CONQUEST SST REMOTE CONTROLLED MONITOR SYSTEM

INSTALLATION, MAINTENANCE, AND OPERATION

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1.0 INTRODUCTION

This manual is intended to describe the standard installation, operation, and maintenance instructions for the Style 3778 Conquest SST electric remote controlled monitor system. Read and understand these instructions before installing or operating any of the Conquest system components.

1.1 PRODUCT DESCRIPTION

Style 3778 – Conquest SST electric remote controlled monitor system. The standard system is comprised of the following components.

- Monitor
- Nozzle
- Motor drive control box
- Junction box
- Local control panel
- JRC

1.2 DESCRIPTION OF USE

The Style 3778 Conquest SST monitor system is a fixed site, electrically operated, fire fighting device, designed to flow water and or foam solutions up to 1000 gpm. The system is designed and rated for NEC 501 Class I, Div 2, Group C and D, hazardous locations and can also be safely operated in non-hazardous areas.

The Conquest SST monitor system is designed to be operated by trained professionals only. The end user is responsible for the appropriate training of operators.

WARNING - The Conquest SST system is not designed to flow other than water or water/foam solutions. If other agents are to be used, contact Akron Brass.

WARNING - The Conquest SST system is not designed for operation on vehicles.

WARNING - The Conquest SST system is not for use in locations more restrictive than NEC Class I, Div. 2, Group C & D.

WARNING - The Conquest SST system is not to be aimed at or operated in the direction of people.

WARNING - The Conquest SST system is not for use on electrical fires.

WARNING - The Conquest SST system is not designed for continuous oscillation.

WARNING - Exposing the positioning motors, electrical cables, or motor drive unit to temperatures exceeding their 140° F. maximum temperature rating may cause them to become inoperable.

2.0 CONQUEST SST MONITOR (STYLE 3778)

The Conquest SST monitor, Style 3778, is a highly efficient water flowing device, intended to move or aim a wall or stream of water in a desired direction or towards a desired target. The monitor motion is actuated through remotely controlled positioning motors.

2.1 CONQUEST SST MONITOR SPECIFICATION

Material	316/316L Stainless Steel construction
Max. Flow	1000 gpm
Inlet	4" FF 150# flange with 3/8 " SS drain valve
Outlet	3½" NH with pressure gage
Waterway	4.0 in. diameter internal waterway with Nitrile seals
Friction Loss	< 10 psi at 1000 USGPM
Rotation	340° rotation - Maximum.
Elevation	180°, +90° above horizontal to -90° below horizontal - Maximum.
Motors	Single phase, AC Motors with weather protected housings

Manual Override	Permanently attached hand wheel for manual override.
Axis Drive Mechanism	Worm and Worm Gear (self locking)
Operating Temperature	+140℉ to -40℉ (+60℃ to -40℃)
Operating Pressure	250 psi max. (17 bar max.)
Dimensions	23" high, 20½ " wide (rotation radius)
Weight	174 lbs.
Electrical	230 VAC,1 Phase or ,or 230VAC 3 Phase, 50/60 Hz supplied to the Motor Drive Box.
Max. Reaction	832 Lbf. ------ 1000gpm @ 250 psi
Force Moment at Base Inlet	1265 Lb.-ft.
Electrical Rating	Class1, Div. 2, Groups C &D

2.2 CONQUEST SST MONITOR INSTALLATION INSTRUCTIONS

The maximum flow of the Conquest SST monitor is 1000 gpm. The centerline of the elevation joint is 16.56 inches from the bottom of the inlet flange. Ensure that these values and an appropriate safety factor are used to determine a proper support structure.

WARNING - The monitor flange is not intended for use as a base stand. The unit may tip if not properly mounted and secured.

WARNING: Cable grips must be fully engaged on the cable insulation and tight.

1. Lift the monitor onto the appropriate flange or support structure. Ensure that the sling arrangement is secure before attempting to lift the unit.

2. Position the monitor on the flange with the monitor outlet oriented in the desired direction.
3. Attach the monitor with eight 5/8" diameter bolts and nuts of grade 5 minimum strength and suitable washers. Use the proper tightening techniques when torquing the fasteners.

2.3 CONQUEST SST MONITOR OPERATING INSTRUCTIONS

The following is intended to provide the basic instructions for operating the Conquest SST Style 3778 monitor.

