Work Clearance Management
Working with Work Permits

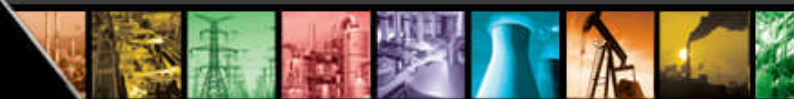### Enhancement Package 5 for SAP ERP 6.0

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SAP-CENTRIC EAM
Inspiring Individuals – Empowering Enterprises

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■ **Enhancement Package 5 for SAP ERP 6.0**

Not just any old enhancement package - we want to present the new functions that can help you fundamentally improve your processes.

This presentation will give you an overview of the new process "Working with Work Permits" initiated by the oil and gas industry.

Looking forward to finding out the latest news from development?

New Process
Work Permit Management

- By using work permits, you can make sure that safety measures for carrying out certain work are complied with, and safety barriers are not taken out of service unless compensating measures are put in place.

- The work permit is an operational safety barrier to protect against undesired incidents.

- A work permit is a written document that authorizes specified persons to carry out specified work at a specified time.

- It describes both the work to be carried out and the requirements, that must be fulfilled.

- Work permits are categorized in different levels, depending on risk considerations and the need for coordination.

- A work permit can be created for a WCM-relevant order or for one or more operations.

Example: The Oil & Gas Industry Distinguishes Between Two Levels of Work Permits

- **Work Permits of Level 1**

  Work permits of level 1 are used for work that involves high risks and hazards. This work requires a comprehensive safety and approval process. It includes hot work, work in an area with special entry restrictions, and so on.

  Level 1 work permits are usually valid for only one working shift. An extension of the work permit is only possible under certain conditions (for example, 4 hours). Afterwards, the work permit can no longer be extended. If the work is not yet completed at this point in time, a new work permit must be applied for.

- **Work Permits of Level 2**

  Work permits of level 2 are used for all work with lower risks/hazards. This work must also be completed within a predefined time period, although the time period is defined more generously (for example, 14 days).

Target State

By using work permits, the following points can be fulfilled:

- They provide guidelines as to which work requires a work permit.

- They ensure that the permission to carry out specific work is given in agreement with the persons responsible for the technical asset.

- They describe in detail the requirements to be fulfilled, including the risks that may arise from hazardous substances, electricity, and other energy forms.

- All persons have access to the all required information in the system.

- Coordination of simultaneous activities is possible.

- When the work permit is returned after completion of the work, this ensures the following:
  - The technical asset affected by the work is in a safe condition.
  - The technical asset can be commissioned again.
  - Cleaning and clearing up have taken place on site.

Prerequisites

- Work permit management presupposes the enhanced model.

- If you work with work permits, you must not activate WCM for the operation.

- If you work with work permits, you must not activate valuation.

- In Customizing for Work Clearance Management, you have defined the settings

Process Description
Repair to a Feedwater Pump System (1/4)

- The maintenance planner creates a maintenance order for a repair to a feedwater pump system.

- For the above maintenance order, the responsible skilled worker creates a level 1 work permit, which is to be valid <u>for the next day</u>. In the work permit, this skilled worker describes the work to be performed and the required safety measures ("requirements"). In our example process, a lockout/tagout is required (among other things), for which a WCD template is available as a copy model.

Note: All skilled workers are given training on working with work permits.

Process Description
Repair to a Feedwater Pump System (2/4)

- In the afternoon, a coordination meeting is held in which <u>all</u> work permits <u>for the next day</u> are checked, added to if necessary, and approved by the person responsible.

- At the end of the meeting, <u>all approved</u> work permits are printed out and placed ready for collection <u>for the next day</u>.

Note: The work permit cannot be activated until lockout/tagout has been performed and confirmed in the system.

- In the morning (of the next day) the printed work permits are collected by the skilled workers responsible.

- Together with the person responsible for the technical system <u>all</u> required safety measures are carried out, i.e. in particular, lockout/tagout is set.

