

Electronic Procedure Package  
AP-301  
Quality Record

08/12/20 01:01 AM

## Quality Record

OFFICIAL COPY

Jan 27 2023

Document Number: AP-301

Document Title: SEASONAL WEATHER PREPARATIONS AND MONITORING

Version: 086

Document Type: APRC

Procedure Checklist Questions	Response(Yes/NA)
Checklist and/or blanks initiated,signed,dated or filled in NA as appropriate?	Yes
Required attachments included?	Yes
Charts,graphs,datasheets,etc.attached,dated,identified,and marked?	Yes
Calibrated test equipment,if used,checked out/in and references to this procedure?	Yes
Procedure requirement met?	Yes

Performed By(Printed Name and Signature): AARON TUBB ( E54575 )  
Date:2020-08-06

Approved By(Printed Name and Signature): STEPHEN SIMMS ( I42690 )  
Date:2020-08-11

Activity = OPS

Description =

08/12/20 01:01 AM

## Quality Record

### Document Comments

Comment Type: Work Complete  
No comment

Comment Type: Supervisor Review Complete  
Review complete

### Document Files

APRC - HNP - AP-301 - 086 - ISSUED.PDF

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 17 of 56

ATTACHMENT 1  
Page 1 of 11

<< Cold Weather Preparations >>

**1.0 SECTION I - INSULATION, HEAT TRACE, FREEZE PROTECTION,  
TEMPERATURE MAINTENANCE INSPECTION**

NOTE	
• Attachment steps may be performed in any order.....	<input type="checkbox"/> ✓
• These items in Section I may be performed any time prior to September 30 to allow early completion and will be scheduled by the On-Line schedule. Both Attachment 1 Section 1.0 and Attachment 1 Section 2.0 are required to be completed by September 30. ....	<input type="checkbox"/> ✓
• PLP-401 'Equipment in Use' Tags are to be installed on temporary heaters and temporary heat trace to preclude inadvertent removal. Each tag should state 'AP-301 Compensatory Measure for Cold Weather. Do Not Remove Without SM Approval' and be added to the PLP-401 Log at Y:\Operations\OldShared\TEMP_PWR_AP-401_EM-005_LOG\TempPower.xlsm. ....	<input type="checkbox"/> ✓
• When installing temporary heaters, only one 30 kw or two 18 kw heaters, at most, may be installed at any one 480V power outlet. ....	<input type="checkbox"/> ✓
• Placement of temporary heaters shall comply with AD-EG-ALL-1523, Temporary Ignition Source Control (including separation distances) <b>AND</b> drawing 7-S-9517, Seasonal HVAC Equipment Installations. ....	<input type="checkbox"/> ✓

1. **Check** all insulation is properly installed (no exposed lines or valves) for the following: .....

- a. LT-01CT-0990IW, RWST Level Ch I.....
  - b. LT-01CT-0991IIW, RWST Level Ch II.....
  - c. LT-01CT-0992IIIW, RWST Level Ch III.....
  - d. LT-01CT-0993IV, RWST Level Ch IV .....
  - e. RWST sample line: .....
- 1CT-19, RWST Sample Root Isolation Valve .....
  - 1CT-20, RWST Sample Isolation Valve.....

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 18 of 56

ATTACHMENT 1  
Page 2 of 11

<< Cold Weather Preparations >>

1.0 SECTION I - INSULATION, HEAT TRACE, FREEZE PROTECTION,  
TEMPERATURE MAINTENANCE INSPECTION (continued)

- f. Drain to RHT:
- 1CT-13, RWST Drain Isolation Valve .....
- g. Sensing lines for LT-7110:
- 1CT-18, LT-7110 Root Isol Vlv .....
- h. Hydro test pump suction line:
- 1CT-22, SIS Hydro Test Pump Suction from RWST .....

