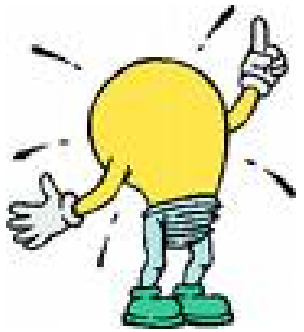
Order Processing with WCM Operations

Release ERP 6.0

WCM GmbH

September 2008



Motivation

Maintenance works in complex installations often require high level security measurements.

However, in a task list there are tasks that might require other or no safety measurements.

Thanks to the assignment of the safety measurements in form of permits this process can be shown.

Process Description (1)

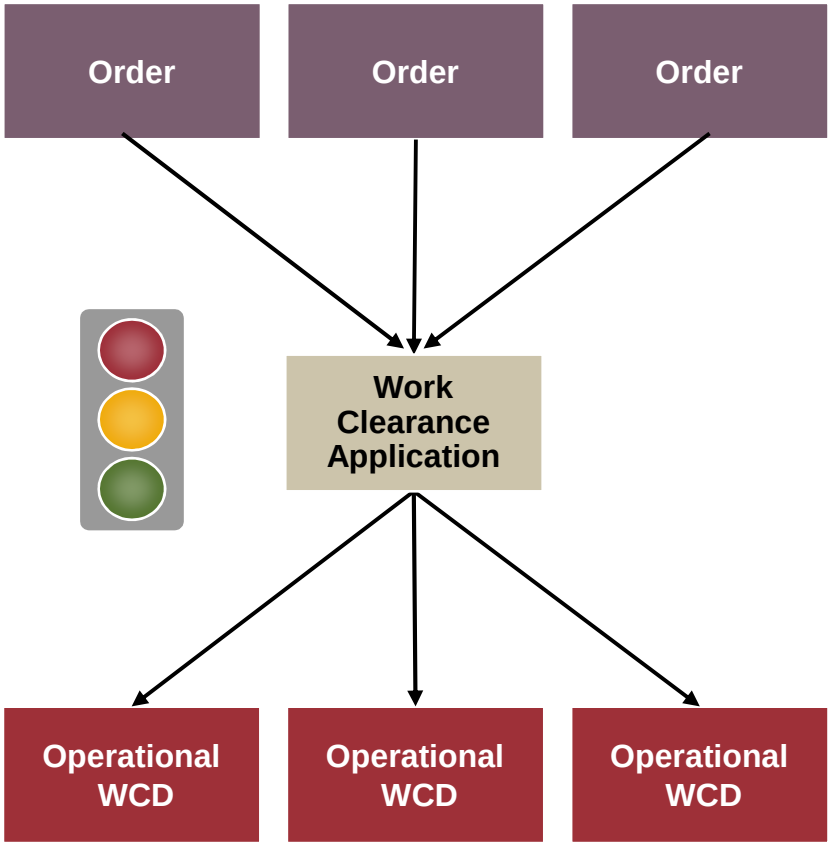
- There are maintenance measures at a pump station. A task list contains an operation for scaffolding. Measures for work safety are required. A lockout/tagout however is not necessary. All other operations require lockout/tagout.
- The person in charge for maintenance plans an order.
- On the basis of the respective technical object, the system realizes that additional safety measurements are necessary.
- Valuation is active.
- The maintenance planner decides that lockout/tagout is necessary.
- A task list will be assigned to the order. An operation contains a WCD template.
- The operations are combined in approval groups.
- The WCM objects are linked with the order.
- If an approval in the work clearance application is granted, the system checks which operation of the order can be carried out.

Process Description (2)

- With the confirmation that the lockout/tagout has been completed, all operations of this approval group can be issued “Released for execution“.
- When the work is finished, the status on the operation can be set „Work completed“.
- As soon as all work has been finished, the process of untagging can be started.

Model

We use the standard model for this process.

