PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes indoor and outdoor secondary unit substations, each consisting of the following:

1. Primary incoming section.
2. Transformer.
3. Secondary distribution section.

B. Related Sections include the following:

1. Division 26 Section "Medium-Voltage Cables" for requirements of terminating cables in incoming section of substation.
2. Division 26 Section "Overcurrent Protective Device Coordination Study" for short-circuit rating of devices and for setting of overcurrent protective devices.
3. Division 26 Section "Electrical Power Monitoring and Control" for communication features of power distribution system devices.
4. Division 26 Section "Medium-Voltage Switchgear" for metering and instrument transformers.
5. Division 26 Section "Enclosed Bus Assemblies" for busway connections between transformers and secondary distribution equipment.
6. Division 26 Section "Power Factor Correction Equipment" for capacitors to be located in secondary section.
7. Division 26 Section "Transfer Switches" for transfer switches that may be located in secondary distribution section.
8. Division 26 Section "Transient-Voltage Suppression for Low-Voltage Electrical Power Circuits" for transient voltage surge suppressors for low-voltage power, control, and communication equipment that may be located in secondary section.

1.3 DEFINITIONS

A. NETA ATS: Acceptance Testing Specification.

1.4 SUBMITTALS

A. Product Data: Include rated capacities, furnished specialties, and accessories.

B. Shop Drawings: Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

1. Wiring Diagrams: Power, signal, and control wiring.
2. Dimensioned plans and elevations showing major components and features.
3. One-line diagram.
4. List of materials.
5. Nameplate legends.
6. Size and number of bus bars and current rating for each bus, including mains and branches of phase, neutral, and ground buses.
7. Short-time and short-circuit current ratings of secondary unit substations and components.
8. Ratings of individual protective devices.

C. Time-Current Characteristic Curves: For overcurrent protective devices.

D. Primary Fuses: Submit recommendations and size calculations.

E. Coordination Drawings: Reflected ceiling plans, drawn to scale, on which the following items are shown and coordinated with each other, based on input from installers of the items involved:

1. Dimensioned concrete base, outline of secondary unit substation, conduit entries, and ground rod locations.
2. Location of structural supports for structure-supported raceways, busways, and seismic bracing.
3. Location of lighting fixtures, sprinkler piping and heads, ducts, and diffusers.

F. Manufacturer Seismic Qualification Certification: Submit certification that transformer assembly and components will withstand seismic forces defined in Division 26 Section "Vibration and Seismic Controls for Electrical Systems." Include the following:

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.

   a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."
   b. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2. Dimensioned Outline Drawings of Equipment Unit: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of equipment anchorage devices on which the certification is based and their installation requirements.

G. Product Certificates: For secondary unit substations, signed by product manufacturer.

H. Qualification Data: For testing agency.

I. Material Test Reports: For secondary unit substations.

J. Factory test reports.

K. Field quality-control test reports.

L. Operation and Maintenance Data: For secondary unit substations and accessories to include in emergency, operation, and maintenance manuals.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: An independent agency, with the experience and capability to conduct the testing indicated, that is a member company of the InterNational Electrical Testing Association or is a nationally recognized testing laboratory (NRTL) as defined by OSHA in 29 CFR 1910.7, and that is acceptable to authorities having jurisdiction.

1. Testing Agency's Field Supervisor: Person currently certified by the InterNational Electrical Testing Association or the National Institute for Certification in Engineering Technologies to supervise on-site testing specified in Part 3.

B. Source Limitations: Obtain secondary unit substation through one source from a single manufacturer.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of secondary unit substations and are based on the specific system indicated. Refer to Division 01 Section "Product Requirements."

D. Electrical Components, Devices and Accessories: Listed and labeled as defined in CEC, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

E. Comply with IEEE C2.

F. Comply with IEEE C37.121.

G. Comply with CEC.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver in shipping splits in sizes that can be moved past obstructions in delivery path.