**NOTE**

It is expected that adequate inspections per the following step can be performed by the Auxiliary Operators (AO) during normal rounds. Inspection of each area listed below should be adequately accomplished in one shift by a qualified AO. Inspection of the entire plant should be completed within three to six shifts. These inspections should be performed preferably during daylight. .... ☐

2. **Perform** the following for each area listed below: .....
- a. Visually **inspect** piping and components that will be exposed to freezing temperatures. ....
- b. **Ensure** that heat tracing and insulation are intact.....
- c. **Check** for broken, crushed, missing or wet insulation.....
- d. **IF** any discrepancies are found,  
**THEN** perform the following: .....
- (1) **Initiate** work orders .....
- (2) **State** 'AP-301 Component' designator. ....
- (3) **Add** SEC WR (Winter Readiness) and Priority Level 2. ....

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS  
AND MONITORING

AP-301

Rev. 86

Page 19 of 56

ATTACHMENT 1

Page 3 of 11

## &lt;&lt; Cold Weather Preparations &gt;&gt;

1.0 SECTION I - INSULATION, HEAT TRACE, FREEZE PROTECTION,  
TEMPERATURE MAINTENANCE INSPECTION (continued)

- e. **IF** any work orders are initiated,  
**THEN** list the work orders in Comments Section..... N/A

Area	Initial	Area	Initial
TB-261 & COND PMP PIT	<u>2</u>	ESW & CTMU STRUCTURE	<u>2</u>
TB-286	<u>2</u>	ESWSS & FIRE PUMPS	<u>2</u>
TB-314	<u>2</u>	WTB/WNB & OILY WST SE	<u>2</u>
STEAM TUNNEL & RAB ROOF	<u>2</u>	AUX BOILER AREA	<u>2</u>
TANK BLDG	<u>2</u>	CW & NSW PUMPS	<u>2</u>
DIESEL BLDG	<u>2</u>	DEH SKID	<u>2</u>
MANHOLE M70 SUMP PUMP SKID 1EE-E562	<u>2</u>	MANHOLE M71 SUMP PUMP SKID 1EE-E563	<u>2</u>
MANHOLE M72 SUMP PUMP SKID 1EE-E564	<u>2</u>	MANHOLE M73 SUMP PUMP SKID 1EE-E565	<u>2</u>
MANHOLE M84 SUMP PUMP SKID 1EE-E566	<u>2</u>	MANHOLE M86 SUMP PUMP SKID 1EE-E567	<u>2</u>
MANHOLE M87 SUMP PUMP SKID 1EE-E568	<u>2</u>	MANHOLE M505 SUMP PUMP SKID 1EE-E569	<u>2</u>
MANHOLE M511 SUMP PUMP SKID 1EE-E570	<u>2</u>	MANHOLE M512 SUMP PUMP SKID 1EE-E571	<u>2</u>
MANHOLE M516 SUMP PUMP SKID 1EE-E572	<u>2</u>	MANHOLE M523 SUMP PUMP SKID 1EE-E573	<u>2</u>
PIPE CROSSOVER AT 230KV TRENCH	<u>2</u>		

3. **Perform** the following for all Freeze Protection and Temperature Maintenance Systems:..... 2

- a. **Check** that all Freeze Protection and Temperature Maintenance Systems are operable per OP-161 and OP-161.01..... 2

- b. **IF** any component is found INOPERABLE,  
**THEN** perform the following:

- (1) **Initiate** a work order. .... 2
- (2) **State** 'AP-301 Component' designator. .... 2
- (3) **Add** SEC WR and Priority Level 2. .... 2

- c. **IF** any work orders are initiated,  
**THEN** list work orders in the Comments Section..... 2

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 20 of 56

ATTACHMENT 1  
Page 4 of 11

<< Cold Weather Preparations >>

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS

NOTE

- Attachment steps may be performed in any order..... ☐
- Items in Attachment 1 Section 2.0 should be performed closer to the September 30 date and will be scheduled by the On-Line Schedule. .... ☐
- PLP-401 'Equipment in Use' Tags are to be installed on temporary heaters to preclude inadvertent removal. Each tag should state 'AP-301 Compensatory Measure for Cold Weather. Do Not Remove Without SM Approval' and be added to the PLP-401 Log at Y:\Operations\OldShared\TEMP\_PWR\_AP-401\_EM-005\_LOG\TempPower.xlsm..... ☐
- When installing temporary heaters, only one 30 kw or two 18 kw heaters, at most, may be installed at any one 480V power outlet. .... ☐
- Placement of temporary heaters shall comply with AD-EG-ALL-1523, Temporary Ignition Source Control (including separation distances) **AND** drawing 7-S-9517, Seasonal HVAC Equipment Installations. .... ☐

