



Bid Documents and Specification

**Jefferson County
Public Utility District
833/933 kVA ONAN Rated**

December 2019

Bid# 2019-003



**Intermountain Consumer
Professional Engineers, Inc.
1145 East South Union Avenue
Midvale, Utah 84047
(801) 255-1111**

TABLE OF CONTENTS

<u>Section - Contents</u>	<u>Page</u>
Notice to Bidders	1
Proposal	2
1.0 General Requirements	
1.1 Scope	6
1.2 Correspondence.....	6
1.3 Bid Proposal.....	6
1.4 Bid Evaluation	6
1.5 Purchase Order.....	7
1.6 Delivery and Shipping	7
1.7 Invoicing	7
1.8 Title	8
1.9 Payment	8
1.10 Cancellation	8
1.11 Exceptions.....	8
1.12 Warranty	8
1.13 Standards.....	8
1.14 Inspection.....	8
1.15 Field Engineering and Testing	9
1.16 Drawings and Descriptions	9
2.0 Specifications - Specific	
2.1 Regulator Ratings.....	10
2.2 Control Features	10
2.3 Accessories	10
2.4 Bushing Terminals	11
2.5 Shipping Data.....	11
3.0 Specifications – General	
3.1 Tank	11
3.2 Grounding	11
3.3 Lifting and Anchoring.....	11
3.4 Bushings.....	11
3.5 Insulation System.....	12
3.6 Name Plate	12
3.7 Color	12
3.8 General	12

NOTICE TO BIDDERS

NOTICE TO BIDDERS:

Jefferson County Public Utility District No. 1 (PUD) in Port Townsend, WA invites sealed bids to be received at the office of the District until **3:00pm on Wednesday, January 8th, 2020** for **SIX (6) SINGLE PHASE VOLTAGE REGULATORS (RUS Approved)** in accordance with the bid documents. Prospective bidders are hereby notified that they are solely responsible for ensuring timely delivery of their bid to the District on or before the bid submission date and time indicated. Bids received on time will be publicly opened and read aloud.

The Bids will be for furnishing Single Phase Voltage Regulators, as needed by Jefferson County Public Utility District for a one (1) year period. Bids will in accordance with the Bid Documents.

Sealed proposals are to be delivered to:

Attention: Alyson Dean, Purchasing Agent
Jefferson County PUD
310 Four Corners Road
Port Townsend, WA 98368

Instructions, specifications and proposal blanks will be on file in the office of Jefferson County Public Utility District, where they may be consulted or secured for the purpose of bidding.

BID SECURITY:

A certified check, bank cashier's check or bid bond executed by a State licensed surety company made payable to Jefferson County Public Utility District No 1 is required with each bid in the amount equal to five percent (5%).

REJECTION OF BIDS:

Jefferson County Public Utility District reserves the right to reject any or all bids or to waive any formality or technicality in any bid in the interest of the District.

PUBLIC RECORDS ACT:

The District is subject to the disclosure obligations of the Washington Public Records Act of RCW 42.56. The Bidder expressly acknowledges and agrees that its Bid and any information Bidder submits with its Bid is subject to public disclosure pursuant to the Public Records Act or other applicable law and the District may disclose Bidder's proposal and/or accompanying information at its sole discretion in accordance with its obligations under applicable law.

PROPOSAL

Name of Bidder: _____ Date: _____

To: Jefferson County Public Utility District
 310 Four Corners Road
 Port Townsend, WA. 98368

The undersigned, in compliance with your invitation for bids for the Voltage Regulators, having examined the specifications and related documents and being familiar with all of the conditions affecting the work, do hereby propose to furnish all materials and supplies as required in accordance with the contract documents as prepared by Intermountain Consumer Professional Engineers, Inc., within the time set forth and at the price stated below. This price is to cover all expenses incurred in providing the equipment required under the contract documents of which this proposal is a part.

I/We acknowledge receipt of the following addenda:

Addenda No.	Date Received

I/We agree to perform and complete all work shown on the drawings and/or described in the specifications for the sum of:

Dollars(\$ _____)

per 833 kVA regulator (including stand if applicable) (In case of discrepancy, written amount shall govern.)

These bids shall be good for 45 days after bid opening. Upon receipt of a contract from the Owner, the undersigned agrees to sign and return the contract within three (3) days.