B. Coordinate delivery of secondary unit substations to allow movement into designated space.

C. Store secondary unit substation components[**protected from weather and**] so condensation will not form on or in units. Provide temporary heating according to manufacturer's written instructions.

D. Handle secondary unit substation components according to manufacturer's written instructions. Use factory-installed lifting provisions.

1.7 PROJECT CONDITIONS

A. Field Measurements: Indicate measurements on Shop Drawings.

B. Interruption of Existing electric Service: Do not interrupt electric service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary electric service according to requirements indicated:

1. Notify Owner and Construction Manager no fewer than 3 days in advance of proposed interruption of electric service.
2. Do not proceed with interruption of electric service without Construction Manager's written permission.

C. Service Conditions: IEEE C37.121, usual service conditions, except for the following:

1. Exposure to significant solar radiation.
2. Altitudes above 3300 feet (1000 m).
3. Exposure to fumes, vapors, or dust.
4. Exposure to explosive environments.
5. Exposure to hot and humid climate or to excessive moisture, including steam, salt spray, and dripping water.
6. Exposure to seismic shock or to abnormal vibration, shock, or tilting.
7. Exposure to excessively high or low temperatures.
8. Unusual transportation or storage conditions.
9. Unusual grounding resistance conditions.
10. Unusual space limitations.

1.8 COORDINATION

A. Coordinate layout and installation of secondary unit substations with other construction that penetrates floors and ceilings, or is supported by them, including light fixtures, HVAC equipment, and fire-suppression-system components.

B. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified in Division 03.

1.9 EXTRA MATERIALS

A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Spare fuses: ~~[**Six**] **<Insert number>**~~3 of each type and rating of fuse and fusible device used~~, except for medium-voltage fuses[**and fuses associated with network protector**]~~. Include spares for the following:

   a. Primary disconnect fuses.
   b. Potential transformer fuses.
   c. Control power fuses.
   d. Fuses and fusible devices for fused circuit breakers.
   e. Fuses for secondary fusible devices.

2. Spare Indicating Lights: Six of each type installed.
3. Touchup Paint: ~~[**Three**] **<Insert number>** half-pint containers~~spray cans of paint matching enclosure's exterior finish.

4. Primary Switch Contact Lubricant: [**One**] <**Insert number**> container(s).
~~5. [**One**] <**Insert number**> set(s) of spare mounting gaskets for bushings, handholes, and the gasket between relief cover and flange of pressure relief device.~~

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. ABB Control, Inc.
2. Cooper Industries, Inc.; Cooper Power Systems Division.
3. Cutler-Hammer.
4. GE Electrical Distribution & Control.
5. Siemens Energy & Automation, Inc.
6. Square D; Schneider Electric.
~~7. **<Insert manufacturer's name.>**~~

2.2 MANUFACTURED UNITS

~~A. Indoor Unit Arrangement: Single assembly.~~

~~B. Indoor Unit Arrangement: Separate secondary distribution equipment connected with busway.~~

~~C.~~A. Outdoor Unit Arrangement: [**Single assembly**] ~~[**Separate secondary distribution equipment connected with busway**].~~

1. Weatherproof, listed for installation outdoors, complying with IEEE C37.20.1.
2. Aisleless Construction: Full-height doors in front of basic weatherproof equipment.

~~D.~~B. Enclosure Finish: Factory-applied finish in manufacturer's standard color, including under surfaces treated with corrosion-resistant undercoating.

~~E.~~C. Enclosure Finish: Factory-applied finish in manufacturer's standard gray over a rust-inhibiting primer on treated metal surface.

2.3 INCOMING SECTION

~~A. Primary Incoming Section: Terminal assembly with adequate space for incoming cable terminations and surge arresters.~~

~~B. Primary Incoming Section: Transformer cover-mounted bushings.~~

~~C.~~A. Primary Incoming Section: Enclosed, air-interrupter, ~~[**dual primary**] [~~**primary**~~]~~ switch.

