

## Substation SAP Work Management System (WMS) Process

### SUMMARY

This document describes procedures for entering, managing, and editing data pertaining to substation equipment and systems in the SAP/Work Management System (SAP/WMS). It also includes steps to properly document and record maintenance activities in support of [Utility Standard TD-3322S, "Substation Equipment Maintenance Requirements."](#)

This utility procedure is not intended to be a SAP user manual.

Level of Use: Informational Use

### TARGET AUDIENCE

This procedure is written for substation maintenance, construction, and asset and maintenance planning personnel.

### SAFETY

This document describes administrative tasks that do not raise the risk of a specific hazard to personnel, the public, or equipment.

### BEFORE YOU START

NA

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## Substation SAP Work Management System (WMS) Process

### PROCEDURE STEPS

#### 1 SAP/WMS Workflow Process

- 1.1 For the detailed processes, SEE [Attachment 6, "Substation Equipment Maintenance Process,"](#) and [Instructions on Completing Equipment Form Workbook.](#)

#### 2 Roles and Responsibilities by Classification

##### 2.1 Asset and Maintenance Planning Supervisor

1. SUPERVISE AND PROVIDE support to asset and maintenance planners and condition-based maintenance (CBM) work methods and procedures specialists.
2. SUPPORT the personnel named in [Item 2.1.1](#) above with compliance reporting, including California Independent System Operator (CAISO), California Public Utilities Commission (CPUC), North American Electric Reliability Corporations (NERC), Western Electricity Coordinating Council (WECC), third parties, and internal measures.
3. PROVIDE reports to directors, managers, AND superintendents.
  - a. IDENTIFY deficiencies
  - b. DEVELOP solutions
  - c. PROVIDE feedback to appropriate stakeholders
4. PROVIDE ongoing configuration support AND documentation.
5. ACT as team lead for future work management process improvements.
6. IDENTIFY SAP/WMS process deficiencies AND support solutions.
7. ACT as the point of contact between the headquarters (HQ) and the SAP/WMS support group.
8. PERFORM quarterly AND annual verifications.
9. REVIEW AND UPDATE tasks related to the accumulated critical current (ACC) process, as described in [Job Aid TD-3320P-12-JA08, "ACC Reviews and Controls."](#)

##### 2.2 Asset and Maintenance Planner

1. FOLLOW the substation maintenance and construction (SM&C) requirements outlined in [Utility Standard TD-3322S](#) for installing and maintaining substation equipment for newly installed or out-of-service equipment in SAP.

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### 2.2 (continued)

- a. FOLLOW [Job Aid, "Creating New Equipment Record."](#)
- b. IDENTIFY Criticality Codes (ABC Indicator) in the SAP equipment record per instructions below:
  - (1) For CAISO-controlled distribution-class (59 kilovolts [kV] and below) equipment, USE criticality Code A OR Code B only.
  - (2) For transmission-class (60 kV and above) equipment, USE criticality Code A, B, or C, based on the following criteria:

**A**—CAISO or NERC\WECC Critical. CAISO and PG&E have agreed on a list of equipment and facilities designated as critical to the utility and CAISO.

**B**—CAISO Non-critical. DESIGNATE CAISO-controlled equipment not on the CAISO-critical list as "CAISO Non-critical."

**C**—Non-CAISO (all other transmission-owned equipment). DESIGNATE non-CAISO-controlled, transmission-class equipment as "Non-CAISO."

#### NOTE

All transmission-class equipment not designated as A or B must be designated as C.

**Example:** A transmission-class, high-side breaker or circuit switcher for a distribution bank typically would be designated C.

- c. IDENTIFY the CAISO AND/OR the NERC\WECC indicator in the SAP equipment record per below:
  - (1) CAISO Indicator field – INDICATE whether equipment falls under the control of the CAISO by filling in "Y" or "N" for all equipment regardless of ownership.
  - (2) NERC\WECC Compliance Requirement field – INDICATE which NERC\WECC compliance standard is applicable, if any, for all equipment.
  - (3) IF any major equipment is marked as being under CAISO control,  
THEN MARK the batteries AND station functional location to match the highest level of CAISO control.
  - (4) IF any battery is marked FAC-501-WECC,  
THEN MARK the charger the same.