NO.	ITEM	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	Voltage Regulator with Stand	Ea.	6		

The bid will be awarded to the Bidder with the lowest evaluated bid price.

TOTAL OF BID (excluding sales tax) \$ _____

Value Analysis Factors (VAF) (To be completed by PUD)

Technical Support.....	-0 - 2%
Service Shop.....	-0 - 2%
Service Engineer.....	-0 - 1%
Product Quality and Performance.....	-0 - 5%

Total VAF

The bid prices will be evaluated by the Value Analysis Factors to ensure that the Purchaser is getting the best product from a reputable manufacturer with adequate service capabilities. The bid will be awarded based on the evaluated price.

Total Evaluated Regulator Price (1 + VAF) \$ _____

Regulator Delivery Timeframe (from placement of order) _____ wks

Field Engineering Service:

Field Engineering Service (flat rate per diem):..... \$ _____

SCADA Information:

Communications Protocol _____

Connector Type _____

Drawings included with proposal (yes/no): _____

Substitutions:

The following substitutions of materials and/or equipment are proposed:

Manufacturer and Description	Add/Deduct
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____
_____	\$ _____

Exceptions

All exceptions taken to items in this specification are to be listed below. The paragraph number and title should be stated, followed by an explanation of the exception to be taken. (Attach additional sheets if necessary.)

TECHNICAL DATA TO BE FURNISHED WITH BID

VOLTAGE REGULATOR

The following technical information and data shall be submitted with the bid:

The voltage regulators shall be designed and manufactured for installation outdoors in a non-hazardous area over an ambient temperature range of -08F to 1108F at an altitude of 200 feet above sea level. The ratings to follow to apply at 100 feet above sea level.

(1) Number of regulators required	6
(2) Number of phases.....	1
(3) Type of Regulator	_____
(4) System Voltage	_____
(5) Regulator Rated Voltage	_____
(6) Frequency.....	_____
(7) Class.....	_____
(8) Coolant.....	_____
(9) Temperature Rise	_____
(10) Regulator Rated BIL Minimum	_____
(11) Regulator Rated kVA ONAN @ 55° C rise.....	_____
(12) Regulator Rated kVA ONAN @ 65° C rise.....	_____
(13) Regulator Rated Current (+/- 10% Reg.).....	_____
(14) Regulator Rated Current (+/- 5% Reg.).....	_____
(15) Number of Steps.....	_____
(16) Voltage Regulator Control Type	_____
(17) Tank Design Type (sealed?).....	_____

Note: The 833/933 kVA voltage regulators will be in service behind a 12/16/20/22.4MVA, 115kV - 12.47kV GndY power transformer. The regulators shall be operated at the 12.47kV/7.2kV voltage. Proper control voltage transformers shall be installed to provide a proper voltage ratio for operation.

Dated at: _____ this _____ day of _____ 20 _____

Bidder _____ (SEAL)

By _____
(Signature)

(Printed or Typed)

Title _____

Attest: _____

Complete Business Address of Bidder:

State of Incorporation: _____

Complete Address of Principal Offices:

Name, Address and Telephone Number of
Person to Contact Regarding this Proposal.
Include both Mail and Street Addresses:

Telephone: _____

Facsimile: _____

PART 1 - GENERAL REQUIREMENTS

1.1 SCOPE

- A. The purpose of this specification is to furnish the specific data and requirements pertaining to the purchase, design, inspection, shipment, service engineering, and the testing of all voltage regulators as specified herein to be purchased by Jefferson County Public Utility District.

1.2 CORRESPONDENCE

- A. All proposals shall be addressed to:

Ms. Alyson Dean, Purchasing Agent
Jefferson County PUD
310 Four Corners Road
Port Townsend, WA 98368

Telephone: (360) 385-8349
E-Mail: adean@jeffpud.org

- B. Technical questions shall be addressed to:

Mr. Jimmy Scarborough, Electrical Engineering Supervisor
Jefferson County PUD
310 Four Corners Road
Port Townsend, WA 98368

Telephone: (360) 385-8376
E-Mail: jscarborough@jeffpud.org

1.3 BID PROPOSAL

- A. Firm prices shall be quoted. The Bidder's proposal shall not include sales or use taxes.
- B. **The Purchaser reserves the sole right without cause to accept or reject any or all bids, or any portion thereof.**
- C. All bids shall be marked "833/933 kVA Voltage Regulators".
- D. A certified check, bank cashier's check or bid bond executed by a State licensed surety company made payable to Jefferson County Public Utility District No 1 is required with each bid in the amount equal to five percent (5%).
- E. The Purchaser reserves the right to waive minor irregularities or minor errors in any proposal if it appears to the Purchaser that such irregularities or errors were made inadvertently. Any such irregularities or errors so waived must be corrected in the Proposal in which they occur prior to the execution of any contract which may be awarded thereon.
- F. **Bidder shall supply three (3) copies of proposals (one [1] original, two [2] copies).**
- G. All Bidders will be notified of any changes in the specifications in addendum letters. Receipt of addendum letters must be acknowledged in the bid proposal.