- The person responsible for the technical system phones the control room to confirm the execution of all safety measures and requests activation of the work permit.

  Note: The responsible skilled worker can only start repairs on site with an active work permit.

Process Description
Repair to a Feedwater Pump System(4/4)

- As soon as the work permit has been activated in the control room, the responsible skilled worker can start with the repair work.

- Once the repair has been completed successfully, the responsible skilled worker returns the work permit.

  Note: A work permit can be extended if necessary (e.g. by 4 hours).

- <u>All</u> returned work permits are closed in the system.
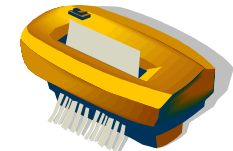
- The system automatically recognizes that lockout/tagout is no longer required. As a result, lockout/tagout on the site can be removed.
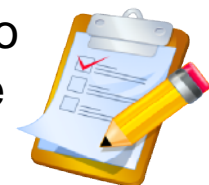
Detailed Process Description
Create Maintenance Order

(1)

(2) Order 845711 saved with notification 11012349

- The maintenance worker creates a maintenance order for the repair to a feedwater pump system (transaction IW31).

Detailed Process Description
Create Level 1 Work Permit

- For the above maintenance order, the responsible skilled worker creates a level 1 work permit that is to be valid <u>for the next day</u>.

- A level 1 work permit is typically intended for critical work and should therefore only be valid <u>for one shift</u> (i.e. 8 hours).

Detailed Process Description
Plan Level 1 Work Permit

Create WP - Level 1: Initial Screen

Data Transfer
- ☑ Short text
- ☑ Reference object
- ☑ Maintenance Planner Group
- ☑ Priority
- ☑ Work center
- ☑ Basic Date
- ☑ Scheduled
- ☑ Ref. object incl. installed equipment

(4)

Operational V&B Lists | Tech. Tools | Preparation

Identification
Application | Repair Feedwater Pump System 2 | 001

Validity
Status | CRTE | abc
Valid from | 03.04.2010 | 08:00:00 | Valid to | 03.04.2010 | 16:00:00

Asset Data | Responsibilities | Work Description | Requirements

Work (Level 1)
- ☐ Open Sea
- ☐ Hazardous Substances
- ☐ Radioactive Material
- ☐ Explosives
- ☑ Other Activities

Further Work (Level 1)
- ☐ Hot Work A
- ☑ Hot Work B
- ☐ Entry Confined Space
- ☑ Pressure Testing
- ☐ Lifting Operations

Work Order
Order | 845711 | Repair Feedwater Pump System 2
Status | WCM EXEC CRTD MANC NMAT

Work Description

(5)

- In the work permit, the skilled worker describes the work to be performed and the safety measures required here. In the example process, lockout/tagout is required.

- In Customizing, it is possible to specify that an additional approval is required for lockout/tagout.