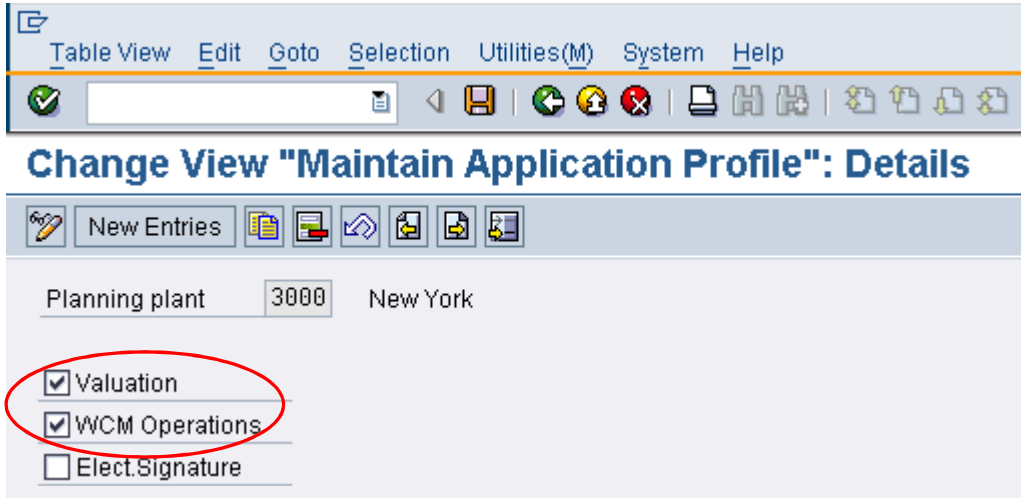


Roles

These user roles are involved in this process:

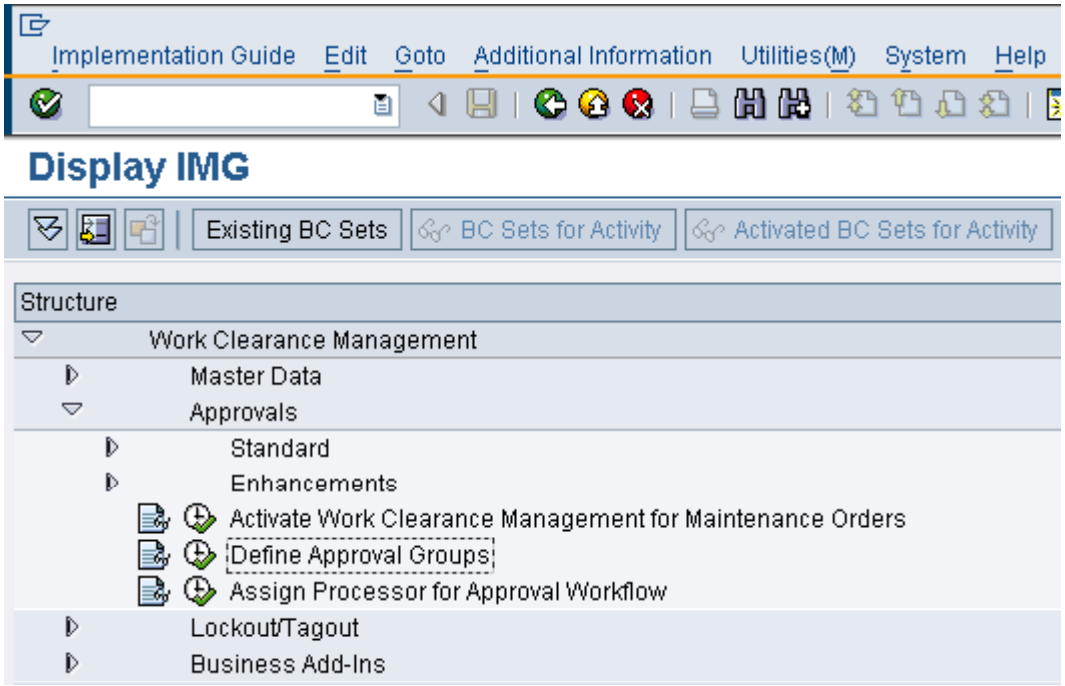
- Maintenance planner
- Safety planner
- Safety engineer
- Operation
- Maintenance