1. **Perform** the applicable steps below for the following outside instrument cabinets:.....

a. **Shut** any ventilation louvers.....

b. **Check** the internal heaters/lights operating. {7.1.5} .....  
Cabinets are located as follows:

n/a ① m  
n/a

① NO 20351175 for section 1 only.  
m M. Merletto

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS  
AND MONITORING

AP-301

Rev. 86

Page 21 of 56

ATTACHMENT 1

Page 5 of 11

## &lt;&lt; Cold Weather Preparations &gt;&gt;

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS (continued)

Table 1, Instrument Cabinets

Cabinet	Location	Initial	Cabinet	Location	Initial
T1-C15	T-261-AV7		T1-C1	T-286-AV27	
T1-C23	T-261-AV14		T1-C4	T-286-AP27	
T1-C22	T-261-AP19		T1-C6	T-286-AP35	
T1-C24	T-261-AV27		T1-C17	T-286-AV40	
T1-C10	T-261-AP27		T1-C2	T-286-AM36	
T1-C12	T-261-AV30		T1-C8	T-286-AK42	
T1-C26 [Note 2]	T-261-AV40		T1-C7-RPS-IV	T-286-AH36Z	
T1-C19	T-261-AV35		T1-C21-RPS-III	T-291-AH36Z	
T1-C20	T-261-AV40		T1-C18	T-286-AA40	
T1-C13	T-261-AV40		T1-C5	T-286-AF27	
T1-C14	T-261-AP42		Y1-C9	NSW PMP A	
T1-C3	T-261-AK40		Y1-C10	CWP A	
T1-C16	T-261-AK40		Y21-C6	CTMU	
T1-C11	T-242-AF27		Y21-C7-ESF-A	ESW PUMP A	
T1-C25	T-261-AF19		Y21-C8-ESF-B	ESW PUMP B	
T1-C9	T-261-AF19		Y21-C1	ESWSS	
T1-C28 [Note 1]	T-265-AP9		Y1-C3	MD FIRE PMP	
Diesel Driven Fire Pump 1&4 NNS Inst Cab	ESWSS				

Note 1: T1-C28 light fixture is not wired

Note 2: Heater not installed.

OFFICIAL COPY

Jan 27 2023

n/a ①



SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 22 of 56

ATTACHMENT 1  
Page 6 of 11

<< Cold Weather Preparations >>

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS (continued)

2. **Perform** ORT-1415. {7.1.6}.....
- a. **Check** work orders have been initiated for any inoperable heaters and that these work orders have 'AP-301 Component' stated in the designator, SEC WR added, and are Priority Level 2. ....
- b. **IF** any EUH is anticipated to be inoperable after October 30, **THEN perform** the following: .....
  - (1) **Identify** contingencies for maintaining room temperatures above freezing. Such contingencies may include temporary heaters to be installed or permanent H&V systems to be operated to maintain temperature. ....
  - (2) **List** any such EUHs, the contingency plans and any associated work orders in the Comments section. ....
- c. **IF** any permanent plant H&V unit is operated for freeze protection **OR** temperature maintenance, **THEN ensure** that a Caution Tag is placed on the control switch .....
- d. **IF** a temporary heater is installed, **THEN place** a PLP-401 'Equipment in Use' Tag on the power cable per the Note on Page 4.....
- e. **IF** a temporary heater is installed, **THEN ensure** placement of the heater complies with AD-EG-ALL-1523 (including separation distances) **AND** drawing 7-S-9517, Seasonal HVAC Equipment Installations. ....