## Substation SAP Work Management System (WMS) Process

### 2.2 (continued)

- d. OBTAIN AND ASSIGN ACC trigger levels for circuit breakers, reclosers, and circuit switchers as described in [Attachment 14, "Accumulated Critical Current Process,"](#) and [Job Aid TD-3320P-12-JA04, "Establishing and Setting ACC Limit Values."](#)
  - e. OBTAIN AND ASSIGN fault duty for circuit breakers, reclosers, and circuit switchers as described in [TD-3320P-12, Attachment 14,](#) and [Job Aid TD-3320P-12-JA05, "Establishing and Setting ACC Max Fault Duty in SAP."](#)
  - f. FOLLOW [Job Aid, "Creating Metal Clad Equipment,"](#) for any revolving equipment (circuit breakers).
  - g. FOLLOW [Job Aid, "Creating Maintenance Plan,"](#) per [Attachment 4, "Substation Maintenance Plans."](#)
  - h. For as-found equipment, IF the equipment is in SAP,  
  
THEN UPDATE the equipment information, AND CORRECT the data AND maintenance plans as quickly as possible.
    - (1) IF the equipment is not in SAP,  
  
THEN ADD to SAP AND CREATE any maintenance plans required after receiving the new equipment form.
  - i. FOLLOW [Job Aid, "Removing an Equipment Record,"](#) for archiving equipment.
  - j. FOLLOW [Job Aid, "Moving a Mobile,"](#) AND [Attachment 2, "Mobile Maintenance Plans,"](#) for mobile equipment tracking.
- 2. PROVIDE supervisors, crew leads, and clerical support with a list of current, future, and past-due work AND TRACK to completion.
  - 3. RUN various reports to monitor compliance to PG&E procedures AND standards.
  - 4. RUN reports for compliance purposes – NERC/WECC, CAISO, CPUC, etc.
  - 5. When a breaker fails an exercise, CALL OUT Mechanism (Mech) Service orders as requested from the maintenance supervisor per [Job Aid, "Calling out Mech Service Order due to Failed Exercise."](#)
  - 6. Whenever maintenance is deferred, COMPLETE the steps outlined in [Job Aid, "T180 Order Deferral Process,"](#) and [Utility Standard TD-3322S, Attachment 3, "Deferring Preventive Maintenance,"](#) if applicable.
  - 7. MAINTAIN oil-filled equipment in the TOA4 (Transformer Oil Analysis) database by ADDING new equipment AND REMOVING archived equipment.

## Substation SAP Work Management System (WMS) Process

### 2.2 (continued)

8. REVIEW TJH2B AND ATS test results to reset plans in SAP/WMS to recommended intervals.
9. WORK with supervisors AND field specialists to optimize preventive maintenance programs.
10. IDENTIFY any excesses OR deficiencies in the preventive maintenance system.

### 2.3 Maintenance Supervisor

1. REVIEW AND VERIFY requests for work AND ENSURE the request does not already have an active work order.
2. In conjunction with the crew lead, DETERMINE when the labor, material, tools, rental equipment, contractors, etc., are ready for the work to be scheduled.
3. ASSIGN daily SAP/WMS work, including necessary resources, employees, etc.
4. ENSURE the following conditions are true:
  - All necessary maintenance tasks are completed satisfactorily.
  - The equipment performs within specified parameters.
  - All orders are promptly completed in SAP.
5. REQUEST a T180 order for a mechanism (mech) service when a breaker fails an exercise.
6. DOCUMENT all unresolved maintenance issues (UMI) with batteries and chargers that are designated in SAP as [NERC PRC-005](#). A UMI is a deficiency identified during a maintenance activity that causes the component to not meet the intended performance, which cannot be corrected during the maintenance cycle and requires follow-up corrective action by assigned personnel.
  - a. CREATE an SAP corrective notification (T080) before the preventive maintenance order (T180) is closed. The corrective notification must include the following information:
    - The letters "UMI" at the beginning of the short text
    - A thorough description of the problem found