1.4 BID EVALUATION

- A. The Purchaser will consider the prices and delivery dates as only two elements making up the total value of the material to be purchased. In order to properly evaluate other factors, we request the Supplier to provide answers to the following questions in his proposal:
 - 1. Where is the nearest factory authorized repair shop capable of repairing equipment of the size and type proposed?
 - 2. Where are the nearest factory trained Service Engineers located who can provide field service for the proposed equipment?

3. How much (if any) of the Service Engineer's service are included in the quoted price for the equipment proposed?
4. Please list any other information or project features that you feel should be considered in the evaluation of these proposals.

B. Other items which will be considered in the bid evaluation are:

1. The Bidder's past performance(s) in providing substation equipment and meeting quoted deliveries.
2. The Bidder's past ability and willingness to solve problems that have arisen in a satisfactory and complete manner.
3. The Bidder's deviations from the specifications.
4. Warranties. (Standard and Extended)
5. Manufacturer's cancellation policy.

1.5 PURCHASE ORDER

- A. It is anticipated that a purchase order will be issued to the successful Bidder(s) within thirty **(30) days** after the due date for the receipt of the proposals. However, all bids shall be valid for forty-five days after receipt of proposal.

1.6 DELIVERY AND SHIPPING

- A. Firm delivery dates shall be of prime concern during the bid evaluation. Date of shipment shall be as promised by the Bidder, based upon prompt receipt of all necessary information. The date of shipment shall be defined as the date the bill of lading is signed by the carrier. Delivery FOB Jefferson County PUD material yard located at 310 Four Corners Rd Port Townsend, WA 98368.
- B. Any change in the delivery date shall be reported immediately by telephone, followed by a written confirmation and explanation thereof. The delivery date shall be extended for the period of any reasonable delay due exclusively to causes beyond the control and without the fault of the Seller.
- C. Shipping shall be FOB job site. The title to the material and apparatus furnished hereunder shall pass to the Purchaser at the destination point.
- D. The apparatus shall be shipped in assembled units insofar as is consistent with good shipping practice. The apparatus shall be carefully packed for shipment. If items must be disassembled for shipment, they shall be "match-marked". All units and their containers shall be "piece-marked" and shall show the purchase order number. The Supplier shall indicate if the unit will be shipped completely assembled or will require on-site assembly. If on-site assembly is required please indicate parts requiring assembly.
- E. On the same day that any shipment to the Purchaser is originated, a transmission, including the following, shall be forwarded to the Purchaser:
1. Packing List
 2. Bill of Lading
 3. Packing list shall also accompany each shipment.
- F. Purchaser shall be notified as to the whereabouts of the regulator 48 hours prior to their schedule arrival at the destination point. Bidder shall pay any costs associated with unloading in the event that the regulators are not on site at this notified time.
- G. Warehouse receiving hours are Monday through Friday 8:30a.m. to 2:00p.m. Failure to deliver prior to 1:00p.m. may not guarantee unloading until the next day. Failure to deliver prior to 1:00p.m on a Friday will not guarantee unloading until the following Monday. Layover costs will be paid by the Supplier.

1.7 INVOICING

- A. Invoices shall be submitted in triplicate form to:

Ms. Alyson Dean, Purchasing Agent
Jefferson County PUD
310 Four Corners Road
Port Townsend, WA 98368

1.8 TITLE

- A. The title to the material and apparatus furnished hereunder shall be listed as follows:

Jefferson County PUD
310 Four Corners Road
Port Townsend, WA 98368

1.9 PAYMENT

- A. Upon the shipment of any equipment hereunder, the Seller shall submit to the Purchaser a detailed invoice in duplicate of the equipment shipped. After delivery of the equipment the Purchaser shall make payment therefore to the Seller.