1. Three pole, single throw, dead front, metal enclosed, with manual stored energy operator, ~~[~~**with fuses mounted on a single frame**~~] [without fuses]~~, complying with IEEE C37.20.3.
2. Mechanical~~Key~~ interlocking system to prevent fuse access door from being opened unless switch is open~~.[Additionally, interlock air-interrupter switch with transformer secondary main circuit breaker, preventing switch from being opened or closed unless secondary main circuit breaker is open.]~~
3. Phase Barriers: Located between blades~~[~~ **and fuses**~~]~~ of each phase, designed for easy removal, allows visual inspection of switch components when barrier is in place.
4. Window: Permits viewing switch-blade positions when door is closed.
5. Accessory Set: Tools and miscellaneous items required for interrupter switchgear test, inspection, maintenance, and operation. Include fuse-handling tool as recommended by switchgear manufacturer.
6. Continuous-Current Rating: 600 A.
7. Short-Circuit Rating:

   a. Short-time momentary asymmetrical fault rating of 40 kA.
   b. 3-second symmetrical rating of 25-kA RMS.
   c. Fault close asymmetrical rating of 40 kA.

8. Fuses: Sizes recommended by secondary unit substation manufacturer, considering fan cooling, temperature-rise specification, and cycle loading. Comply with the following:

   a. Current-limiting type, rated for not less than 50-kA RMS symmetrical current-interrupting capacity.
   b. Indicator integral with each fuse to show when it has blown.
   c. Spares: Include three fuses in use and three spare fuses in storage clips in each switch.

~~D.~~B. Surge Arresters: Comply with IEEE C62.11, Distribution class; metal-oxide-varistor type, with ratings as indicated, connected in each phase of incoming circuit and ahead of any disconnecting device.

2.4 LIQUID-FILLED TRANSFORMER SECTION

A. Description: IEEE C57.12.00 and UL 1062, liquid-filled, 2-winding, secondary unit substation transformer.

~~B. Insulating Liquid: Mineral oil complying with ASTM D 3487, Type II, and tested according to ASTM D 117.~~

~~C.~~B. Insulating Liquid: Less flammable, edible-seed-oil based, and UL listed as complying with NFPA 70 requirements for fire point of not less than 300 deg C when tested according to ASTM D 92. Liquid shall be biodegradable and nontoxic.

~~D. Insulating Liquid: Less flammable, dielectric, and UL listed as complying with NFPA 70 requirements for fire point of not less than 300 deg C when tested according to ASTM D 92. Liquid shall be biodegradable and nontoxic.~~

~~E. Insulating Liquid: Less flammable, silicone-based dielectric, and UL listed as complying with NFPA 70 requirements for fire point of not less than 300 deg C when tested according to ASTM D 92. Liquid shall have low toxicity and be nonhazardous.~~

~~F. Insulation Temperature Rise: 65/55 deg C, based on an average ambient temperature of 30 deg C over 24 hours with a maximum ambient temperature of 40 deg C. Insulation system shall be rated to continuously allow an additional 12-percent kVA output, at 65 deg C temperature rise, without decreasing rated transformer life.~~

~~G.~~C. Insulation Temperature Rise: 65 deg C, based on an average ambient temperature of 30 deg C over 24 hours with a maximum ambient temperature of 40 deg C.

~~H.~~D. Basic Impulse Level: Comply with UL 1062.

~~I.~~E. Basic Impulse Level: ~~[60] [75]~~ [**95**] ~~[110]~~ kV.

~~J.~~F. Full-Capacity Voltage Taps: 4 nominal 2.5 percent taps, 2 above and 2 below rated primary voltage; with externally operable tap changer for de-energized use and with position indicator and padlock hasp.

~~K. Full-Capacity Voltage Taps: 4 nominal 2.5 percent taps below rated primary voltage, with externally operable tap changer for de-energized use and with position indicator and padlock hasp.~~

~~L.~~G. Cooling System: Class ~~[**OA, liquid cooled**] [~~**OA/FA, liquid cooled, and with forced-air rating**] ~~[**OA/FFA, liquid cooled, and with provisions for future forced-air rating**]~~. Cooling systems shall include auxiliary cooling equipment, automatic controls, and status indicating lights.