## Substation SAP Work Management System (WMS) Process

### 2.3 (continued)

- Evidence that actions were taken to correct the UMI. Evidence may include, but is not limited to, work orders, replacement component orders, invoices, project schedules with completed milestones, return material authorizations (RMAs) or purchase orders.
- b. Once the preventive maintenance work is completed and documented, the appropriate supervisor must REVIEW results to ensure the corrective notification was created for tracking the UMI AND that evidence was captured demonstrating the UMI was mitigated and resolved.
  - (1) TRACK all UMIs AND DOCUMENT them in SAP WM.
  - (2) USE reports from SAP to show compliance with the regulatory requirement.
- 7. IDENTIFY any necessary follow-up tasks AND TAKE responsibility for generating the appropriate notifications.
- 8. COMPLETE [Form TD-3220P-12-F01, "Corrective Work Form Electric Substation."](#) (Attachment 1) for all corrective work.
- 9. ASSIGN a priority code for all corrective work notifications (LC) and PM orders (T080). The priority code indicates the urgency to complete the task. The priority codes are:
  - A—Immediate/Correct Unsafe Condition (30 Days)
  - B—Urgent Compliance (90 Days)
  - E—System Repair/Improvement (365 Days)
  - F—System Repair/Improvement (1+ Yrs.)

#### NOTE

Any change to a priority code requires an explanation detailed in comments of the order and notification.

- 10. REVIEW the field personnel's completed hard copy work packets within 45 calendar days of the work being completed.
- 11. PROVIDE feedback to the field specialists who make decisions concerning adjustments to the preventive maintenance plans.
- 12. Working with the asset and maintenance planner, IDENTIFY SAP/WMS process deficiencies AND SUPPORT solutions.

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### 2.4 Crew Lead

1. CREATE/REVIEW the scheduling report for planning work.
2. MATCH labor capacity to the schedule AND PREPARE the tentative work plan.
3. TRACK the labor capacity each month AND CREATE the monthly schedule using the notification backlog.
4. MATCH work from the backlog to the labor availability to produce a detailed monthly schedule.
5. Working with the maintenance supervisor, DETERMINE when the labor, material, tools, rental equipment, contractors, etc., are ready for the work to be scheduled.
  - a. SCHEDULE work by priority only:
    - Priority A – SCHEDULE AND COMPLETE work within 30 days. This work is for emergency/make safe situations only.
    - Priority B – SCHEDULE AND COMPLETE work within 90 days.
    - Priority E – SCHEDULE AND COMPLETE work within 365 days.
    - Priority F – SCHEDULE work when manpower and budget are available.
6. SUBMIT clearances AND PREPARE job packages. Job packages typically include the following items:
  - a. History and/or maintenance cards, all current necessary forms, and maintenance task information as found in the latest revision of the [Substation Maintenance and Construction Manual \(SM&C\) \(TD-3322M\)](#).
  - b. A copy of the SAP PM work ticket (shop paper).
  - c. Corrective work form.
  - d. Electrical Transmission Substation (ETS) datasheet for T180 orders with equipment.
  - e. Battery resistance baseline data for battery system being tested, if applicable.
7. IF a clearance is canceled,  
  
THEN COORDINATE with operations personnel AND CAISO as appropriate to RESCHEDULE AND COMPLETE by the original basic finish date, if possible.

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### 2.5 Equipment Installer (SEE [Attachment 5](#) for process)

1. INSTALL equipment AND RECORD nameplate information on the [New Equipment Form](#).
2. SUBMIT a completed new equipment form to the asset and maintenance planning shared mailbox at: [EDM&CSubstationAsset@pge.com](mailto:EDM&CSubstationAsset@pge.com)
3. TEST to verify that installed equipment is ready to release.
4. PROVIDE test information to the maintenance supervisor.