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 23 of 56

ATTACHMENT 1  
Page 7 of 11

## << Cold Weather Preparations >>

### 2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS, TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT ACTIONS (continued)

#### NOTE

- In the past there has been a need to install a temporary heater(s) in the ASI pump room. This has been evaluated under EC 94965. .... ☐
- Historical Meteorological Data for the area shows winter temperatures will be below 32°F **AND** remain there for greater than 12 hours, therefore the heaters required to be installed for this condition will be installed as part of the cold weather preparations..... ☐
- Additional temporary heaters may be installed as conditions warrant per Attachment 2 Step 6..... ☐
- Placement of temporary heaters shall comply with AD-EG-ALL-1523, Temporary Ignition Source Control (including separation distances) **AND** drawing 7-S-9517, Seasonal HVAC Equipment Installations. .... ☐

3. **Install** the following Temporary Heaters since outside temperature is expected to go below 32°F **AND** remain there for greater than 12 hours:.....

#### Turbine Building

- **Install** temporary heater in the Turbine Bldg 255' elev. North near 1CE-1057 (Feed Pump Seal Drain To Condenser Control Valve). See EC 401531. (Affects Generation) .....
- **Install** temporary heater in the Turbine Bldg 261' elev. North near 1CO-E031 (Portable Breathing Air Compressor). Concern is condensate may freeze and hamper the ability of the compressor to function properly.(BOP) See EC 401531 and EC 411055. ....
- **Install** temporary heaters in the Turbine Bldg 261' Elev. West near FI-01CE-1920A (Condenser Vacuum Pump A Effluent Flow Ind) **AND** FI-01CE-1920B (Condenser Vacuum Pump B Effluent Flow Ind.). Concern is glass tube for flow Indicator may crack from internal water freezing. See EC 401531. (BOP).....

OFFICIAL COPY

Jan 27 2023

na ①

na

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 24 of 56

ATTACHMENT 1  
Page 8 of 11

<< Cold Weather Preparations >>

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS (continued)

Turbine Building (continued)

- **Ensure** a Work Order (PMID/RQ 20733-02) is scheduled to **install** a temporary heater in the Turbine Bldg 261' elev. Southeast near 1SFD-E030 (TB, EL 261 (LFDCP-9-1) to prevent spurious alarms by November 20. Installed internal heaters cannot cope with extreme temperatures. (Safety Related) See EC 401531 and AR 148743..... h/a ①m
- **Install** temporary heater in the Turbine Bldg 261' elev. Southeast near 1SFD-E037 (TB, EL 261 (LFDCP-9-2). Installed internal heaters cannot cope with extreme temperatures. (Safety Related) See EC 411055 ..... h/a
- **Install** temporary heater in the Turbine Bldg 261' elev. Southeast near 1SFD-E017 (TB-Transformer Yard) LFDCP-11. Installed internal heaters cannot cope with extreme temperatures. (Safety Related) See EC 411055 ..... h/a
- **Install** temporary heater in the Turbine Bldg 261' elev. Northwest near 1CAB-T1-C12 (Instrument Cabinet). Cabinet contains various pressure switches, indicators, and transmitters for Condensate and Feedwater systems. (Safety Related) See EC 411055 .... h/a
- **Install** temporary heater in the Turbine Bldg 261' elev. Northwest near 1CAB-T1-C26 (Instrument Cabinet). Cabinet contains multiple pressure and flow transmitters for the Feedwater system. (Safety Related) See EC 411055..... h/a
- **Install** temporary heater outside the Turbine Bldg 261' elev. Southeast near LG-01HY-4198 (TB Hydrogen Oily Water Drain Tank Level Indicator). (BOP) See EC 401531 ..... h/a

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 25 of 56

ATTACHMENT 1  
Page 9 of 11

<< Cold Weather Preparations >>

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS (continued)

NSW Structure

- **Install** temporary heater near 1MP-65 (Cooling Tower Make-Up Flow Line Pressure Test Isol). This is a small pressure test point and vent valve off of the Cooling Tower Make-up level control valve bypass line. (BOP) See EC 411055 .....