Detailed Process
Activate WCM on Operational Level



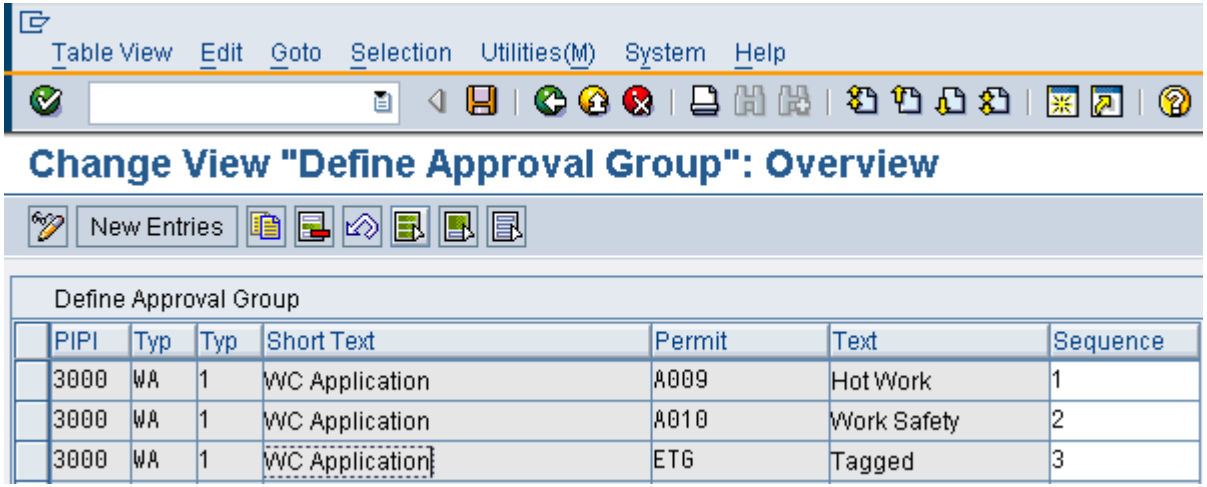
In the customizing in the application profile for the planning plant 3000 the processes for lockout/tagout and the valuation are activated.

Detailed Process
Assign Approval Groups



In the customizing the approval groups are assigned for the planning plant 3000.

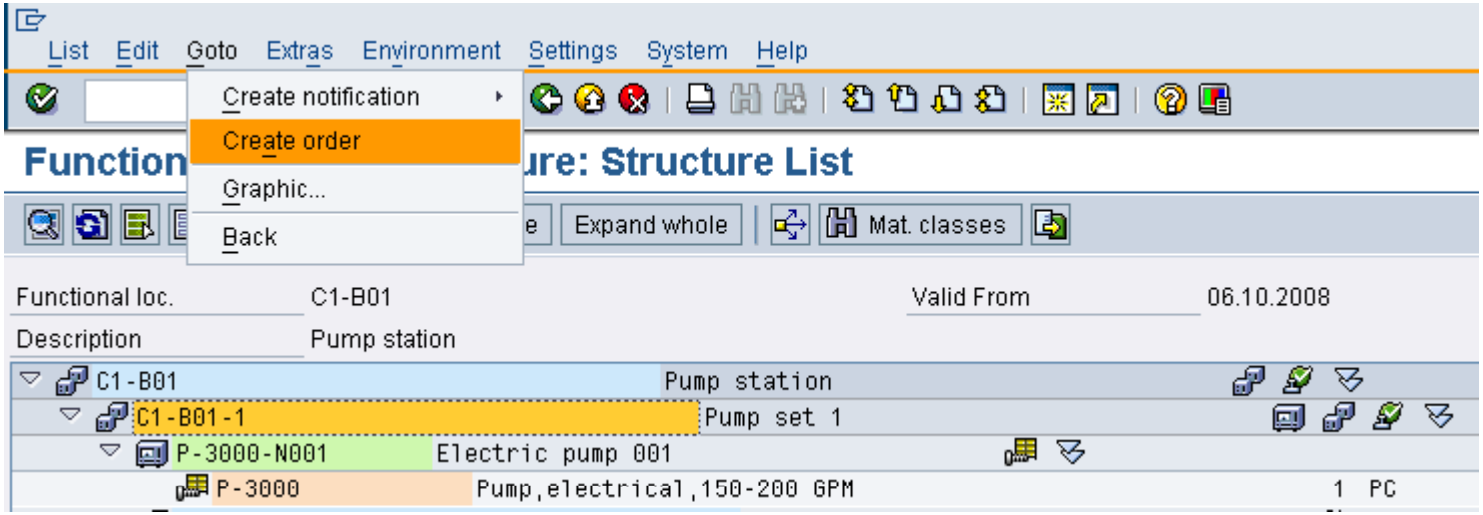
Detailed Process
Assign Approval Groups



PIPI	Typ	Typ	Short Text	Permit	Text	Sequence
3000	WA	1	WC Application	A009	Hot Work	1
3000	WA	1	WC Application	A010	Work Safety	2
3000	WA	1	WC Application	ETG	Tagged	3