PRODUCT WARNINGS:

WARNING: For use by trained personnel only.

WARNING: Charge the unit with water slowly. Rapid charging may cause a pressure surge which has the potential to cause an injury, or damage the monitor.

WARNING: Aim the unit in a safe direction before pumping water through it.

WARNING: DO NOT exceed the maximum flow ratings of the monitor. Exceeding these ratings has the potential to cause an injury, or damage the monitor.

WARNING: For use with water or standard fire fighting foams only. Contact Akron Brass if other agents are to be used. After use with foam or other agents, flush with water.

WARNING: Do not install shutoffs on the outlet of the Conquest Monitor. Shutoffs increase the potential for pressure surges due to water hammer, which have the potential to cause injury, or damage the monitor.

WARNING: Drain the Conquest monitor after use to prevent freeze damage.

OPERATING INSTRUCTIONS

The Conquest SST monitor comes equipped with a manual override handwheels in case of power failures and for use in maintenance. Standard remote controlled electrical operation is described in the operating instructions in the CONTROL PANEL section 6.0.

Manual Override - The manual override handwheel is made of stainless steel. The monitor can be elevated or rotated manually by simply turning the appropriate handwheel.

WARNING: Do not stand or place any part of your body in front of the nozzle when operating.

WARNING: Do not electrically operate monitor while in contact with either of the manual override handwheels. Power must be off before operating the override handwheels.

ROTATION & ELEVATION LIMITS

Rotation Stops – The Conquest SST monitor comes standard with one rotational stop setting the travel to 340°. Vertical Stops – The Conquest SST monitor comes standard with vertical stops at +90° and -90°. Stops at other locations must be specified at time of order.

2.4 CONQUEST SST MONITOR MAINTENANCE INSTRUCTIONS

The Conquest SST Monitor should be inspected prior to initial start-up and on a periodic basis, to ensure it is in good operating condition.

1. Periodically lubricate the grease fittings with Mobilith SHC 460 Synthetic grease. Inject the lubricant until it becomes visible from the bleeder holes in the center of the swivel plugs.
2. Periodically clean grit and dirt from around moving parts and cable connections.
3. Periodically operate all functions of the monitor through its full travel.
4. Replace the identification tag if it should become worn or damaged.
5. If any of the following situations are encountered, the monitor should be taken out of service, repaired, and tested prior to placing it back in service.
   - Operating above maximum rated pressure or flow.
   - Not draining and allowing water to freeze inside.
   - Prolonged exposures to temperatures above 140°F, or below -40°F.
   - Other misuses that may be unique to your specific environment.
   - Inability to move the monitor with the override handwheels.
   - Excessive wear.
   - Poor discharge performance.
   - Water leaks.

3.0 CONQUEST SST NOZZLE (STYLE 4473)

The Conquest SST Style 4473 nozzle is a self educting, electrically adjustable fog nozzle. The nozzle comes equipped with a field adjustable baffle designed to flow 500, 750 & 1000 gpm at a pressure up of 100 psi. The nozzle is also equipped with a manual override pin for manual operation.

3.1 CONQUEST SSTNOZZLE STYLE 4473 SPECIFICATIONS

Material	316/316L Stainless Steel construction.
Flow	500, 750 & 1000 gpm (field adjustable without tools)
Foam Induction Rate	3%
Expansion Ratio	1:5 – 1:11 (w/AFFF/AR – AFFF Fire Fighting Foam)
Inlet	3½" NH
Pattern	Straight stream to 140^{o} wide angle fog
Motor	Single phase AC Motor with weather protected housings Motor has manual override.
Operating Temperature	(-40℉ to +140℉) (-40℃ to +60℃)
Operating Pressure	250 psi maximum (10.5 bar max.)
Dimensions	11 ½ "high, 11" Long ., and 13" wide, including motor
Weight	62 lbs. (28 kg)
Electrical Rating	Class1, Div. 2, Groups C &D
Electrical Requirements	- 120 VAC, 5 amp, 60 Hz

3.2 STYLE 4473 SELF EDUCTING NOZZLE OPERATING INSTRUCTIONS

The following is intended to provide the basic instructions for operating a Style 4473 nozzle.

WARNING: Do not stand or place any part of your body in front of the nozzle when operating. Do not adjust the pattern sleeve manually when flowing water.