### 2.6 Maintenance Supervisor Clerical Support

1. CREATE LC notifications AND RELEASE to an order upon request.
  - a. RELEASE all Priority A and B notifications to an order upon creation.
2. ENTER fault duty data from Asset Performance Management (APM) for circuit breakers and circuit switchers into SAP/WMS per [Job Aid TD-3320P-12-JA07, "Entering Fault Duty Data & Equipment Condition Codes in SAP."](#)
3. ENTER station inspection reads from APM for counters and load tap changers (LTCs) through neutrals into SAP/WMS per [Job Aid, "Station Reads Entry."](#)
4. ENTER circuit breaker interrupter wear assessment analysis (WAA) from breaker oil analysis (BOAs) reports and overhaul/mechanism service test results, as described in clerical [Job Aid, "BOA and Breaker Overhaul and Mechanism Service Assessment Recording."](#)
5. TRACK work orders to completion AND INITIATE job closings when notified by the supervisor.
  - a. RESOLVE any open items before closing orders.
6. FOLLOW [Job Aid, "Closing Orders Through ZORDER,"](#) for orders created in error or not worked.
7. For annual orders, GO TO the [2016 Substation Actg Handbook](#). DO NOT CHARGE labor to annual CO-type orders.
8. RUN SAP/WMS list edits AND printing shop/work tickets as requested to support the supervisor, crew lead, and electrician.
9. IDENTIFY SAP/WMS process deficiencies.
  - a. SUPPORT solutions AND PROVIDE feedback.



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### 2.6 (continued)

10. ASSIST in preparing job packages for approved work, as requested.
11. PROVIDE SAP clerical support to the asset and maintenance planner, as needed.
12. PROVIDE SAP clerical support backup to other substation HQs, as needed.

## 3 Equipment Records

### 3.1 Testing, Approving for Service, and Entering Data for Substation Equipment

1. Hard Copy Records
  - a. Field personnel COMPLETE the appropriate test reports by documenting all testing activities whether maintenance (routine maintenance) or installation (installing, commissioning, or accepting). This applies to all substation equipment.
    - (1) COMPLETE hand-written records using black or blue non-erasable ink.
  - b. Substation personnel at each HQ MAINTAIN a “hard copy” filing system containing all maintenance and installation test reports for equipment within their jurisdiction. (SEE [Job Aid, “Hard Copy Files.”](#))
    - (1) This includes, maintenance history cards, copies of test reports for all planned maintenance activities, inspection and measurements activities, etc.
    - (2) ORGANIZE this file system alphabetically by substation AND CREATE a folder for each piece of equipment requiring maintenance. ENSURE the file system is easily searchable to facilitate auditing and regulatory reporting.
  - c. Installation records – The construction supervisor (or designee) SENDS all installation test reports electronically to the responsible maintenance supervisor within 10 business days after the equipment is released for service.
    - (1) HQ maintenance personnel PRINT AND FILE all installation hard copies within 10 business days of receiving the electronic copies.
  - d. Maintenance records – The maintenance supervisor (or designee) must REVIEW the hard copy OR the electronic records to ensure all forms are filled out properly AND all required checks, measurements, tasks, etc., are completed.
  - e. The work is not considered complete until all documents pertaining to the work are filed in the hard-copy file.

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### 3.1 (continued)

#### 2. Electronic Records

- a. Installation reports – After completing the final equipment commissioning work and releasing the equipment into service, FILE all test records or commission test records in the maintenance department [SharePoint](#) folder. SEE [Job Aid, "Substation Records – HQ Scanning."](#)
- b. Maintenance reports – After closing the work order in SAP, POST all maintenance and test reports to the appropriate folder in the maintenance department [SharePoint](#) within 10 working days of the date the work was completed. SEE [Job Aid, "Substation Records – HQ Scanning."](#)

(1) IF electronic records are not available,

THEN SCAN the hard copy records into .pdf format AND FILE them appropriately.

