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1.0 PURPOSE AND SCOPE
(7.1.2, 7.1.3, 7.1.4)

This procedure describes the processes by which Tank Operations Contractor (TOC) owned equipment is identified and equipment data is maintained within SmartPlant® Foundation (SPF). SPF serves as the Master Equipment List (MEL) for the TOC in accordance with TFC-PLN-29 and the Safety Equipment Compliance Database (SECD) in accordance with TFC-ENG-FACSUP-C-24.

This procedure also defines the requirements for creating Equipment Identification Numbers (EIN) (see Section 4.1).

The processes described in this procedure are also initiated by any activity that would add to, delete from, or change equipment data contained in SPF.

SPF uses the term “Tag” to describe equipment. The terms Equipment, Component, Tag, and SSC (Structure, System, and Component) are used interchangeably in this procedure to describe equipment.

Note. This is not a stand-alone procedure. For Safety SSCs, this procedure must be used in conjunction with TFC-ENG-FACSUP-C-24.

2.0 IMPLEMENTATION

This procedure is effective on the date shown in the header.

Revision G of this procedure is a major revision to accompany the implementation of the SECD in SPF. This revision also separates the steps required for managing the fields associated with demonstrating compliance for safety equipment into a separate dedicated procedure. TFC-ENG-FACSUP-C-24. TFC-ENG-FACSUP-C-24 discusses the phased implementation for the SECD in SPF and must be read in conjunction with this procedure when managing data associated with safety equipment.

It is recognized that the Master Equipment List (MEL) contains many items of legacy equipment for which all desired data or relationships may not have been populated in historic databases. Therefore, it is not expected that all data fields/relationships discussed in Section 4.3 for legacy equipment will be fully populated at the time of release of this procedure. Efforts are in process to supplement the information and relationships in SPF over time, such as by reviewing essential drawings and identifying related equipment EINs, systems, and buildings. Due to the large number of items of equipment in the MEL (almost 100,000), it is anticipated to take several years to complete this data improvement effort. Data supporting safety equipment is substantially stronger than for general service equipment with fields and relationships required for demonstrating compliance for “Active” safety equipment requiring review/approval by the Design Authority prior to activation as discussed in TFC-ENG-FACSUP-C-24.

3.0 RESPONSIBILITIES

3.1 Engineering

The Chief Engineer or delegate assigns SSC determination responsibilities to the Design Authorities (DAs).
3.1.1 Engineering Manager

The Engineering Manager or delegate:

- Assigns DAs to TOC-owned SSCs
- Identifies Support Engineers to be granted access to SPF for equipment data input/modification and provides those names to SPF Administration

3.1.2 Design Authority (DA)

- Inputs and maintains equipment information in SPF as directed and assigned. Data input activities may be delegated to individuals who have the appropriate access permissions; however, the DA retains responsibility for the input.
- Approves Safety Equipment compliance data in accordance with TFC-ENG-FACSUP-C-24.

3.1.3 Support Engineer

Inputs and maintains equipment information in SPF as directed and assigned. Data input activities may be delegated to individuals who have the appropriate access permissions; however, the DA retains responsibility for the input.

3.2 SPF Administration

- Provides SPF training to personnel requiring access.
- Provides the SPF TOC Equipment Editor role to support engineers, enabling create/edit capabilities for equipment data.
- Provides TOC SECD Editor role to engineers maintaining safety significant equipment in accordance with TFC-ENG-FACSUP-C-24.
- Creates new equipment Tag Types in SPF that align with TFC-ENG-STD-12.
- Creates non-standard EINs when required.

4.0 PROCEDURE

Addition of new information and modification of existing data within SPF can be initiated by items such as, but not limited to, acquisition of new equipment, removal/inactivation of equipment, modification of existing equipment, newly obtained information pertaining to equipment performance and reliability, or modification of safety basis requirements. This includes the review, update, or discovery of incorrect information in SPF.

