. Finish: Rough bronze.

1.10 REDUCED PRESSURE ZONE BACKFLOW PREVENTERS

- A. Reduced-Pressure-Principle Backflow Preventers:
 - 1. Standard: ASSE 1013.
 - 2. Operation: Continuous-pressure applications.
 - 3. Pressure Loss: 12 psig maximum, through middle third of flow range.

4. Body: Cast silicon copper alloy for NPS 2 and smaller; ductile or cast iron with interior lining that complies with AWWA C550 or that is FDA approved or stainless steel for NPS 2-1/2 and larger.
5. End Connections: Threaded for NPS 2 and smaller; flanged for NPS 2-1/2 and larger.
6. Configuration: Designed for horizontal, straight-through flow.
7. Accessories:
 - a. Valves NPS 2 and Smaller: Ball type with threaded ends on inlet and outlet.
 - b. Valves NPS 2-1/2 and Larger: Outside-screw and yoke-gate type with flanged ends on inlet and outlet.
 - c. Air-Gap Fitting: ASME A112.1.2, matching backflow-preventer connection.

1.11 STRAINERS FOR DOMESTIC WATER PIPING

- A. Y-Pattern Strainers:
1. Pressure Rating: 125 psig minimum unless otherwise indicated.
 2. Body: Bronze for NPS 2 and smaller; cast iron with interior lining that complies with AWWA C550 or that is FDA approved, epoxy coated and for NPS 2-1/2 and larger.
 3. End Connections: Threaded for NPS 2 and smaller; flanged for NPS 2-1/2 and larger.
 4. Screen: Stainless steel with round perforations unless otherwise indicated.
 5. Perforation Size:
 - a. Strainers NPS 2 and Smaller: 0.033 inch.
 - b. Strainers NPS 2-1/2 to NPS 4: 0.062 inch.
 6. Drain: Factory-installed, hose-end drain valve.

1.12 HOSE BIBBS

- A. Hose Bibbs:
1. Standard: ASME A112.18.1 for sediment faucets.
 2. Body Material: Bronze.
 3. Seat: Bronze, replaceable.
 4. Supply Connections: NPS 1/2 or NPS 3/4 threaded or solder-joint inlet.
 5. Outlet Connection: Garden-hose thread complying with ASME B1.20.7.
 6. Pressure Rating: 125 psig.
 7. Vacuum Breaker: Integral or field-installation, nonremovable, drainable, hose-connection vacuum breaker complying with ASSE 1011.
 8. Finish for Equipment Rooms: Rough bronze, or chrome or nickel plated.
 9. Finish for Service Areas: Rough bronze.
 10. Finish for Finished Rooms: Chrome or nickel plated.
 11. Operation for Equipment Rooms: Wheel handle or operating key.
 12. Operation for Service Areas: Wheel handle.

13. Operation for Finished Rooms: Operating key.
14. Include operating key with each operating-key hose bibb.
15. Include wall flange with each chrome- or nickel-plated hose bibb.

1.13 DRAIN VALVES

- A. Ball-Valve-Type, Hose-End Drain Valves:
1. Standard: MSS SP-110 for standard-port, two-piece ball valves.
 2. Pressure Rating: 400-psig minimum CWP.
 3. Size: NPS 3/4.
 4. Body: Copper alloy.
 5. Ball: Chrome-plated brass.
 6. Seats and Seals: Replaceable.
 7. Handle: Vinyl-covered steel.
 8. Inlet: Threaded or solder joint.
 9. Outlet: Threaded, short nipple with garden-hose thread complying with ASME B1.20.7 and cap with brass chain.

1.14 WATER-HAMMER ARRESTERS

- A. Water-Hammer Arresters:
1. Standard: ASSE 1010 or PDI-WH 201.
 2. Type: Diaphragm.
 3. Size: ASSE 1010, Sizes AA and A through F, or PDI-WH 201, Sizes A through F.

1.15 FLEXIBLE CONNECTORS

- A. Bronze-Hose Flexible Connectors: Corrugated-bronze tubing with bronze wire-braid covering and ends brazed to inner tubing.
1. Working-Pressure Rating: Minimum 200 psig.
 2. End Connections NPS 2 and Smaller: Threaded copper pipe or plain-end copper tube.
 3. End Connections NPS 2-1/2 and Larger: Flanged copper alloy.
- B. Stainless Steel-Hose Flexible Connectors: Corrugated-stainless steel tubing with stainless steel wire-braid covering and ends welded to inner tubing.
1. Working-Pressure Rating: Minimum 200 psig.
 2. End Connections NPS 2 and Smaller: Threaded steel-pipe nipple.
 3. End Connections NPS 2-1/2 and Larger: Flanged steel nipple.

EXECUTION

1.16 INSTALLATION OF PIPING SPECIALTIES

- A. Balancing Valves: Install in locations where they can easily be adjusted. Set at indicated design flow rates.
- B. Y-Pattern Strainers: For water, install on supply side of each pump.
- C. Water-Hammer Arresters: Install in water piping in accordance with PDI-WH 201.

1.17 PIPING CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. When installing piping specialties adjacent to equipment and machines, allow space for service and maintenance.

1.18 ELECTRICAL CONNECTIONS

- A. Connect wiring in accordance with Section 26 05 19 "Low-Voltage Electrical Power Conductors and Cables."
- B. Ground equipment in accordance with Section 26 05 26 "Grounding and Bonding for Electrical Systems."
- C. Install electrical devices furnished by manufacturer, but not factory mounted, in accordance with NFPA 70 and NECA 1.

1.19 IDENTIFICATION

- A. Plastic Labels for Equipment: Install engraved plastic-laminate equipment nameplate or sign on or near each of the following:
 - 1. Vacuum breakers.
 - 2. Balancing valves.
 - 3. Wall hydrants.
- B. Distinguish among multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations, in addition to identifying unit. Nameplates and signs are specified in Section 22 05 53 "Identification for Plumbing Piping and Equipment."

1.20 ADJUSTING

- A. Set field-adjustable pressure set points of water pressure-reducing valves.
- B. Set field-adjustable flow set points of balancing valves.
- C. Set field-adjustable temperature set points of temperature-actuated, water mixing valves.
- D. Adjust each pressure vacuum breaker in accordance with manufacturer's written instructions, authorities having jurisdiction and the device's reference standard.

1.21 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect components, assemblies, and equipment installations, including connections.
- C. Perform the following tests and inspections with the assistance of a factory-authorized service representative.
 - 1. Test each pressure vacuum breaker according to authorities having jurisdiction and the device's reference standard.
 - 2. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 - 3. Operational Test: After electrical circuitry has been energized, start units to confirm unit operation.
 - 4. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- D. Domestic water piping specialties will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports.

END OF SECTION