Detailed Process Description
Create Operational V&B List
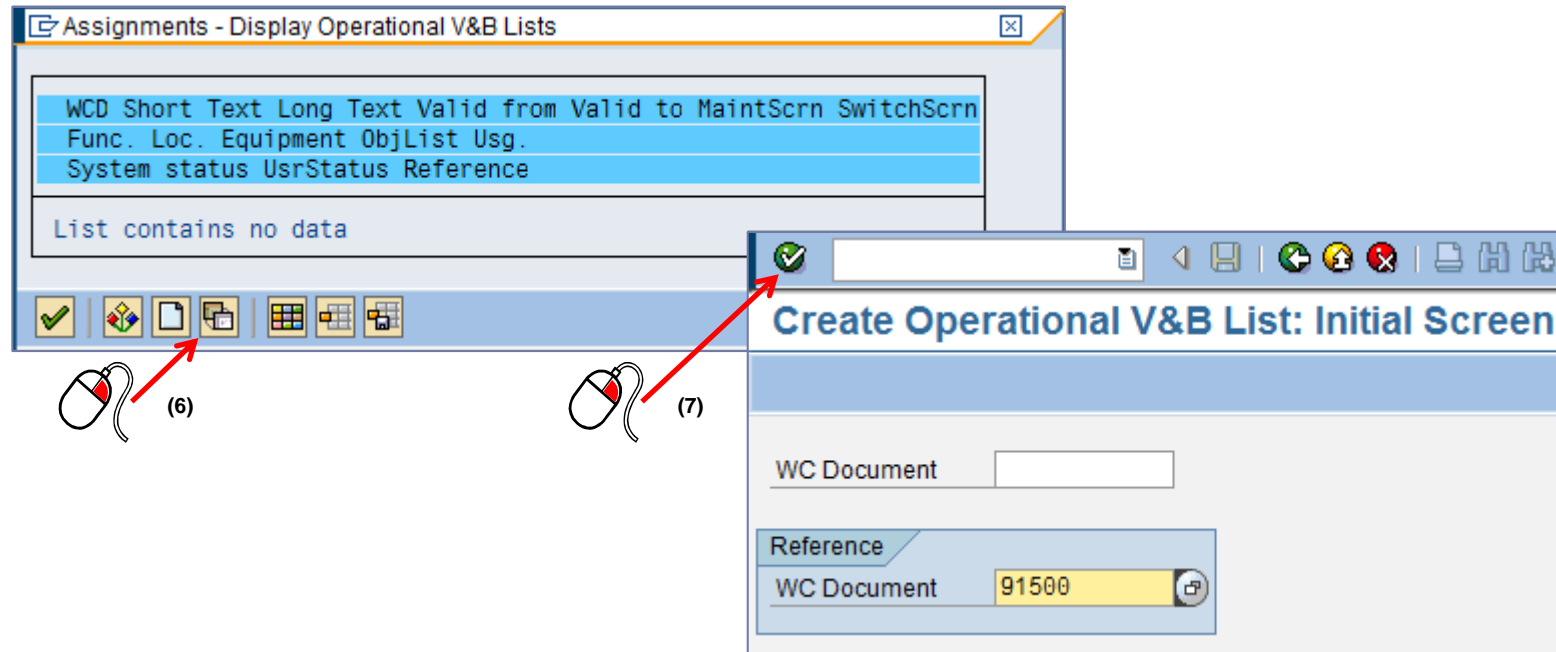
- A V&B List template is used as a copy model for lockout/tagout.

Detailed Process Description
Create Operational V&B List

- V&B List templates serve as the copy model for Operational V&B Lists. As a result, complex Operational V&B lists do not have to be created from scratch every time for complex system structures.

Detailed Process Description
Check and Approve Work Permits

- In the afternoon, a coordination meeting is held in which all work permits for the next day are checked, added to if necessary, and approved by the person responsible.