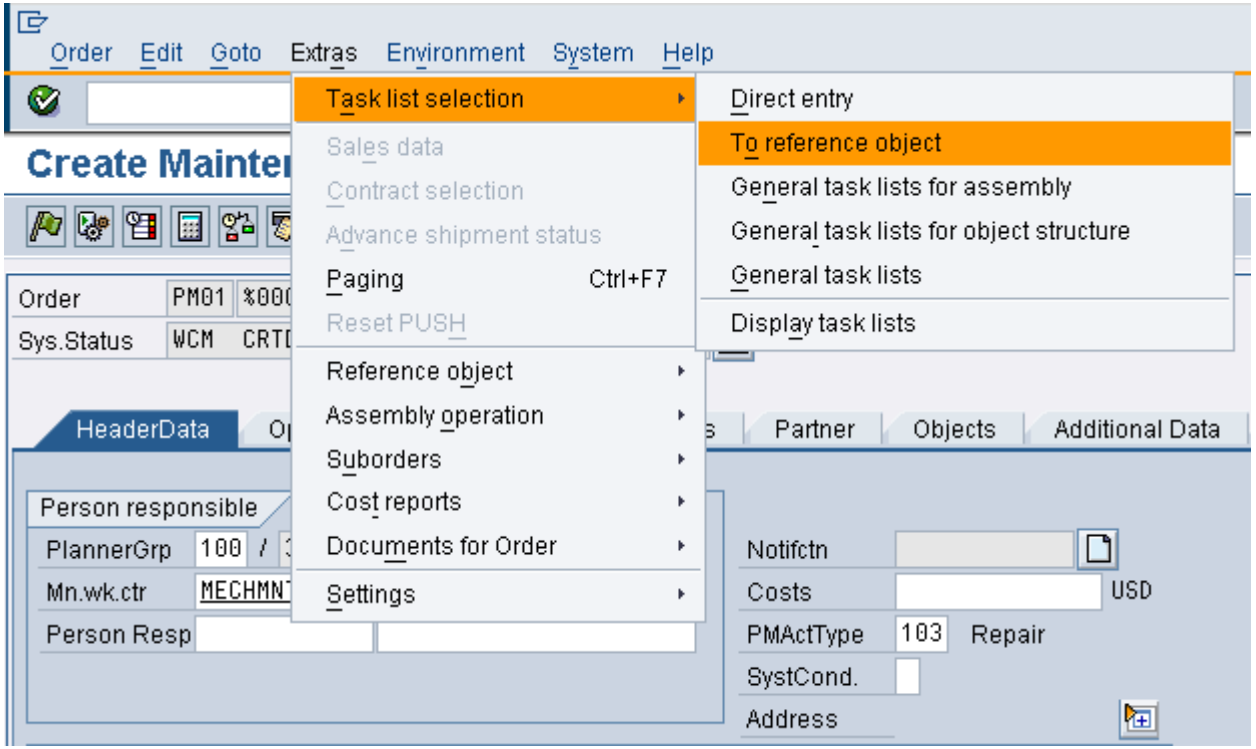
The permit A009 “Hot Work“, A010 “Work Safety“ and ETG “Tagged“ are assigned to the approval group in plant 3000.

Detailed Process
Create an Order from the Structure List



For the pump set 1 an order is created.

Detailed Process
Assign a Task List



A task list is assigned to the order. The task list was created for the pump set.

Detailed Process
Operation Overview

Order Edit Goto Extras Environment System Help

Create Maintenance Order : Operation Overview

Valuation | WCM Operations

Order: PM01 %00000000001 WCM Pump Set 1 C1-B01-1

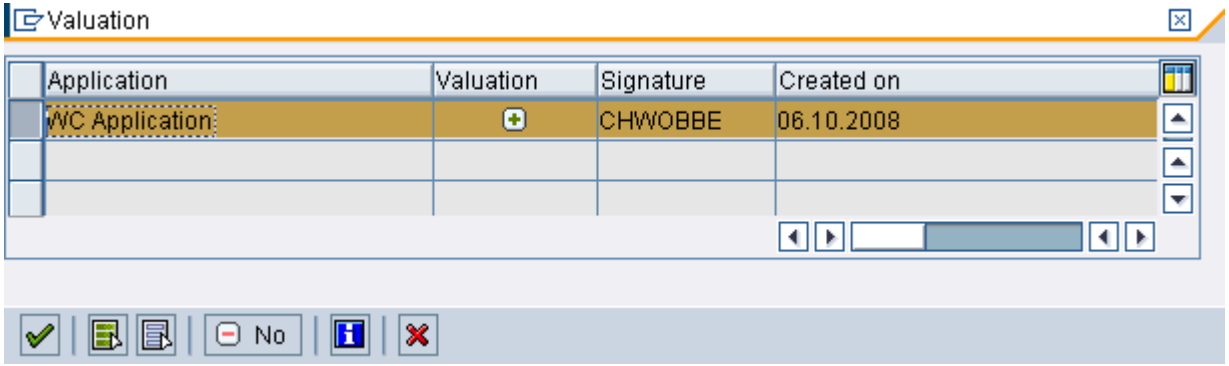
Sys.Status: WCM CRTD MANC NTUP

HeaderData | Operations | Components | Costs | Partner | Objects | Additional Data | Locatic