~~M.~~H. Sound level may not exceed 58 dB, without fans.

~~N.~~I. Impedance: 5.75~~<**Insert value**>~~ percent.

~~O.~~J. Accessories: Grounding pads, lifting lugs, and provisions for jacking under base. Transformers shall have a steel base and frame allowing use of pipe rollers in any direction, and an insulated, low-voltage, neutral bushing with removable ground strap. Include the following additional accessories:

1. Liquid-level gage.
2. Pressure-vacuum gage.
3. Liquid temperature indicator.
4. Drain and filter valves.
5. Pressure relief device.

~~2.5 DRY-TYPE TRANSFORMER SECTION~~

~~A. Description: IEEE C57.12.01, [**IEEE C57.12.50**] [**IEEE C57.12.51**] [**IEEE C57.12.52**], NEMA ST 20, and dry-type, 2-winding, secondary unit substation transformer.~~

~~B. Enclosure: [**Indoor, ventilated**] [**Outdoor, ventilated**] [**Totally enclosed, nonventilated**], cast coil/encapsulated coil, with primary and secondary windings individually cast in epoxy; with insulation system rated at 185 deg C with an 80 deg C average winding temperature rise above a maximum ambient temperature of 40 deg C.~~

~~C. Enclosure: [**Indoor, ventilated**] [**Outdoor, ventilated**] [**Totally enclosed, nonventilated**], vacuum-pressure, impregnated-type and with insulation system rated at 220 deg C with an 80 deg C average winding temperature rise above a maximum ambient temperature of 40 deg C.~~

~~D. Cooling System: Class [**AA, air cooled**] [**AA/FA, air cooled with forced-air rating**] [**AA/FFA, air cooled with provisions for future forced-air rating**], complying with IEEE C57.12.01.~~

~~1. Automatic forced-air cooling system controls, including thermal sensors, fans, control wiring, temperature controller with test switch, power panel with current-limiting fuses, indicating lights, alarm, and alarm silencing relay.~~
~~2. Include mounting provision for fans.~~

~~E. Insulation Materials: IEEE C57.12.01, rated 220 deg C.~~

~~F. Insulation Temperature Rise: [**80**] [**115**] [**150**] deg C, maximum rise above 40 deg C.~~

~~G. Basic Impulse Level: [**60**] [**75**] [**95**] [**110**] kV.~~

~~H. Full-Capacity Voltage Taps: 4 nominal 2.5 percent taps, 2 above and 2 below rated primary voltage.~~

~~I. Full-Capacity Voltage Taps: 4 nominal 2.5 percent taps below rated primary voltage.~~

~~J. Sound level may not exceed **<Insert maximum dBA level>**, without fans operating.~~

~~K. Impedance: **<Insert value>** percent.~~

~~L. High-Temperature Alarm: Sensor at transformer with local audible and visual alarm and contacts for remote alarm.~~

~~2.6~~2.5 SECONDARY DISTRIBUTION SECTION

~~A. Secondary Terminal Compartment: Bus [**bars mounted on standoff insulators**] [**duct flange for close coupling with busway**].~~

~~B. Secondary Distribution: Low-voltage switchgear as specified in Division 26 Section "Low-Voltage Switchgear."~~

~~C.~~A. Secondary Distribution: Low-voltage switchboard as specified in Division 26 Section "Switchboards."