ESW Structure

- **Install** temporary heater near 1CAB-Y21-C6 (Instrument Cabinet). Cabinet contains multiple pressure switches and indicators for the CTMU and CMTMU Screen Wash systems. (Safety Related) See EC 411055 .....
- a. **Install** a PLP-401 'Equipment in Use' Tag on the heater power cable per the Note on Page 4.....
- b. **Ensure** placement of the heater complies with AD-EG-ALL-1523 (including separation distances) **AND** drawing 7-S-9517, Seasonal HVAC Equipment Installations.. ....
- c. **List** the location for each temporary heater installed as contingency for cold weather in Table 2, Temporary Heater Locations.....
- 4. **Close** the following dampers in the EDG Unit 2 Corridor,:.....
  - DG-D9-1 (Isolation Damper Diesel Generator Bldg Unit 2 Corridor) .....
  - DG-D10-1 (Isolation Damper Diesel Generator Bldg Unit 2 Corridor) .....
- 5. **Direct** Chemistry to **perform** the following: .....
  - a. **Ensure** adequacy of enclosures **AND** heaters for outside chemical addition systems. ....

OFFICIAL COPY

Jan 27 2023

Handwritten notes and signatures in blue ink, including a circled '1' and various initials and lines.

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 26 of 56

ATTACHMENT 1  
Page 10 of 11

<< Cold Weather Preparations >>

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS (continued)

- b. **Ensure** adequacy of enclosure **AND** heater for surface water composite sampler at the main dam spillway. .... h/a ①
  - c. **Install** PLP-401 'Equipment in Use' Tags on heater power supplies per the Note on Page 4. ....
6. **Ensure** a Work Order is scheduled to check that the Turbine Building Pre-action Sprinkler System has been drained prior to cold weather (PMID/RQ 40422-01), **AND** drain if required. ....
7. **Ensure** ONE of the following for Warehouse 6 Dry-pipe Sprinkler System: .....
  - System is aligned for normal operation and pressurized per OP-149, Section 8.3, Resetting Dry Pipe Sprinkler System in Warehouse #6. ....
  - OR
  - System is drained and isolated with equipment protection clearance in place. ....
8. **Ensure** the Diesel Fire Pump keep warm system is FUNCTIONAL. The engine coolant heater maintains the coolant temperature at least 120°F. The engine should be warm to the touch in the water jacket areas. ....
9. **Drain** Fuel Oil Storage Tank diked areas to prevent ice buildup. ....
10. **Drain** the Aux Boiler Fuel Oil Tanks in-tank foam injection lines per PMID/RQ 40422-02 (Model WO 1128166). ....
11. After reviewing the Temporary Modification Log, **check** that any temporary plant support equipment or instrumentation is protected from freezing temperatures. .... h/a

OFFICIAL COPY

Jan 27 2023

SEASONAL WEATHER PREPARATIONS AND MONITORING	AP-301
	Rev. 86
	Page 27 of 56

ATTACHMENT 1  
Page 11 of 11

<< Cold Weather Preparations >>

2.0 SECTION II - EHU AND INSTRUMENT CABINET INSPECTIONS,  
TEMPORARY HEATER INSTALLATION AND OUTSIDE EQUIPMENT  
ACTIONS (continued)

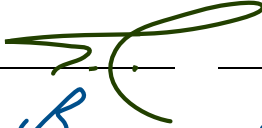
Comments: (List any discrepancies noted and work orders initiated)

Heat trace alarm WOs previously initiated: 20364614, 20378198  
and 20414888.

Sections of Attachment performed:

Section I Section II  
(circle Section performed)

Attachment Performed by:

<u>Initial</u>	<u>Name (Print)</u>	<u>Initial</u>	<u>Name (Print)</u>
	Thomas Morris	Z	Zachery Mayfield
B	Bruce Horn	R	R. Honeycutt
Z	Kurt Blomquist		
A	Aaron Ivbb		

Completed By:  A.  
Control Room Supervisor Print / Sign

8/6/2020  
Date

Reviewed By:  Tim English  
Shift Manager Print / Sign

8/6/2020  
Date

Reviewed By:  Stephen Simms  
Online Manager Print / Sign

8/11/20  
Date

After receiving the final review signature, this Attachment becomes a QA Record.

OFFICIAL COPY

Jan 27 2023