OpAc	SOp	Work ctr	Plant	Co...	StTextK	S...	Operation short text	LT	Work	Un	N...
0010		MECHMNT	3000	PM01			Scaffolding		3,0	HR	2
0020		MECHMNT	3000	WCM			Tagout process for Pump Station		1,0	HR	2
0030		MECHMNT	3000	PM01			Visual check Pump station		0,5	HR	1
0040		MECHMNT	3000	PM01			Check and replace spare parts		1,5	HR	1

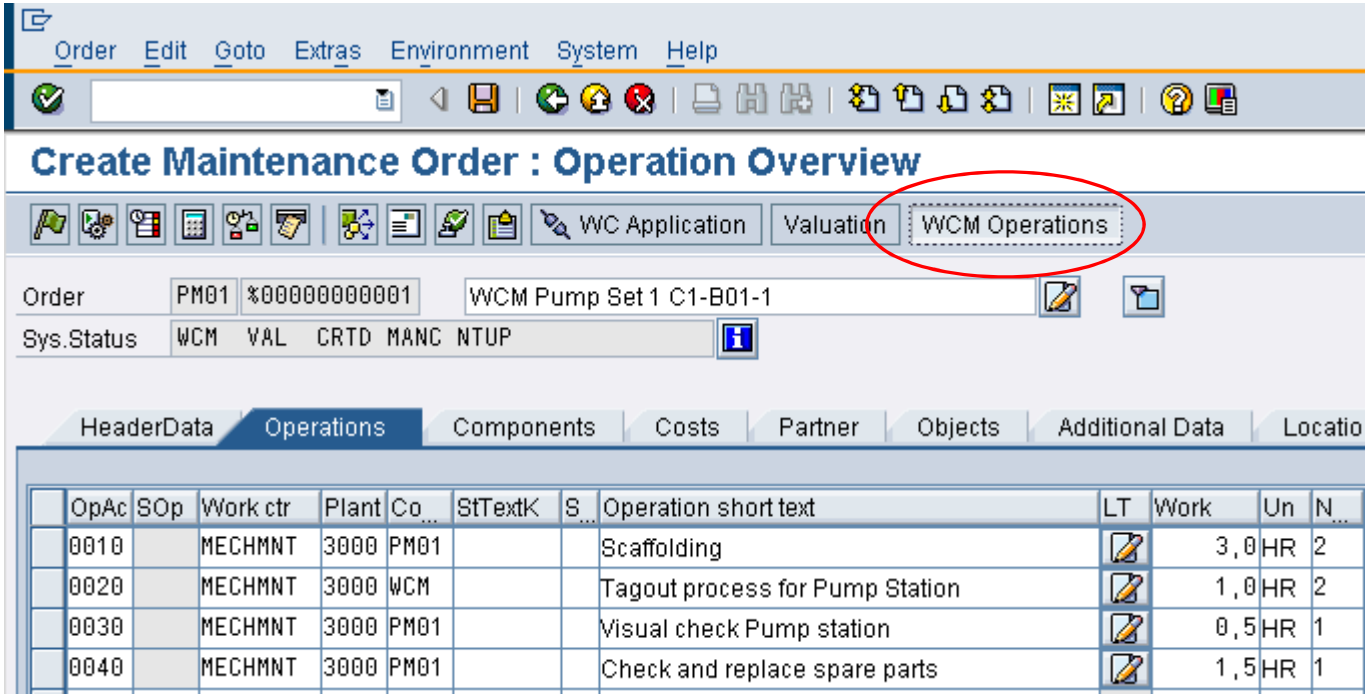
The task list contains 4 operations. For the scaffolding no lockout/tagout is necessary.

Detailed Process
Valuation – Lockout/Tagout Necessary



The safety planner decides that a lockout/tagout (Work Clearance Application) is necessary.