4.1 General Requirements for EINs

1. EINs are established in accordance with the formats provided in TFC-ENG-STD-12 and data is entered into SPF, for ALL equipment where one or more of the following conditions apply:
• Equipment is a component of a safety system (safety-significant SSC, defense-in-depth SSC)

• Equipment is vital to continued operation and mission accomplishment

• Equipment is required to satisfy environmental regulations

• Equipment requires periodic maintenance through the Preventive Maintenance (PM) module of the WMS (see TFC-OPS-MAINT-C-12)

• Equipment is uniquely identified in a drawing or technical document (e.g., Piping and Instrumentation Diagram [P&ID])

• Equipment is uniquely identified in an operating or maintenance procedure.

2. Certain items that are not important to continued operation and mission accomplishment (such as items that are intended solely for administrative facilities) do not need to be identified with an EIN and entered into SPF; likewise, software tags (i.e., non-physical components such as software signals or alarms that do not require maintenance or replacement parts) should not be entered into SPF.

4.2 Creating New EINs

(7.1.1) SPF is used to create new EINs and to collect equipment data. SPF creates EINs in accordance with the standard formats identified in TFC-ENG-STD-12. Occasionally, legacy components are identified in the field or on drawings that are not listed in SPF that have non-standard EINs and need to be added to the database. Non-standard EINs can be added by SPF Administration. After creation within SPF, an automated interface between SPF and the WMS will transfer the data from SPF to the equipment module of the WMS, once a minimum required amount of data has been identified for the EIN. Instructions for completing the equipment form entries in SPF that are discussed in the following sections are available on the SPF intranet web page under SPF Forms & Instructions using the SPF-TAGi form instructions.

The following are the procedural steps for adding new equipment data.

1. Collect information from the vendor or projects organization, as applicable, for the new equipment to be added to the TOC facilities.

   NOTE 1: Component types are generic and new types should not be generated to reflect a specific instance of equipment (e.g. for a panel or cabinet, use PNL - Panel, rather than creating a new acronym for a type of panel, say Pressure Alarm Panel. Use P-Pump for all pumps. Use V - Valve for all valves.)

   NOTE 2: If an appropriate component type (Tag type) is not available in SPF, request a new Tag type be added from SPF Administration. SPF Administration will review the request to ensure the requested Tag type is not a variation on an already existing type.

2. Using the Tag Type tree in SPF, identify the appropriate component type that most closely reflects the type of equipment.
NOTE 1: The creation of EINs and equipment data entry is a two-step process. The initial step to obtain the EIN is a simple process requiring minimal data entry to obtain the number. The specific data required to create each type of component and the format of the EIN is identified in TFC-ENG-STD-12. Following initial EIN creation, it is necessary to update the Tag with additional information as discussed in Section 4.3. Additional information is required for safety-significant equipment in accordance with TFC-ENG-FACSUP-C-24.

NOTE 2: SPF will assign a unique 3-digit sequence number for the component, except for PUREX Type Process Blanks and Chem Connector Process Blanks (See Step 4).

3. Create an EIN for the identified component(s) by selecting the appropriate Tag Type in SPF.
   a. Use “Create Tag…” method in SPF to open the create form.
   b. Provide a succinct and meaningful description of the component.
   c. Enter the required additional data to create the EIN number, typically Primary Building/Facility and Primary System.
      1. For 242-A or 222-S, identify the room that the equipment is located in.
      2. If the component is part of a skid or larger assembly, identify the Parent EIN (Assembly).
      3. If a specific sequence number is desired, use the “Start at number” field to specify the desired number. Otherwise SPF will select the next unique sequence number.
   d. Click “Finish” to create the EIN.

4. For PUREX Type Process Blanks and Chem Connector Process Blanks, use the table in Routing Board drawing, H-14-107346, Sheet,1 to track EINs for Blanks and Blank Status.
   a. As process blanks are installed or removed, update the table with new EINs, as applicable, and Blank Status (e.g. Installed/Removed”).
   b. Show the actual location where it is installed on the applicable sheet.