1.10 CANCELLATION

- A. In the event the Purchaser shall be required, or deems it advisable, to suspend or terminate the work being performed pursuant to this Specification, the Purchaser may do so at any time by written notice to the Seller. In such cases, the Seller would take whatever action with respect to work in process as would minimize its claim against the Purchaser. The Purchaser would pay the Seller a reasonable suspension or termination charge for all disbursements or expenses which the Seller has incurred or become obligated for prior to the date of notice of cancellation, less the reasonable resale value of the materials, equipment, and apparatus which shall have been obtained or ordered to become an integral part of the work, and excluding any allowance for anticipated profits on the unperformed portion of the work. Reimbursement portions of this section would not apply to cancellations caused by design changes by the Manufacturer not authorized by the Purchaser or caused by delivery of material beyond the quoted delivery date(s) not authorized by the Purchaser.

1.11 EXCEPTIONS

- A. Any exceptions to this Specification shall be clearly stated in the Bidder's proposal. The fact that there are exceptions will not necessarily preclude the selection of the Bidder's proposal. Any exceptions will be itemized in the evaluation of the proposal. If no exceptions to this Specification are taken by the Bidder, this shall also be clearly stated.
- B. Alternative offerings will be considered, but they must clearly be indicated as alternatives.

1.12 WARRANTY

- A. Manufacturer shall warrant to Purchaser that the apparatus or services to be furnished hereunder shall be of the highest quality and free from defects in material, workmanship, and title and will be of the kind designated in the pertinent purchase order. The Manufacturer's warranty shall be effective for a period of eighteen (18) months after the date of shipment to Purchaser or twelve (12) months after energization, whichever occurs first. Terms of Manufacturer's warranty shall be included in the bid proposal and will be a criterion for evaluation of the proposal.

1.13 STANDARDS

- A. Unless otherwise stated, the latest revisions of the standards of ANSI, NEMA, IEEE, ASTM, NEC, and UL, shall be met in design, testing, and manufacture of the equipment covered by this Specification. In the event a conflict occurs between these codes and the specifications which will follow, the more stringent requirements shall govern.

1.14 INSPECTION

- A. A representative of the Purchaser shall be allowed free access at all reasonable times to the Manufacturer's shops and those of his suppliers for inspection of the equipment, or any of its parts, and to obtain information on the progress of the work. Any work or material found to be defective or which does not meet the requirements of this Specification may be rejected and shall be replaced by the Manufacturer at his own expense. Such inspection, however, shall not relieve the Manufacturer from responsibility for the quality and correctness of the work.

1.15 FIELD ENGINEERING AND TESTING

- A. The voltage regulator(s) shall be assembled and tested at the factory for satisfactory alignment, operation and electrical integrity.
- B. All regulators shall be tested in accordance with the latest ANSI Standards and as indicated in C57.15 Section 5.9. In addition, every voltage regulator shall receive the following test:
 - 1. Impulse test at 100% rated BIL on L and SL bushings to assure full integrity of the insulation system.
 - 2. Operated for 1,000 operations, stepping through multiple steps in both the raise and lower directions to verify correct control and tap changer operation and to assure all infant failures are detected at the factory.
- C. Test reports shall be included with each manual as specified in Section 1.16B of this specification.
- D. Field tests at time of installation shall be made at the expense of the Purchaser. If for any reason whatsoever the equipment furnished and installed hereunder, does not meet in any respect the warranties hereof and/or the performance specified by the Bidder in the proposal, and it becomes necessary for the Manufacturer to make alterations for the purpose of meeting those warranties and/or performances, additional tests required to show the effects of such alterations shall be performed at the expense of the Manufacturer.