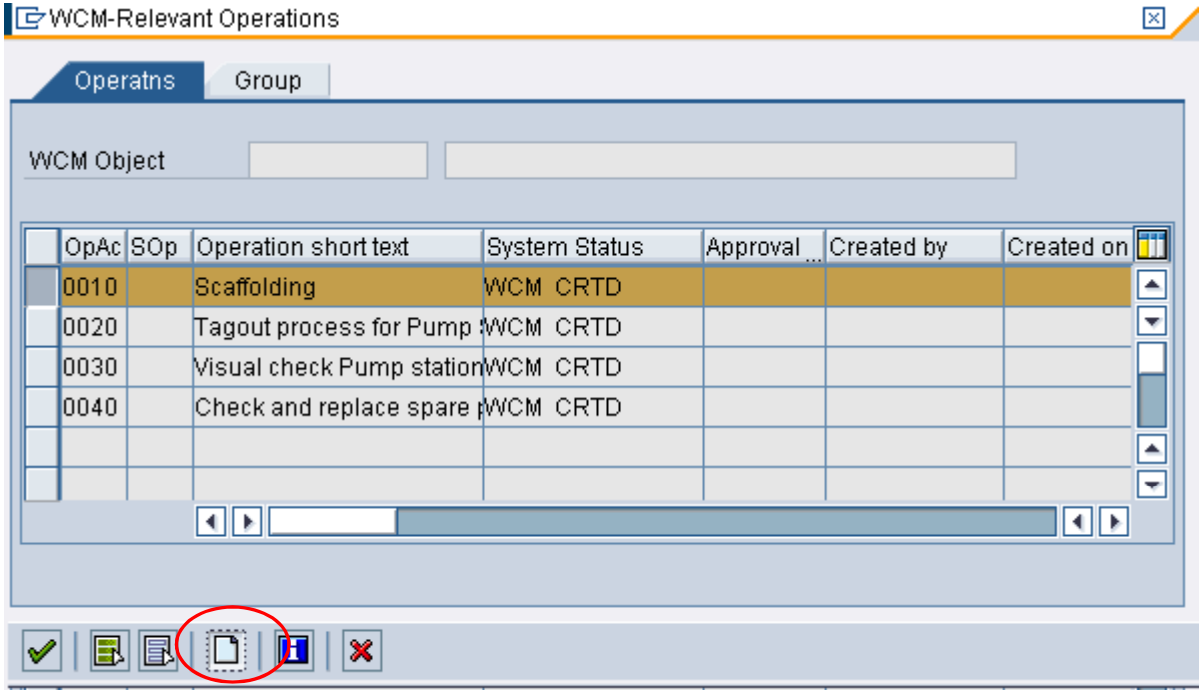
Detailed Process
Handle WCM Operations



The safety planner assigns the operations to the approval group. He pushes the button

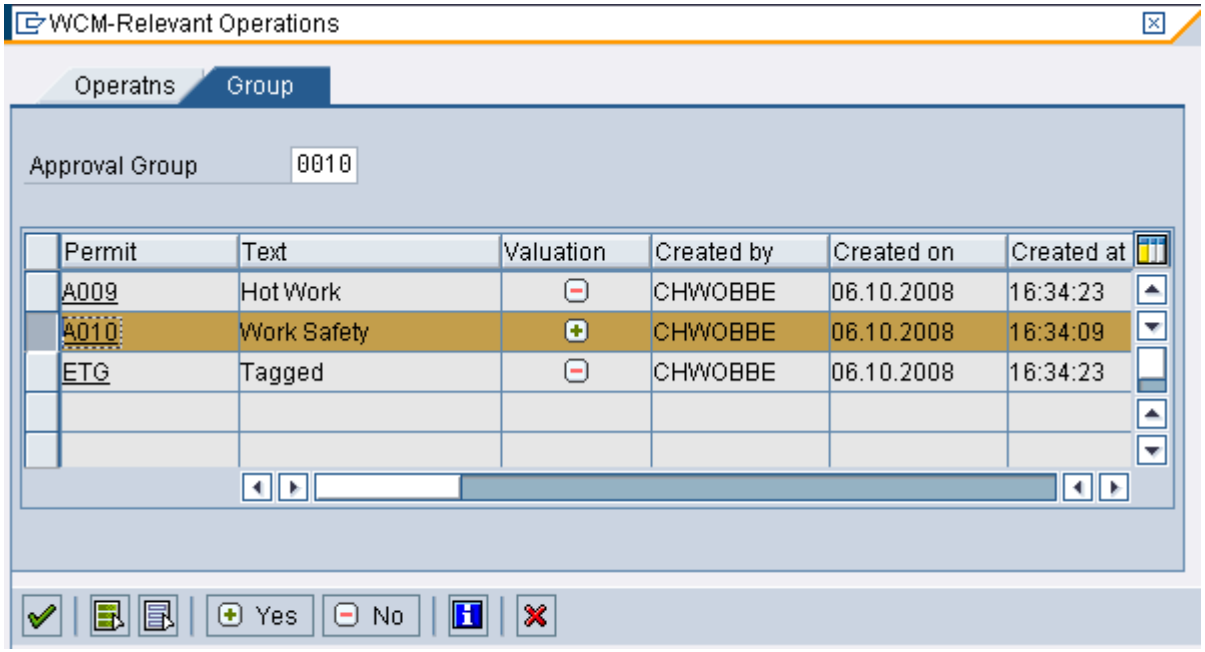
WCM Operations .