GENERAL INFORMATION

- 500, 750 & 1000 gpm at 100 psi at the inlet to the monitor
- Maximum operating pressure 250 psi/17 bar
- Not for use on electrical fires
- For use with water or standard fire-fighting foams only.
- After use with foam flush with fresh water
- Charge slowly to allow a controlled pressure build-up during start-up.
- Ensure the nozzle is properly matched with the JRC if applicable.
- Ensure the nozzle is aimed in a safe direction, prior to operating.
- The nozzle is configured for optimum performance. Do not alter in any manner.
- Ensure that the manual-locking handle is not tightened during operation.

NOZZLE OPERATION

The Akrofoam is shipped preset at 1000 gpm. The nozzle can be adjusted to alternate flow settings (500 & 750 gpm). Flow settings are marked on the baffle head. To change the flow setting:

1. Push the spring loaded baffle head all the way in and rotate it to the desired flow setting.
2. Release the baffle head so the pin engages into the desired flow setting slot.

To operate the nozzle manually:

1) Unscrew the linear actuator T-handle locking pin and remove.
2) Manually push or pull the pattern sleeve to the desired position.
3) Push for straight stream or pull for fog pattern.
4) Tighten knurled handle to lock pattern position.

3.3 CONQUEST SST NOZZLE STYLE 4473 MAINTENANCE

Your nozzle should be operated periodically and inspected after each use to ensure it is in good operating condition.

1) Under normal conditions, periodically flushing the nozzle with clean water and cleaning grit and dirt from around exterior moving parts will allow the nozzle to operate properly.
2) Over time the seals may need to be replaced. This can be accomplished by purchasing the appropriate Akron repair parts. See parts list in APPENDIX B.
3) Use qualified maintenance mechanics for all repairs.
4) Replace the identification tag if it should become worn or damaged.
5) If any of the following situations are encountered, the nozzle should be taken out of service, repaired, and tested prior to placing it back in service.
    - Operating above rated pressure or flow.
    - Allowing water to freeze inside the nozzle.
    - Dropping nozzle from a height where damage is incurred.
    - Inoperable or difficult to operate controls.
    - Excessive wear.
    - Poor discharge performance.
    - Water leaks.
    - Other damaging circumstances unique to your specific environment.

4.0 CONQUEST SST MOTOR DRIVE CONTROL PANEL

The Conquest SST motor drive control panel houses the hardware required to operate the monitor from remote locations and includes:

- Motor drive control board for monitor control and nozzle pattern control.
- Terminal blocks for connection to monitor junction box and master control panel.
- External master power ON/OFF switch with locking ability.
- Transformer.
- Fuses.

4.1 MOTOR DRIVE CONTROL PANEL SPECIFICATIONS

Operator Inputs	Left/Right, Up/Down, Stream/Fog from Operator Control Panel
Input Power	230 VAC 1 – phase, 50/60 Hz, 2.5A
Outputs	Bi directional control for monitor rotation, elevation and nozzle pattern motors
Motor Control Method	3 – Axis, solid state, motor drive unit

Enclosure	NEMA 4X, 316L, Stainless Steel
Other Drive Features	LED input power indicator LED input signal indicators LED output signal indicators LED status indicators for troubleshooting Line fuse 50/60 Hz input power Auxiliary relay for customer supplied water or foam valve on/off Electronic PCB coated to resist corrosion Three axis drive is a self-contained unit, which is easily removed for repair/ replacement
Temperature Range	+140 to -40 F operating temperature
Electrical Rating	Class1, Div. 2, Groups C &D
Dimensions:	24” x 20” x 8”
Weight:	80 lbs.

4.2 MOTOR DRIVE CONTROL PANEL INSTALLATION INSTRUCTIONS

The Motor Drive Control Panel is normally located within 100 ft. of the Conquest SST Monitor that it controls. A typical location for the Motor Drive Control Panel is at the base of the riser or tower that the monitor is mounted on. If the Motor Drive Control Panel must be located further than 100 feet please contact Akron Brass Engineering. This is to prevent intermittent operation because of voltage drop issues of the wiring between the Conquest SST Monitor and the Motor Drive Control Panel.

WARNING: Make sure power is off and all local lock-out, tag-out procedures are followed.