~~D. Secondary Distribution: Motor-control center as specified in Division 26 Section "Motor-Control Centers."~~

~~E. Distribution Panelboard: Panelboards as specified in Division 26 Section "Panelboards."~~

~~F. Network Protectors:~~

~~1. Rated for continuous service in an ambient temperature of up to 40 deg C, applied to 3-phase, 4-wire, solidly grounded wye secondary networks. Comply with IEEE C57.12.44.~~
~~2. Dead-front, drawout design with externally mounted fuses, using hand-cranked rail system. Relay and control panel located on a separate drawout module.~~

~~3. Protector Operator: [**Spring-close**] [**and**] [**or**] [**stored-energy**] mechanism, rated to close on a [**25,000**] [**40,000**] RMS symmetrical load.~~
~~4. Control Voltage: Not more than 125 V.~~
~~5. Control microprocessor-based, three-phase, tripping relay with features and functions as follows:~~

~~a. Close protector if positive sequence power flows into the network. Adjustable closing range shall be from 0.5 to 3.5 V in phase difference between network and transformer voltages.~~
~~b. Trip protector if there is a net, three-phase, reverse power flow through protector. Trip protectors shall be adjustable from 0.05 to 5 percent of continuous-current rating of current transformers within protector.~~
~~c. Trip protector if there is a flow of reverse magnetizing current of its associated transformer.~~
~~d. Field-adjustable relay parameters and watt or watt-var trip values.~~

~~6. Protector shall not open under any fault on network side of protector.~~
~~7. Current-limiting fuses shall have interrupting capacity of 150,000 A on network side of protector for protection against switchboard bus faults.~~
~~8. Mechanical interlocks shall prevent racking in and racking out when protector is closed.~~
~~9. Auxiliary contacts shall be remotely tripped and locked out by four-wire remote pilot devices.~~
~~10. Network protectors shall have not less than two spare auxiliary dry contacts.~~
~~11. Network Switchgear-Mounted Disconnect Switch: Supply each network-protector circuit with a switchgear-mounted fuse truck, with Class L fuses rated for 200-kA interrupting capacity, and key interlocked with each associated protector.~~
~~12. Network Switchgear-Mounted Disconnect Switch: Supply each network-protector circuit with a switchgear-mounted main circuit breaker rated for fault current that can be delivered by the network transformers, less one. Use drawout type to provide a means of isolating the load side of each protector from the network bus.~~

~~2.7~~2.6 IDENTIFICATION DEVICES

A. Compartment Nameplates: Engraved, laminated-plastic or metal nameplate for each compartment, mounted with corrosion-resistant screws. Nameplates and label products are specified in Division 26 Section "Identification for Electrical Systems."

~~2.8~~2.7 SOURCE QUALITY CONTROL

A. Factory Tests: Perform design and routine tests according to standards specified for components. Conduct transformer tests according to IEEE C57.12.90. Conduct switchgear and switchboard tests according to ANSI C37.51.

B. Factory Tests: Perform the following factory-certified tests on each secondary unit substation:

1. Resistance measurements of all windings on the rated voltage connection and on tap extreme connections.
2. Ratios on the rated voltage connection and on tap extreme connections.
3. Polarity and phase relation on the rated voltage connection.
4. No-load loss at rated voltage on the rated voltage connection.
5. Exciting current at rated voltage on the rated voltage connection.

6. Impedance and load loss at rated current on the rated voltage connection and on tap extreme connections.
7. Applied potential.
8. Induced potential.
9. Temperature Test: If a transformer is supplied with auxiliary cooling equipment to provide more than one rating, test at lowest kilovolt-ampere Class OA or Class AA rating and highest kilovolt-ampere Class FA rating.

    a. Temperature test is not required if a record of a temperature test on an essentially duplicate unit is available.

~~10. Owner will witness all required factory tests. Notify Architect at least 14 days before date of tests and indicate their approximate duration.~~

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and space conditions for compliance with requirements for secondary unit substations and other conditions affecting performance of work.

B. Examine roughing-in of conduits and grounding systems to verify the following:

1. Wiring entries comply with layout requirements.
2. Entries are within conduit-entry tolerances specified by manufacturer and no feeders will have to cross section barriers to reach load or line lugs.

C. Examine walls, floors, roofs, and concrete bases for suitable conditions for secondary unit substation installation.

D. Verify that ground connections are in place and that requirements in Division 26 Section "Grounding and Bonding for Electrical Systems" have been met. Maximum ground resistance shall be 5 ohms at secondary unit substation location.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install secondary unit substations on concrete bases.

