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**NAVY PUBLIC WORKS CENTER
NORFOLK, VIRGINIA
UTILITIES DEPARTMENT**

STANDARD OPERATING PROCEDURE / JOB HAZARD ANALYSIS

TITLE
INSTALL ELECTRICAL SERVICE TO
VORTEX STEAM METER

PROCEDURE NUMBER
WC 622 HVE 052

SIGNED: _____ **(DATE)**

APPROVED: _____ **(DATE)**

SAFETY PROFESSIONAL: _____ **(DATE)**

MANAGEMENT OFFICIAL: _____ **(DATE)**

REVISION

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INSTALL ELECTRICAL SERVICE TO VORTEX STEAM METER

Purpose:

Procedure to provide electrical service to a Vortex steam meter.

Potential Energy Sources:

1. 208Y120 volt AC service equipment and cables.
2. Steam.

Tools and PPE:

Tools: Hand tools, Multimeter, fiberglass ladder(if required), Bucket Truck(if required). PPE: Work gloves, safety shoes, hard hat, safety harness.

References:

1. PWC Occupational Safety and Health Program Manual, PWCNORVAINST 5100.33E
2. SOP WC 624 HVE 001, Set Up and Secure Bucket/Auger Truck
3. Occupational Safety and Health Standards for General Industry (29 CFR PART 1910): Subpart I, Personnel Protective Equipment; Subpart R, Electrical Power Generation / Transmission / Distribution; Subpart S, Electrical
4. NFPA 70 E approach distances to exposed, energized, electrical conductors and circuit parts.
5. ANSI C2-1987 National Electrical Safety Code
6. SOP WC 622 HVE 013, Hazardous Energy Control(Lockout/Tagout)

Procedures:

1. Assess the conditions at the work site. Check for steam leaks and where exposed steam piping is located. All steam leaks which present a hazard to the work will be repaired prior to beginning electrical service work.
2. Open, lock(if possible), and tag the 208Y or 120/240 circuit which will be the source of power to the steam meter. Follow SOP WC HVE 013, Hazardous Energy Control(Lockout/Tagout).
3. If a bucket truck is required to do the work, then set up the bucket truck. Refer to SOP WC 624 HVE 001, Set Up and Secure Bucket/Auger truck for details.

When operating a bucket truck the following safety rules will be followed.

- a) Only an authorized person, one with a current government license to operate an aerial lift, will operate the bucket.
- b) Do not use the bucket truck if winds exceed the truck manufacture's specified limit.
- c) Do not perform energized work in wet weather.
- d) Personnel in bucket will wear a safety harness with a lanyard attached to the boom or bucket.
- e) Do not exceed the bucket's weight limitations.

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f) Stand firmly on the floor of the bucket with both feet. Do not sit on

the bucket's edge or use planks, ladders, or other such devices.

g) If ground personnel are present, then at least one of them will have been

trained to operate the bucket in an emergency situation where the bucket

personnel are no longer able to operate the bucket controls.

4. Ladders may be used in place of a bucket truck. When ladders are used, they will be secured at the top. Ground personnel will secure the ladder at the bottom till the top has been secured. Refer to attach ladder safety rules for further information.

5. The PPE for the job will be work gloves and safety shoes. If a bucket truck or a ladder is used, personnel working on the ground will wear hard hats.

6. Install electrical service to the steam Vortex meter.

7. Connect electrical service to the Vortex meter.

8. Remove the lock(if placed), and tag from the 208Y or 120/240 power circuit, and energize the circuit. Follow SOP WC HVE 013, Hazardous Energy Control(Lockout/Tagout).

9. Using a Multimeter, test to verify the meter has the correct voltage. Check that the meter is operating.

10. Secure the bucket truck, if used, per SOP WC 624 HVE 001, Set Up and Secure Bucket/Auger truck for details. Secure all ladders used.

END