- c. Work is considered complete after the HQ SharePoint folders are in place and all documents pertaining to the work are filed in the SharePoint.
- d. NERC/WECC equipment – PROCESS substation maintenance job packages for equipment associated with NERC/WECC standards according to [Attachment 12, "Documentation Requirements for NERC/WECC Substation Maintenance."](#)

#### 4 Corrective Work and the Facility Damage Action (FDA) Matrix

4.1 COMPLETE the corrective repair work required to ensure safety and reliability within 1 year (365 days) of the LC notification being created.

1. The completion date for capital work may be longer than 1 year.

**Table 1. Priority Code/Impacts**

| Impact  | Priority Code |
|---|---------------|
| Make safe/restore power   | A             |
| Loss of normal capacity/protection  | B*            |
| Reduced operating flexibility/reduced emergency capacity  | B/E           |
| Security impacts  | A/B           |
| Environmental impacts   | A/B           |
| Lost visibility   | B/E           |
| Customer compliant  | B/E           |
| Special programs  | B/E           |
| *Could be Priority E, based on supervisor/designee determination and/or timeline for parts, clearance, and overall situation. |               |

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- 4.2 The FDA matrix provides a means for consistently identifying, documenting, and prioritizing abnormal conditions, including a **recommended** default priority code (e.g., Priority A, B, or E), based on the FDA.

### NOTE

Supervisors/designees may override the default priority based on their understanding/ circumstances of the damage associated with the equipment; however, a comment/reason for the override is required in the long text.

1. The FDA matrix consists of the following key fields: Facility, Damage, Action, Default Priority Code, and Duration. The complete and current FDA matrix can be found in [Attachment 1, "Corrective Work Form Electric Substation" \(TD-3220P-12-F01\)](#).
  - a. IF unable to find an FDA option that is appropriate,  
  
THEN USE "Miscellaneous-Other." (This FDA is used in very few situations, if at all.)

## 5 Requesting Expense Funds for Corrective Work

- 5.1 Superintendents APPROVE all work except the following items:

- Emergency response
- Emergency repairs to provide system stability
- Public or employee safety issues
- COE-managed by dates

### 5.2 Corrective Work Approval

1. For estimated cost less than \$10,000, the supervisor can APPROVE.
  - a. The superintendent may PLACE an approval step on all corrective orders by headquarters, if needed.
2. For estimated cost of \$10,000 or greater, SUBMIT a request as follows:
  - a. Applicable superintendent for concurrence.
  - b. Substation M&C program manager for approval.

## 6 SAP Access and Support

- 6.1 SUBMIT a request to TSC via the [MyITService](#) self-help website for SAP/WMS access.

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- 6.2 CONTACT the appropriate [area asset and maintenance planner](#) contact for SAP/WMS substation-specific support and assistance.
- 6.3 CONTACT the TSC at 8-223-9000 for standard SAP navigation or functionality.

### END of Instructions

### DEFINITIONS

**Accumulated critical current (ACC):** The total fault current a circuit breaker has accrued since the last overhaul.

**Asset performance management (APM):** A system of hardware and software used to collect and analyze inspection and test results.

**Breaker oil analysis (BOA):** An external method for analyzing the internal condition of oil circuit breakers.

**Capacity:** The amount of resources or hours available to perform work. These resources may be limited by budget constraints.

**Condition-based maintenance (CBM):** Maintenance identified by a system of hardware and software used to collect and analyze inspection and test results.

**Criticality code:** Defines the importance of work tasks, notifications, and PM orders within a priority code. Also known in the program as the ABC indicator.

**Job package:** The supporting paperwork given to field personnel to complete the work.

**Major equipment:** Includes, but is not limited to, station transformer banks, circuit breakers (CBs), load tap changers (LTCs) and regulators, condensers, station cap banks, station batteries, reactors, and transmission line conductors, splices, and structures.

**Maintenance plan:** A SAP/WMS-scheduled, recurring maintenance task.

**North American Electric Reliability Corporation (NERC):** A self-regulatory organization, subject to oversight by the U.S. Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. Provides the following functions to ensure the reliability of the Bulk Power System in North America:

- Develop and enforce reliability standards.
- Assess reliability annually.
- Monitor the Bulk Power System.
- Educate, train, and certify industry personnel.