WARNING: Incorrect wiring between the Motor Drive Control Panel and the Junction Box can cause severe motor damage. Follow the wiring instructions in step five below.

1. Secure the motor drive box to a load bearing structure. Refer to the drawing in APPENDIX A for the mounting hole dimensions.

2. Connect the previously pulled control wires through a customer created enclosure penetration to the appropriate terminals inside the enclosure. Refer to the wiring diagram in APPENDIX A.
3. Connect the previously pulled power wires through a customer created enclosure penetration to the appropriate terminals inside the enclosure. Refer to the wiring diagram in APPENDIX A.
4. Connect the customer supplied motor power cables, from the junction box at the monitor to the appropriate terminal strip in the motor drive control box, through a customer created enclosure penetration. Refer to the wiring diagram in APPENDIX A.

WARNING: Ensure that appropriate penetration practices are followed to maintain the required rating for hazardous locations.

4.3 CONQUEST MOTOR DRIVE CONTROL PANEL MAINTENANCE INSTRUCTIONS

WARNING: Make sure power is off and all local lock-out, tag-out procedures are followed if any electrical repair is required.

Your Motor Drive Control Panel should be periodically inspected to ensure proper operation.

1. Make sure that the outside of the box is in satisfactory condition without dents or extreme corrosion.
2. Check each function of the monitor utilizing the control panel to ensure proper operation.

5.0 CONQUEST SST MOTOR JUNCTION BOX

The motor junction box allows for simple cable connection from the control system to the monitor motors. (NEMA 4X, stainless steel)

5.1 MOTOR JUNCTION BOX INSTALLATION INSTRUCTIONS

WARNING: Make sure power is off and all local lock-out, tag-out procedures are followed.

1. Secure the mounting bracket and Junction Box to the underside of the mounting flange. Assure that all connections are tightened to industry standards. Refer to the drawing in APPENDIX A for the mounting diagram.
2. Connect the customer supplied motor power cable, from the motor drive box at the base of the monitor tower to the terminal strip in the

motor junction box, through a customer created enclosure penetration. Refer to the wiring diagram in APPENDIX A.

WARNING: Ensure that appropriate penetration practices are followed to maintain the required hazardous rating.

WARNING: Cable connectors must be fully engaged and tight

6.0 CONTROL PANEL OPERATING INSTRUCTIONS

The following is intended to give the basic instruction on operating a Style 3778 Conquest SST Monitor Control Panel. The use of optional touch screens, PLCs, and Radio controllers is not covered in this manual.

The power ON/OFF buttons will only control 24 VDC power from the monitor drive box.

6.1 MONITOR OPERATION

To move the monitor Up, Down, Left, or Right:

1. Turn the power switch to the ON position:
2. Choose the joystick that corresponds to the monitor that needs to be moved.
3. Push the joystick to the desired direction for movement. The monitor will move with the same orientation as the joystick.
4. To stop the movement, release the joystick.

To move the nozzle pattern to stream or fog:

1. Choose the Stream/Fog buttons that correspond to the nozzle that needs adjustment.
2. Push the Fog button to widen the water stream to a fog pattern.
3. Push the Stream button to narrow the stream to a straight stream.
4. To stop the pattern adjustment, release the button.

To open the water valve: (If supplied as option)

1. Choose the Valve button that corresponds to the monitor that needs to flow water.
2. Press the Water Valve Open button to turn the water on.
3. Press the Water Valve Close button to turn the water off.

6.2 SPECIFICATIONS

Operator Inputs	Power on/off pushbutton Switches with indication Pushbutton switches with indication for: Monitor Rotation (left/right) Monitor Elevation (up/down) Nozzle Pattern Control (stream/fog) Water Control Valve (open/closed)
Input Voltage	24 VDC (generated in the Motor Control Unit)
Enclosure	NEMA 4X, 316L, Stainless Steel
Enclosure Size	12” x 12” x 6”
Electrical Rating	Class1, Div. 2, Groups C &D

6.3 CONTROL PANEL INSTALLATION INSTRUCTIONS

WARNING: Make sure power is off and all local lock-out, tag-out procedures are followed.

1. Secure the master control panel to a load bearing structure. Refer to the drawing in APPENDIX A for the mounting hole dimensions.
2. Connect the previously pulled control wires for each monitor through a customer created enclosure penetration to the appropriate terminals inside the enclosure. Refer to the wiring diagram in APPENDIX A.
3. Connect the previously pulled communication wire through a customer created enclosure penetration to the appropriate terminals inside the enclosure. Refer to the wiring diagram in APPENDIX A.