5. Proceed to Section 4.3 to provide additional equipment data.
4.3 Adding Additional Equipment Data in SPF

It is essential to maintain as much information as possible regarding installed equipment to support future operations, maintenance, modification, and replacement. Completion of Section 4.2 above to obtain an EIN number is not in itself sufficient to provide adequate information on a component. The icon for equipment in SPF will be colored red if only the minimum data in Section 4.2 has been entered. Equipment (Tags) cannot be exported to the WMS or have PMIDs created until additional data is entered as discussed below. Engineers should strive to capture as much information as possible when components are initially procured and the information is readily available. The steps below should be read in conjunction with the SPF-TAGi form instructions discussed previously. Additional information is required for safety-significant components as discussed in TFC-ENG-FACSUP-C-24.

Support Engineer/Design Authority

1. Use the “Edit Tag…” method to access the equipment update form to enter additional data.

2. Enter at least the minimum required data identified on the SPF-TAGi instructions, which includes:
   - Technical Baseline? (Yes/No) – most equipment is “Yes”
   - Design Authority Designator
   - Status (Operational/Out of Service/Project)
   - Asset Class (Equipment/M&TE/Meter)
   - Department (POPS/LAD/PROJ/RC etc.).

   The update form will not save unless the above fields are populated. Completing these fields will remove the red color from the icon and allow the equipment to be exported to WMS and allow PMIDs to be created, but is not sufficient for future tracking.

   Once the minimum data is entered, the update form will save. The Support Engineer/Design Authority may then repeat the update process as many times as necessary to capture necessary data, including the information in the following steps.

3. Complete the “Safety Classification” form section in SPF. Identify the system safety classification for the parent system that includes the identified component(s) as documented in the applicable DSA. If the system is classified as safety-significant:
   a. Identify the DSA Safety SSC ID, which is the applicable section of Chapter 4 of the DSA that addresses the identified component, from the drop down list in SPF.
   b. Follow instructions in TFC-ENG-FACSUP-C-24 and SPF-TAGi to identify additional information required for safety equipment.
4. Use the “Safety Equipment Compliance” form section to display information related to the compliance status of safety equipment (see TFC-ENG-FACSUP-C-24). The form section contains the following fields:

   - Safety Compliance Status (Read-only)
   - End of Service Life/Expiration Date (see step 5 below)
   - Next TSR Surveillance Due Date.

5. If the equipment is safety significant and has a defined service life (e.g., Hose-in-Hose Transfer Lines), identify the “End of Service Life/Expiration Date” in the “Safety Equipment Compliance” form section.

6. Complete additional information in the “Component Details” form section as it becomes available including:

   - MEL Validated:
   - Discontinued:
   - Manufacturer/Make:
   - Model Number:
   - For Hose-in-Hose Transfer Lines, and any other equipment that is tracked in this manner, identify the serial number of the component.
   - Spare Parts Catalog ID provided from Asset Suite.

7. If the equipment is located in a Hazardous Area Classified Location (see TFC-ENG-STD-45), complete the Hazardous Area Classification Details form section as identified in the SPF-TAGi instructions including:

   - Equipment Status (Active/Inactive)
   - Hazardous Area Classification
   - Comments/Basis.

8. Complete additional information in the “Additional Details” form section (See SPF-TAGi instructions) as available including:

   - Description (Key Words)
   - Description (Location)
   - Size (HP, KW, Dimensions etc.)
   - Additional Information
9. In the “Label Details” form section, provide information necessary to produce a component label to be used in the field in accordance with TFC-ENG-STD-12. SPF interfaces with the Laser Engraver used to produce on-site labels. See also SPF-TAGi instructions for additional details. Information to be provided includes:

- Code (indicates the size of label to be used)
- Number of Sides
- Title (This is the first line of the label and has character restrictions in accordance with TFC-ENG-STD-12)
- Sub Title (This is the second line of the label in accordance with STD-12)
- Label Bar Code (a bar code is automatically generated by SPF in accordance with STD-12).

10. Provide information as available in the “Vendor and Purchase Order Details” form section to reference to procurement information for the component. Available fields include:

- Vendor
- Vendor Phone Number
- VIN (Vendor Identification Number)
- Purchase Order No.
- Purchase Order Date
- Date Acquired
- Date Installed.