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### DEFINITIONS (continued)

**Notification:** A document SAP/WMS uses to capture information and/or history (technical and process) of an asset requiring repair, replacement, or tracking. Creating a notification is the first step in identifying work.

**Preventative maintenance:** Planned or unplanned work to prevent failure.

**Priority code:** A term used in SAP to indicate the urgency of a task. SAP assigns priority based on the work task and is limited by order type.

**Wear assessment analysis (WAA):** Estimation of circuit breaker interrupter wear percentage based on breaker oil analysis (BOA) sample results or physical inspection of the interrupter.

**Western Electric Coordinating Council (WECC):** A regional entity authorized to audit and enforce the NERC standards.

### IMPLEMENTATION RESPONSIBILITIES

The designated maintenance superintendent and the manager in charge of substation asset and maintenance planning are responsible for approving, revising, and distributing this utility procedure.

Employees involved with asset and maintenance planning and the maintenance and construction of substation facilities and equipment must review, understand, and follow these procedures.

Substation maintenance superintendents are responsible for managing the SAP/WMS processes in their areas.

Substation maintenance supervisors are responsible for managing the SAP/WMS process in their headquarters (HQs).

Additional roles and responsibilities, by classification, are described in [Section 2, "Roles and Responsibilities by Classification,"](#) on Page 2.

### GOVERNING DOCUMENT

[Utility Standard TD-3320S, "Substation General Work Procedures"](#)

### COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT

[CAISO Transmission Maintenance Procedures \(Filed Maintenance Practices\)](#)

[NERC PRC-005, "Transmission and Generation Protection System Maintenance and Testing"](#)

[WECC Standard PRC-STD-005, "Transmission Maintenance"](#)



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### COMPLIANCE REQUIREMENT / REGULATORY COMMITMENT (continued)

#### Records and Information Management:

The document owner, or designee, ensures any records generated by this procedure are maintained in accordance with the Enterprise Records and Information (ERIM) program policy, standards, and Enterprise Records Retention Schedule (ERRS). Refer to [GOV-7101S](#), [“Enterprise Records and Information Management,”](#) and related standards.

Management of records includes, but is not limited to:

- Integrity
- Storage
- Retention and Disposition
- Classification and Protection

### REFERENCE DOCUMENTS

#### Developmental References:

NA

#### Supplemental References:

[Code of Safe Practices](#)

[Job Aid TD-3320P-12-JA04, “Establishing and Setting ACC Limit Values”](#)

[Job Aid TD-3320P-12-JA05, “Establishing and Setting ACC Max Fault Duty in SA”](#)

[Job Aid TD-3320P-12-JA07, “Entering Fault Duty Data & Equipment Condition Codes in SAP”](#)

[Job Aid TD-3320P-12-JA08, “ACC Reviews and Controls”](#)

#### NOTE

The following job aids are only available to authorized users of the WM Job Aids SharePoint.

Job Aids:

- [BOA and Breaker Overhaul and Mechanism Service Assessment Recording](#)
- [Calling out Mech Service Order due to Failed Exercise](#)
- [Closing Orders Through ZORDER](#)
- [Creating Maintenance Plan](#)

## Substation SAP Work Management System (WMS) Process

### REFERENCE DOCUMENTS (continued)

#### Job Aids:

- [Creating Metal Clad Equipment Record](#)
- [Creating New Equipment Record](#)
- [Hard Copy Files](#)
- [Moving a Mobile](#)
- [Removing an Equipment Record](#)
- [Station Reads Entry](#)
- [Substation Records – HQ Scanning](#)
- [T180 Order Deferral Process](#)