4. Connect the previously pulled power wires through a customer created enclosure penetration to the appropriate terminals inside the enclosure. Refer to the wiring diagram in APPENDIX A.

WARNING: Ensure that appropriate penetration practices are followed to maintain the required rating for hazardous locations.

7.0 JET RATIO CONTROLLER SST

PRODUCT WARNINGS

WARNING: Since various foam concentrates have different viscosities, they all will not proportion accordingly

WARNING: Ensure that only BIM/BIF hose connections are used.

PRODUCT CAUTIONS

CAUTION: If any tags of bands on the JRC are worn or damaged and cannot be easily read, they should be replaced.

CAUTION: For use with fresh water or standard firefighting foams only. Not recommended for use with salt water, After use with foam or water, flush with fresh water.

CAUTION: For firefighting use only.

CAUTION: The JRC is configured for optimum performance. Do not alter in any manner.

CAUTION: Care should be taken to protect the quick connect coupling. Failure to do so may cause leaking resulting in a failure of the JRC to pick up foam concentrate.

CAUTION: Your JRC should be inspected prior to and after each use to ensure it is in good operating condition.

CAUTION: An unanticipated incident may occur if the JRC is used in a manner which is inconsistent with standard operating practices. A partial list of potential misuses follows:

• Operating above maximum rated pressure and flow.
• Not draining and allowing water to freeze inside the JRC.
• Dropping the JRC from a height where damage is incurred.
• Prolonged exposure to temperatures above +140 degrees F or below – 25 degrees F.
• Operating in a corrosive environment.
• Other misuse that might be unique to your specific fire fighting environment.
There are many "tell tale" signs that indicate JRC repair is in order, such as:
• Controls are inoperable or difficult to operate.

- **Excessive wear.**
- **Water leaks.**

If any of the above situations are encountered, the JRC should be taken out of service and repaired, plus tested by a qualified technician prior to placing back in service.

7.1 GENERAL GUIDELINES

The recommended nozzle to use with the JRC is the Akron Style 4473 AkroFoam SST™ nozzle.

The Akron JRC is designed for use with most types of foam concentrates.

Standard Inlet Operating pressure is 100 psi.

To use the JRC with an AkroFoam SST nozzle:

1. Attach the 2 1/2" BIM hose connection to the outlet of the JRC.

2. Attach the 2 1/2" BIF hose connection to the AkroFoam/Hose Adapter on the side of the nozzle.

The JRC is shipped without metering discs installed. Each JRC is supplied with two metering discs for 3% foam at 500 & 750gpm respectively. Each disc is stamped with the flow rate.

To change the Metering Disc, detach the foam solution hose assembly from the JRC and remove the disc - if one is present. Then insert the new Metering Disc into the exposed recess in the JRC body and reattach the foam solution hose.

The Akron JRC will deliver a 3% solution 250' through 2 1/2" hose to the AkroFoam self-educting nozzle.

7.2 OPERATING INSTRUCTIONS

1. The correct JRC metering disk must be installed in the JRC in order to deliver the desired foam/water flow concentration to the nozzle.
2. The nozzle must be set to the desired flow rate to achieve the proper final 3 % foam/water mixture.
   Example - set the JRC inlet pressure to 100 psi and with no metering disc installed in the JRC pickup assembly, JRC will pickup 30 gallons of foam concentrate (3% of 1000 = 30). The concentrate will mix with 30 gallons of

water and be delivered as a 60 gpm solution to an AkroFoam nozzle set on 1000 gpm. The result will be a 3% foam application.

3. Any shutoffs before the nozzle must be fully open. Any attempt to throttle the shutoff will cause the JRC to shut down.
4. After use, the JRC and nozzle must be flushed with clean water for up to 3 minutes to assure all parts are clear of foam.

7.3 TROUBLESHOOTING

There are several factors which may influence the operation of the JRC. The following is designed to help the user determine which element of the system is at fault when the system is not functioning properly.

1. Inlet pressure: The JRC is designed to operate at 100 psi at the inlet of the JRC. The JRC may pick up foam at pressures lower the 100 psi but the meter is calibrated for
this pressure. If the unit is operated at lower pressures the proportioning will not be accurate.