Detailed Process Description
Print Out Work Permits
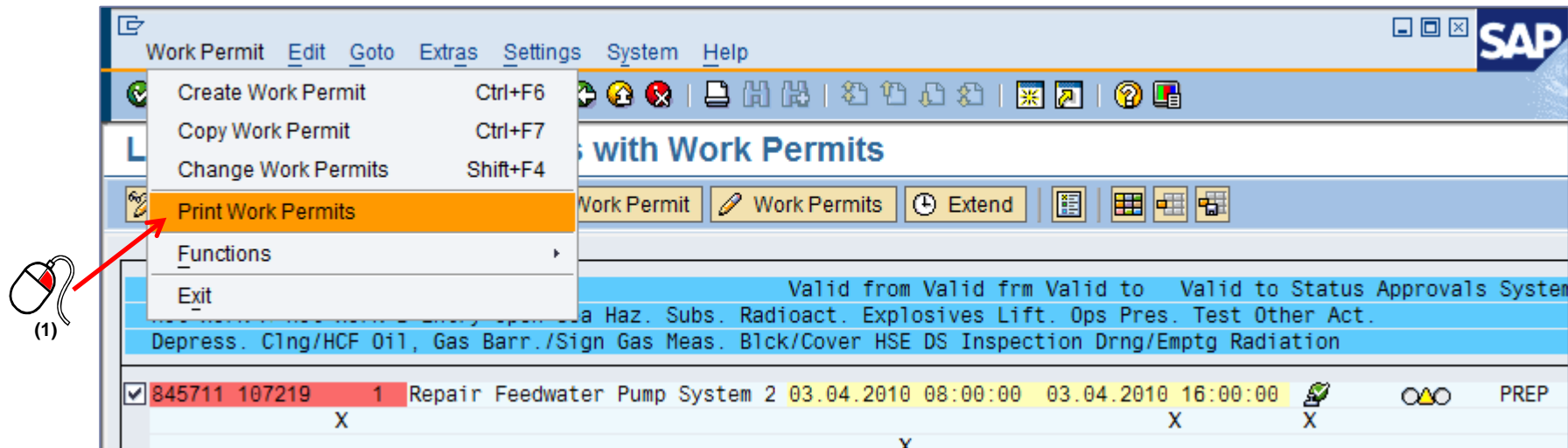
- At the end of the meeting, all approved work permits are printed out and placed ready for collection for the next day.

- The responsible skilled worker can**not** start repair work on site until an active work permit is available.
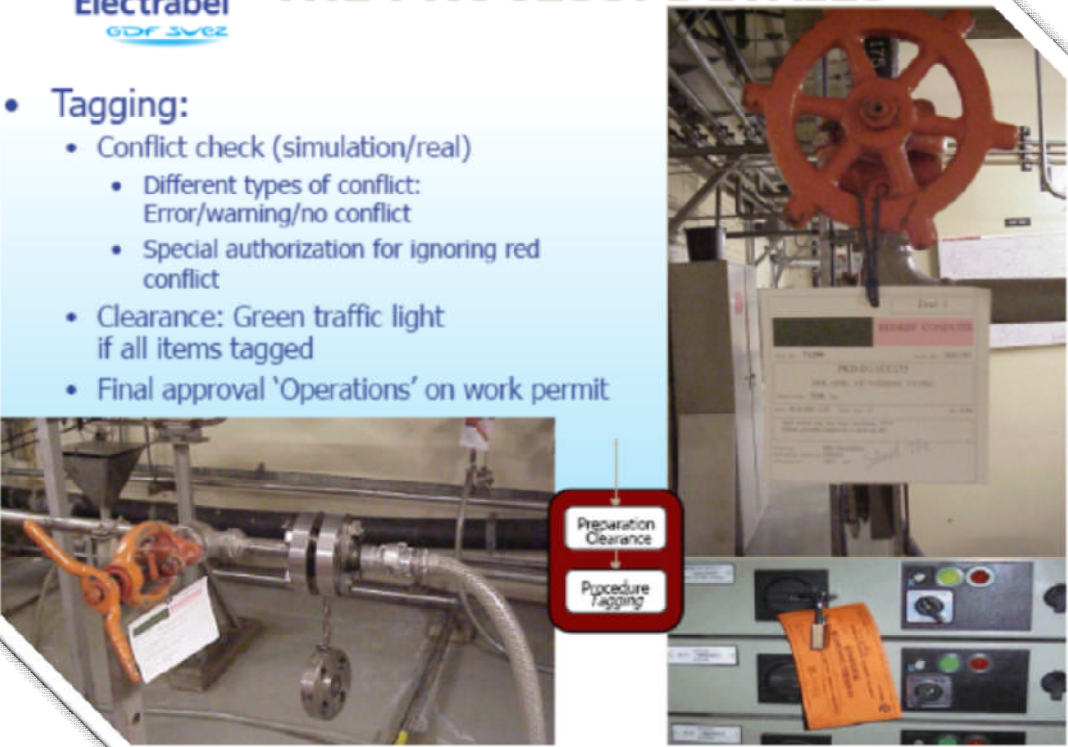
Detailed Process Description
Carry out Safety Measures on Site

- In the morning (of the next day) the printed work permits are collected by the skilled workers responsible.