1.16 DRAWINGS AND DESCRIPTIONS

- A. The following drawings and descriptions shall accompany the Bidder's proposal:
 - 1. General arrangement drawings showing the overall dimensions and relative location of all principal parts.
 - 2. General description of type of materials used for the principal parts.
 - 3. General description of the construction including drawings, photographs, or cuts which show the general construction, including operating mechanism.
 - 4. General description and diagrams showing the equipment mounting and handling facilities and clearance requirements.
 - 5. Control diagrams.
 - 6. Base drawings in sufficient detail to assist the Purchaser's Engineer in making preliminary foundation layout plans.
 - 7. Information on Regulator Control type and function description.
- B. Within four (4) weeks after award of the equipment, the Manufacturer shall furnish to Purchaser's Engineer:
 - 1. One (1) set of certified, reproducible drawings in AutoCAD 2017 format.
 - 2. Three (3) sets of Installation, Operations, and Maintenance Manuals.
 - 3. Three (3) sets of Equipment Specification Sheets and Parts Lists.
 - 4. Recommended spare parts list.
 - 5. Preventative maintenance procedures and schedule of procedures recommended.
- C. In addition, the Manufacturer shall ship one (1) complete set of equipment drawings; Installation, Operations and Maintenance Manuals; and Specification Sheets and Parts Lists with each regulator. This material shall be enclosed in a weather-proof package securely attached to the unit and protected from loss or damage.
- D. The drawing list shall include, at the minimum, the following:
 - 1. Outline
 - 2. Support Frame
 - 3. Name Plate
 - 4. S Bushing
 - 5. L Bushing
 - 6. SL Bushing
 - 7. Accessory Schematic Diagram
 - 8. Control Cabinet Wiring Diagram
 - 9. Location of Bushings
 - 10. Manual on Control to be Provided

PART 2 - SPECIFICATIONS – SPECIFIC

2.1 REGULATOR RATINGS

A. The voltage regulators shall be designed and manufactured for installation outdoors in a non-hazardous area over an ambient temperature range of 08F to 1108F at an altitude of 200 feet above sea level. The ratings to follow apply at 4200 feet above sea level.

- 1. Number of regulators required 6
- 2. Number of phases..... 1
- 3. Type of Regulator Station Step
- 4. System Voltage 12.47 Gnd- Y/7.2 kV
- 5. Regulator Rated Voltage 7.620 kV
- 6. Frequency..... 60 Hz
- 7. Class..... ONAN
- 8. Coolant..... Oil
- 9. Temperature Rise 558/658by resistance
- 10. Regulator Rated BIL Minimum 95 kV
- 11. Regulator Base 55 degree C Rated kVA 833 ONAN
- 12. Regulator Base 65 degree C Rated kVA 933 ONAN
- 13. Regulator Max AMPS 55 degree ONAN Rated (+/- 10% Reg.)..... 1093 Amp
- 14. Number of Steps..... 32 @ 5/8% each

Note: **The 833/933 kVA voltage regulators will be in service behind a 12/16/20/22.4 MVA , 115KV-12.47Y/7.2kV power transformer. The regulators shall be operated at the 12.47 Y/7.2 kV voltage. Proper control voltage transformers shall be installed to provide a proper voltage ratio for operation. Control shall be programed for operate voltage.**

2.2 CONTROL FEATURES

A. The voltage regulators shall be equipped with at least the following features:

- 1. Schweitzer SEL 2431 Voltage Regulator Controller; P/N -24310111X1114XXXXXXX, Key Code, 5329.
- 2. SEL 2431 Controller interconnected for functional operation.
- 3. Weatherproof control panel cabinet, with self-locking door, capable of being padlocked.
- 4. Control cabinet heaters.
- 5. Position indicator with drag hands and reset device.
- 6. Internal motor power supply.
- 7. Adjustable regulating range to values from +/-5 percent to +/-10 percent to provide additional current carrying capacity.

2.3 ACCESSORIES

A. The voltage regulators shall be equipped with at least the following features:

- 1. If necessary, regulator stands sufficient to provide 108 inches of phase to ground (top of concrete) clearance.
- 2. Nameplate data.
 - a. Serial number.
 - b. Number of phases.
 - c. Regulator type.
 - d. Configuration diagram.
 - e. Rate voltage.
 - f. Frequency.
 - g. Rated BIL.
 - h. Rated kVA.
 - i. Rated current.
 - j. Rated range of regulation.
 - k. Total weight.
 - l. Total gallons of oil required.

3. Lifting lugs capable of lifting the complete regulator.
4. Provision for lifting the cover, bushings, core and coil as one assembly from the regulator tank.
5. Oil drain valve and sampling device.
6. Filtering connections.
7. Oil level gauge.
8. Handhole in cover.
9. Provision for grounding tank.
10. Surge arrestor protection for the series winding.
11. Diagram of connections.
12. The operating motor capacitor shall be mounted, external to the main regulator tank to allow for capacitor replacement without un tanking the regulator.