Detailed Process
WCM Operations



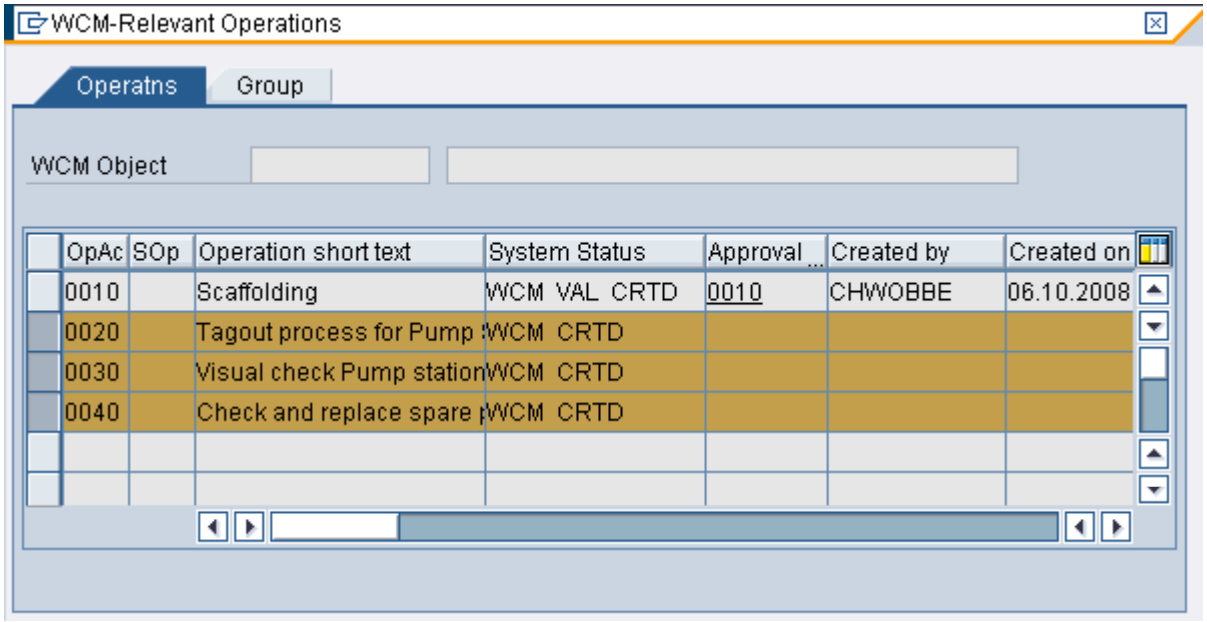
For the scaffolding only the “Work Safety” permit is necessary.