1. Anchor secondary unit substations to concrete bases according to manufacturer's written instructions, seismic codes at Project, and requirements in Division 26 Sections "Hangers and Supports for Electrical Systems" and "Vibration and Seismic Controls for Electrical Systems."
2. Construct concrete bases of dimensions indicated, but not less than 4 inches (100 mm) larger in both directions than supported unit and 4 inches (100 mm) high.
3. Use 3000-psi, 28-day compressive-strength concrete and reinforcement as specified in Division 03 3000 Section Cast-in-Place Concrete.
4. Install dowel rods to connect concrete bases to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around full perimeter of base.

5. Install epoxy-coated anchor bolts for anchoring equipment to the concrete base.
6. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
7. Bolt transformers to channel-iron sills embedded in concrete bases. Install sills level and grout flush with floor or base.

B. Maintain minimum clearances and workspace at equipment according to manufacturer's written instructions and CEC.

3.3 IDENTIFICATION

A. Identify field-installed wiring and components and provide warning signs as specified in Division 26 Section "Identification for Electrical Systems."

B. Operating Instructions: Frame printed operating instructions for secondary unit substations, including key interlocking, control sequences, elementary single-line diagram, and emergency procedures. Fabricate frame of finished wood or metal and cover instructions with clear acrylic plastic. Mount on front of secondary unit substation.

3.4 CONNECTIONS

A. Ground equipment according to Division 26 Section "Grounding and Bonding for Electrical Systems."

B. Connect wiring according to Division 26 Section "Low-Voltage Electrical Power Conductors and Cables."

3.5 CLEANING

A. After completing equipment installation and before energizing, inspect unit components. Remove paint splatters and other spots, dirt, and debris. Repair damaged finish to match original finish. Vacuum interiors of secondary unit substation sections.

3.6 FIELD QUALITY CONTROL

~~A. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect[**, test, and adjust**] field-assembled components and equipment installation, including connections[**, and to assist in field testing**]. Report results in writing.~~

~~B.~~A. Testing: Owner will engage a qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.

~~C.~~B. Testing: Engage a qualified testing and inspecting agency to perform the following field tests and inspections and prepare test reports:

~~D.~~C. Perform the following field tests and inspections and prepare test reports:

1. Perform each visual and mechanical inspection and electrical test according to NETA ATS. Certify compliance with test parameters.
2. After installing secondary unit substation but before primary is energized, verify that grounding system at the substation tested at the specified value or less.
3. After installing secondary unit substation and after electrical circuitry has been energized, test for compliance with requirements.
4. Set field-adjustable switches and circuit-breaker trip ranges as indicated.

    a. Remove and replace malfunctioning units and retest as specified above.

3.7 FOLLOW-UP SERVICE

A. Voltage Monitoring and Adjusting: After Substantial Completion, if requested by Owner, but not more than six months after Final Acceptance, perform the following voltage monitoring:

1. During a period of normal load cycles as evaluated by Owner, perform seven days of three-phase voltage recording at the outgoing section of each secondary unit substation. Use voltmeters with calibration traceable to the National Institute of Science and Technology standards and with a chart speed of not less than 1 inch (25 mm) per hour. Voltage unbalance greater than 1 percent between phases, or deviation of any phase voltage from the nominal value by more than plus or minus 5 percent during the test period, is unacceptable.
2. Corrective Action: If test results are unacceptable, perform the following corrective action, as appropriate:

    a. Adjust transformer taps.
    b. Rebalance loads.
    c. Prepare written request for voltage adjustment by electric utility.

3. Retests: Repeat monitoring, after corrective action has been performed, until satisfactory results are obtained.
4. Report: Prepare a written report covering monitoring performed and corrective action taken.

B. Infrared Scanning: Perform as specified in Division 26 Section "Medium-Voltage Switchgear."

3.8 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain systems. Refer to Division 01 Section "Demonstration and Training."

END OF SECTION