2. Pick-up hose suction: All hose lay based on maximum of 10’ elevation, measured from the discharge side of the JRC with 100 psi inlet pressure.

7.4 MAXIMUM HOSE LAY

The Akron JRC is designed to be used with up to a maximum of 250 feet of 2 1/2" hose. This distance assumes quality hose in good repair and without kinks. In addition, this maximum hose lay does not account for over 10 feet of elevation between the JRC and the nozzle. If after initial set up, the unit does not perform, it’s recommended the hose lay distance be reduced.

8.0 MOTOR REPLACEMENT PROCEDURE

The Conquest SST contains three AC In-Line Gear Motors. The elevation and rotation axis contain 20:1- 1/6 HP motor, while the pattern motor for the nozzle is 30:1- 1/30 HP motor. The replacement procedure is similar for all three motors.

Use the following procedure for motor replacement.

WARNING: Make sure power is off and all local lock-out, tag-out procedures are followed.

8.1 PATTERN MOTOR REPLACEMENT PROCEDURE

To remove the Pattern Motor, perform the following. Use Drawing D46286.

1. Remove the end cap from the pattern motor (Balloon #22).

2. Disconnect the wiring going to the terminal block on the back of the motor housing and pull the wiring through the cord grips of the motor housing (Balloon #24). The cord grip will need to be loosened prior to pulling wires through.
3. Remove the cap screw (Balloon #27) that is used to prevent the housing from rotating.

4. Prior to removing the motor housing make sure the motor wiring is out of the way. Turn the Motor Housing CCW to remove.

5. Remove the 4 cap screws (Balloon # 40) holding the motor to the motor mount (Balloon #38). Slowly pull the motor back from the mount. The motor should come free without much effort. When removed the keyway should still be attached to the slot on the shaft. When installing new motor ensure the keyway is located in the slot on the motor shaft.

6. Reassemble the Motor and Housing in reverse order of the above procedure.

8.2 ELEVATION & ROTATION MOTOR REPLACEMENT PROCEDURE

To remove the Elevation and Rotation motors perform the following: Use Drawing D45971.

1. Remove the end cap from the Elevation or Rotation Motor (Balloon #7).

2. Disconnect the wiring going to the terminal block on the back of the motor housing and pull the wiring through the cord grips of the motor housing (Balloon #6 & 10). The cord grip will need to be loosened prior to pulling wires through.

3. Remove the cap screws (Balloon #12) that is used to prevent the housing from rotating.

4. Prior to removing the motor housing make sure the motor wiring is out of the way. Turn the Motor Housing CCW (facing the opend end) to remove.

5. Remove the 4 cap screws (Balloon #30) holding the motor to the motor mount (Balloon #11). Slowly pull the motor back from the mount. When removed the motor drive hub (Balloon #15) will still be attached. The polyurethane sleeve may or may not come out with the motor. If it does, pull it off and reinstall on the drive hub still in the monitor (Balloon 17). Remove the gear by loosening the set screw. Install the gear on the replacement motor. Use Loctite 222 or Permabond LM113 on the set screw when reinstalling gear on new motor.

6. Reassemble the Motor and Housing.

9.0 HAZARDOUS LOCATION OPERATION

The Style 3778 Conquest SST System consists of the Conquest SST Monitor, Nozzle & Motor Drive Unit and is not for use in locations more restrictive than NEC Class I, Div. 2, Group C & D. The overall design of the system is based on the **National Electrical Code & the Canadian Electrical Code for Non-incendive Equipment & Components.**

WARNING: Substitution of components may impair the operation of equipment and invalidate any approvals noted for the Style 3778 Conquest SST System for Class I, Div 2 Locations

9.1 CERTIFICATIONS & APPROVALS

In consideration of the approvals granted by Factory Mutual no substitution of components are authorized without FM's final approval. No changes of any nature shall be made to the product unless notice of proposed change has been given and written authorization is obtained through the Akron Brass Company.

9.2 SUPERVISION AND MAINTENANCE

In all industrial locations supervision should ensure only qualified persons install, operate, and service the installation. It is important that maintenance personnel exercise more than ordinary care with regard to installation and maintenance of electrical equipment in hazardous (classified) locations and follow site specific and recognized maintenance practices for hazardous locations.