- Together with the person responsible for the technical system, all safety measures are executed, i.e. in particular, lockout/tagout is set.

Detailed Process Description
Activate Work Permit

- Once all safety measures (include lockout/tagout) have been carried out, the person responsible for the technical system phones to request work permit activation.

Detailed Process Description
Carry out Repair

List Editing - Change Orders with Work Permits

- As soon as the work permit has been activated in the control room, the skilled worker responsible can start on the repair work.

- After successful completion of the repair work, the skilled worker responsible returns the work permit.

Detailed Process Description
Close Work Permits
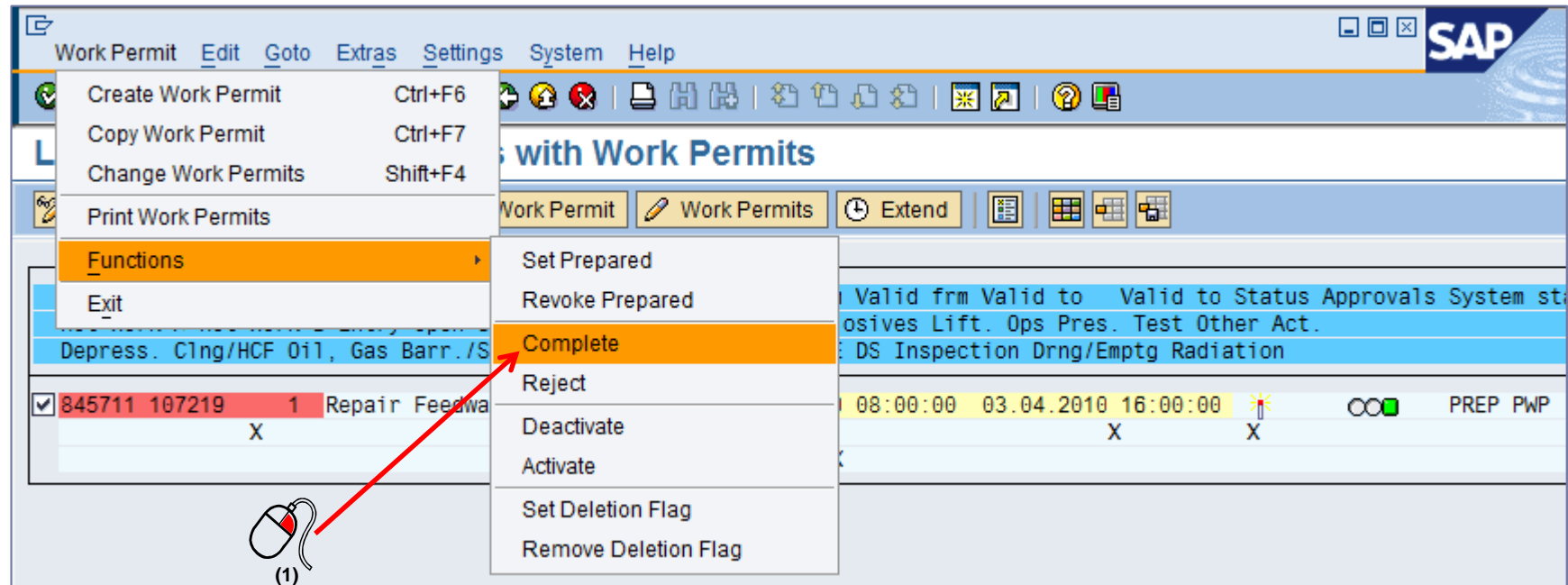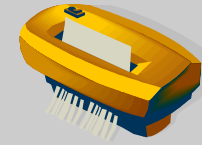
- All returned work permits are closed in the system.

Questions and Anwers

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