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

STANDARD OPERATING PROCEDURE / JOB HAZARD ANALYSIS

TITLE

**REPLACE AIR COMPRESSOR DRAIN VALVE OF
34.5 KV OCB/SF6 CIRCUIT BREAKER**

PROCEDURE NUMBER

WC 622 HVE 027

SIGNED: _____
(DATE)

APPROVED: _____
(DATE)

SAFETY PROFESSIONAL: _____
(DATE)

MANAGEMENT OFFICIAL: _____
(DATE)

REVISION

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REPLACE AIR COMPRESSOR DRAIN VALVE OF
34.5 KV OCB/SF6 CIRCUIT BREAKER

Purpose:

Procedure to replace an air compressor drain valve on a 34.5 kv oil, or SF6, circuit breaker.

Potential Energy Sources:

1. High pressure air
2. 120/240 AC control voltages
3. 125 DC control voltage
4. Breaker Operating Mechanism

Tools and PPE:

Tools: Various hand tools. PPE: Safety shoes, hard hat, safety glasses, and work gloves.

References:

1. PWC Occupational Safety and Health Program Manual, PWCNORVAINST 5100.33E
2. Occupational Safety and Health Standards for General Industry (29 CFR PART 1910): Subpart I, Personnel Protective Equipment
3. SOP WC 622 HVE 013, Hazardous Energy Control(Lockout, Tagout)

Procedures:

1. Tag out breaker control handle located in the switchyard, or substation, control house. Follow SOP WC 622 013, Hazardous Energy Control(Lockout, Tagout).
2. Secure the control voltages in the breaker's control cabinet. The AC and DC power to the breaker controls, the heaters, and the air compressor should be turned off.
3. Bleed the air pressure from the air compressor's air receiver located in the breaker control enclosure.
4. If the breaker is in the closed position, insert the blocking pin in the breaker's trip mechanism as per manufacture's instructions.
5. Unscrew and remove the drain valve from the air compressor receiver's bottom drain pipe.
6. Apply teflon to the threads of the drain pipe and then screw on the new valve.
7. Close the air receiver's bleed down valve.
8. Reenergize the breaker's controls, AC and DC; heaters; and air compressor.
9. Observe that the air compressor cuts on and charges the pneumatic system to the proper air pressure. Check for air leaks at the drain valve.
10. Remove the blocking pin from the breaker's trip mechanism.

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11. Following SOP WC HVE 013, remove the Danger Hold tag to place the breaker back in service.

END