2.4 BUSHING TERMINALS

- A. Conductor Size Parallel 500 kcmil (min)
- B. Conductor Type..... Copper
- C. Type of Terminal.....Must accommodate 2 parallel 500 kcmil (min) conductors

2.5 SHIPPING DATA

- A. The voltage regulators are to be shipped by truck to the warehouse facility of the District located a 310 Four Corners Rd Port Townsend, WA 98368.

PART 3 - SPECIFICATIONS – GENERAL

3.1 TANK

- A. The voltage regulator tanks shall be manufactured from steel plates with welded seams.
- B. The regulator control cabinet shall be mounted on the regulator to result in a cabinet midpoint elevation of six (6) feet from top of concrete/base of regulator stand.
- C. The bushing designations (S, L, SL) shall be stamped or embossed on the voltage regulator cover adjacent to the bushing.
- D. An external oil sight gauge shall be provided which indicates oil level at 25 degree C ambient and oil color.
- E. All voltage regulators shall be furnished with an oil sampling valve.
- F. Ever voltage regulator shall be provided with two laser etched nameplates. One nameplate will be mounted on the control enclosure and the other mounted on the voltage regulator tank.
- G. An external position indicator which is mounted above the oil level of the voltage regulator shall be included to indicate the changer position. The position indicator shall be slanted at a 45 degree angle for ease of reading.

3.2 GROUNDING

- A. Grounding terminals shall accommodate #4/0 Bare Stranded Copper.

3.3 LIFTING AND ANCHORING

- A. Lifting lugs shall be attached to the top of the voltage regulator to facilitate lifting the complete unit as well as for separately lifting the voltage regulator head and assembly.
- B. The voltage regulator mounting base or stand shall be designed to permit anchoring to a concrete foundation. The Manufacturer shall indicate on his outline drawing the dimensions of the voltage regulator base in order that the Purchaser’s Engineer may complete the foundation design in advance of shipment.

3.4 BUSHINGS

- A. All bushings shall be removable with or without un tanking the voltage regulator. All bushings shall be so designed that there will be no undue stressing of any parts due to temperature changes.

- B. Terminals capable of accepting copper or aluminum shall be furnished on all bushings. Porcelain used in the bushings shall be manufactured by the wet process and shall be homogeneous, free from laminations, cavities, or other flaws affecting its mechanical strength or dielectric quality; it shall be well vitrified, tough, and impervious to moisture. The glazing of the porcelain shall be free from imperfections, such as blisters or burns.
- C. All bushings shall be interchangeable.
- D. Bushings shall be rated for operation at an altitude of 200 feet above sea level.
- E. All bushings shall meet the requirements of ANSI Standard C76.1 and C76.2.

3.5 INSULATION SYSTEM

- A. Oil shall be pure, unadulterated, mineral oil obtained by the fractional distillation of petroleum. Oil shall be prepared and refined especially for use in voltage regulators, having a minimum flash point of 145 degree C. It shall be free from moisture, acid alkali, and injurious sulfur compounds. The oil shall not form a deposit under normal operation temperatures. The minimum allowable dielectric strength of the oil shall be 30 kV when measured in accordance with American National Standard methods of Testing Electrical Insulating Oils, C59.2.
- B. All oils shall be non-PCB. The unit shall be clearly marked non-PCB.
- C. The Manufacturer shall supply Material Safety Data Sheets (MSDS) for all applicable products.
- D. The Manufacturer shall provide certified test results verifying that the voltage regulator oil is free from all polychlorinated biphenyl (PCB) fluids. The Manufacturer shall be responsible to provide certified test results verifying the oil is free of all polychlorinated biphenyl (PCB) fluids prior to filling voltage regulator with oil.
- E. An oil sampling and drain valve shall be provided.
- F. As a bid alternate, the Manufacturer shall give a bid value to Supply Enviro Temp FR-3 fluid for each regulator versus supplying mineral oil as specified above.

3.6 NAME PLATE

- A. A durable corrosion-resistant metal nameplate shall be affixed to the voltage regulator by the Manufacturer.

3.7 COLOR

- A. The voltage regulator tank, bushings, and control cabinet shall be ANSI No. 70, light grey.
- B. The Manufacturer shall furnish one gallon of "touch-up" paint. The Manufacturer shall include Material Safety Data Sheets (MSDS) for the paint.

3.8 GENERAL

- A. The voltage regulator shall be in conformance with the requirements of ANSI C57.15