11. Complete the “Work Log Details” form section to provide information to WMS indicating that the component is newly added, modified, discontinued, or to provide additional feedback regarding an update. This form section is required for each update to the component. The required fields are:

- Work Log Type
- Work Log Entry.
NOTE: In addition to the form fields in the main body of the SPF Tag form discussed above, there are a number of “Relationship Maintenance (RM) Tabs” along the bottom of the form that are used to relate and display related information to the Tag. This relationship information can be critical to finding important documents and other information related to the Tag. The RM Tabs available are as follows:

- Project Number
- Drawings
- Documents
- Related PMIDs
- Safety Equipment Compliance
- Safety Compliance Log
- Attached Files.

12. If available, use the “Project Number” Tab to identify the project number that installed the equipment.

13. Use the “Drawings” tab to identify important drawings related to the component including P&IDs, Electrical One Lines, Panel Board Schedules, Fabrication details, hazardous area classification drawings, as applicable. At a minimum, the P&ID that the drawing appears on should be identified.

14. Use the “Documents” tab to identify important documents related to the component such as specifications, commercial grade dedication documents, vendor submittals, or hazardous area classification documents.

15. Use Related PMIDs as a read-only tab that displays any PMID for which the component is the “Header EIN.”
   a. If required, ensure that a PMID has been established for the component in accordance with TFC-OPS-MAINT-C-12.

16. Use the “Safety Equipment Compliance” Tab to display safety requirements (critical characteristics), their source (basis) documents, and provide reference to documents that provide evidence of how the requirements have been demonstrated to be satisfied. Requirements and “How Met” Documents may also be identified from this Tab. See TFC-ENG-FACSUP-C-24 for additional details.

17. Use the “Safety Compliance Log” tab as a read-only tab that displays a log of safety compliance actions (e.g., activations/inactivations) and their basis.

18. Use the “Attached Files” tab to attach files to the Tag object. These files may be photographs of the equipment and or labels, vendor cut sheets, etc.
4.4 Requesting the Addition of New Equipment Tag Types for Selection in SPF

This section describes the process for Engineers to request the addition of new equipment Tag Types for selection in SPF.

Support Engineer

1. Determine the need for a new equipment Tag Type in SPF; ensure the desired Tag Type does not already exist and there is no acceptable alternative Tag Type per TFC-ENG-STD-12.

2. Email SPF Administration, requesting the new Tag Type be added to SPF for selection.

SPF Administration

3. Review the request and determine if the requested Tag Type addition is warranted.
   a. If an appropriate existing Tag Type exists, notify the requestor.
   b. If a new Tag Type is warranted:
      1) Create the Tag Type in SPF
      2) Notify requestor when the new Tag Type is available.
      3) Ensure any impacts to TFC-ENG-STD-12 get incorporated in accordance with TFC-BSM-AD-C-01.

5.0 DEFINITIONS

Component. An assembly of parts.

Item. A general term that can refer to a subsystem, a component, a part, or material.

Maintenance. The proactive and reactive day-to-day work that is required to maintain and preserve facilities and SSCs within them in a condition suitable for performing their designated purpose, and includes planned or unplanned periodic, preventive, predictive, seasonal or corrective (repair) maintenance.

Part. Indivisible items used to assemble a component. Parts include resistors, capacitors, wires, lubricants, O-rings, springs, gaskets, and fasteners.

Subsystem. An assembly of components and parts designed to work together for a specific purpose or function.

Work Management System (WMS). Software system used to manage preventive maintenance activities and process work orders.

6.0 RECORDS

There are no records generated during the performance of this procedure.
7.0 SOURCES

7.1 Requirements

1. TFC-ESHQ-Q_ADM-C-01, “Graded Quality Assurance.”
2. TFC-PLN-02, “Quality Assurance Program Description.”

7.2 References

1. TFC-BSM-AD-C-01, “Administrative Document Development and Maintenance.”
2. TFC-ENG-FACSUP-C-24, “Safety Equipment Compliance Management.”
4. TFC-OPS-MAINT-C-12, “Preventive/Predictive Maintenance Administration.”