#### [New Equipment Form](#)

#### [2016 Substation Actg Handbook](#)

#### [Substation Maintenance and Construction Manual \(SM&C\)](#)

#### [Utility Standard TD-3322S, “Substation Equipment Maintenance Requirements”](#)

#### [Utility Standard SAFE-1001S, “PG&E Injury & Illness Prevention Plan \(IIPP\)”](#)

### APPENDICES

NA

### ATTACHMENTS

#### [Attachment 1, TD-3320P-12-F01, “Corrective Work Form–Electric Substation”](#)

#### [Attachment 2, “Mobile Maintenance Plans”](#)

#### [Attachment 4, “Substation Maintenance Plans”](#)

#### [Attachment 5, “Substation and Protection New Equipment Form and Asset Registry Records Process”](#)

#### [Attachment 6, “Substation Equipment Maintenance Process”](#)

#### [Attachment 12, “Documentation Requirements for NERC/WECC Substation Maintenance”](#)

#### NOTE

Attachments 3, 7, 8, 9, 10, 11, and 13 have been obsoleted or superseded.

## Substation SAP Work Management System (WMS) Process

### DOCUMENT REVISION

This utility procedure cancels and supersedes Utility Procedure TD-3320P-12, "Substation SAP Work Management System (WMS) Process," Rev. 5, dated 12/20/2019.

### DOCUMENT APPROVER

██████████ Superintendent

### DOCUMENT OWNER

██████████ Superintendent

### DOCUMENT CONTACT

██████████ Supervisor

### REVISION NOTES

| Where?  | What Changed?  |
|---|--|
| Rev 0: Entire document  | Re-issued to comply with GDI template and process.<br>Revised the Dec. 2009 version to update Attachments 1 and 5, add Attachments 7 and 8, and incorporate IB0274 rev 2 and its attachments, dated 3/17/11.<br>The Dec. 2009 version had a few discrepancies in terminology that required correction, the SAP priority codes have been updated, and the equipment record requirements and processes have been further refined and improved. |
| Rev 1: Section 5  | Removed density codes for distribution-class equipment; updated Attachment 4 to align with breaker maintenance practice changes in TD-3322B-010.   |
| Rev 2: Section 7, "Definitions," and Attachment 7             | Clarified out-of-compliance regarding Basic Finish Date and calendar year; updated Attachment 7 to include Battery Resistance Testing form F09 from January 2019 update of SMCM Substation Batteries booklet.  |
| Rev 3: Sections 7, 9, and 21, and Attachments 2, 4, 9, and 10 | Removed Out-of-Compliance, corrected mailbox, incorporated trending report from TD-3322B-003, added "as-found" equipment steps, and added Attachments 12 and 13.   |
| Rev 4:  | Made major content changes throughout the document. Read the procedure in its entirety.  |
| Rev 5: Entire document  | Document split in two; one for Test and one for Substation. Reorganized Substation document based on Roles and Responsibilities by Classification. Removed detail and referenced job aids.<br>Revision of Attachments are as follows:  |

## Substation SAP Work Management System (WMS) Process

| Where? | What Changed?  |
|--------|--|
|        | <p>Attachments 1, 5, and 12 – Unchanged.</p> <p>Attachments 2, 4, 6 – Updated.</p> <p>Attachment 3 – Superseded. Part of LC Notification Form now.</p> <p>Attachment 7 – Obsolete. Out of date and not necessary as it is only consolidated from the appropriate equipment sections of the SM&amp;C Manual.</p> <p>Attachments 8, 9, 10 and 11 – Removed. Not applicable to Substation; will be part of Test document.</p> <p>Attachment 13 – Obsolete. Does not follow current process used.</p> <p>Revision to Bulletins are as follows:</p> <p>TD-3320B-003, TD-3320B-004 and TD-3320B-012 – Eliminate. Instructions incorporated into revision of TD-3320P-12.</p> <p>Revisions to Job Aids are as follows:</p> <p>JA01 – Obsolete. Does not follow current process.</p> <p>JA02 and JA03 – Unchanged.</p> |
| Rev 6: | <p>Added Step 8 to Section 2.1.</p> <p>Updated Section 2.2.d.</p> <p>Added reference to Job Aid TD-3320P-12-JA04.</p> <p>Note: All updates are related to the ACC process.</p>   |