Detailed Process
WCM Operations



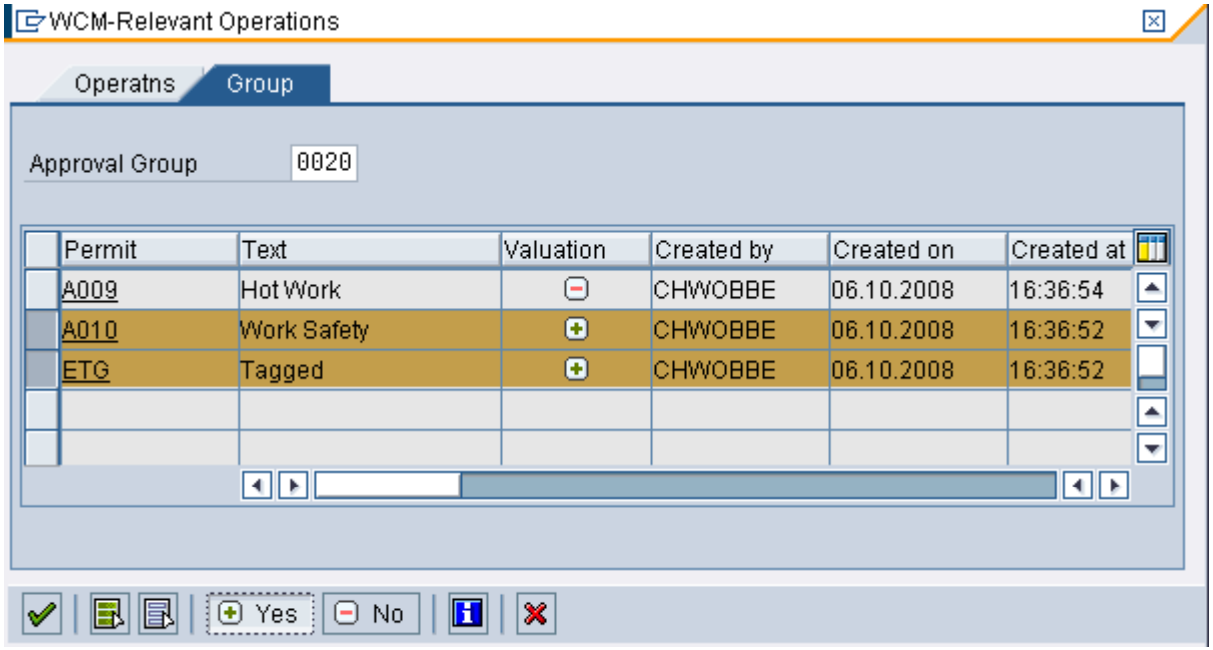
The safety planner creates an approval group. He defines that the permit A010 “Work Safety“ is required. For all other permits he defines that they are not required.

Detailed Process
WCM Operations



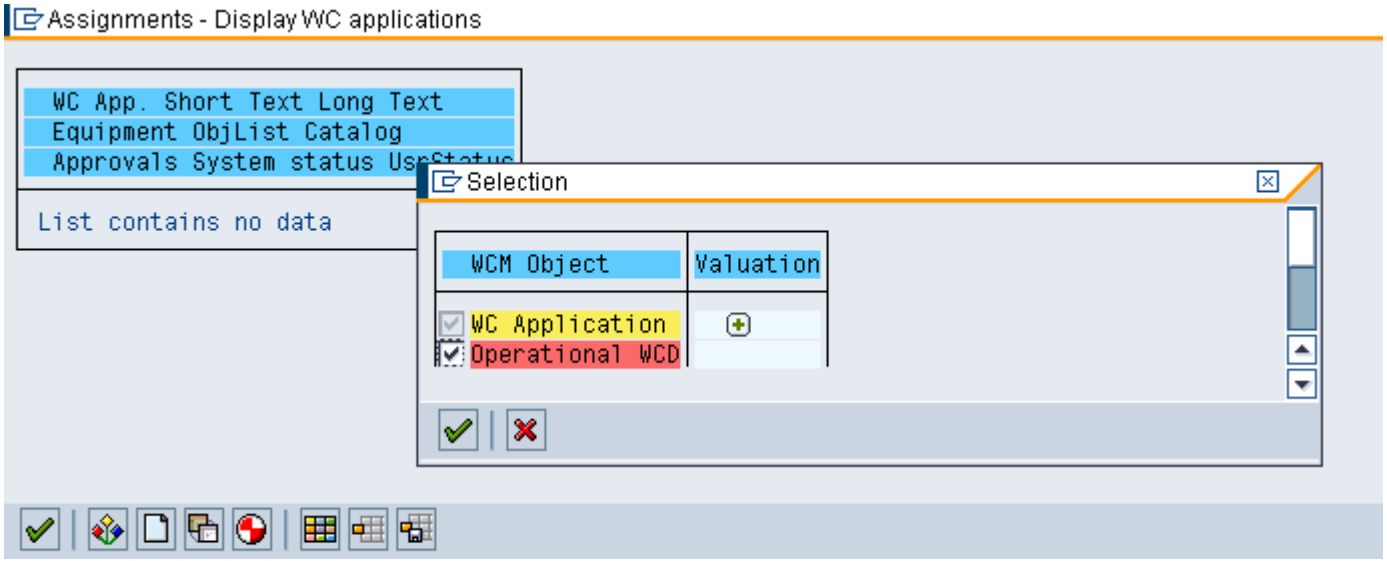
All other operations require the same permits and are therefore chosen all at once and assigned to an approval group.

Detailed Process
WCM Operations



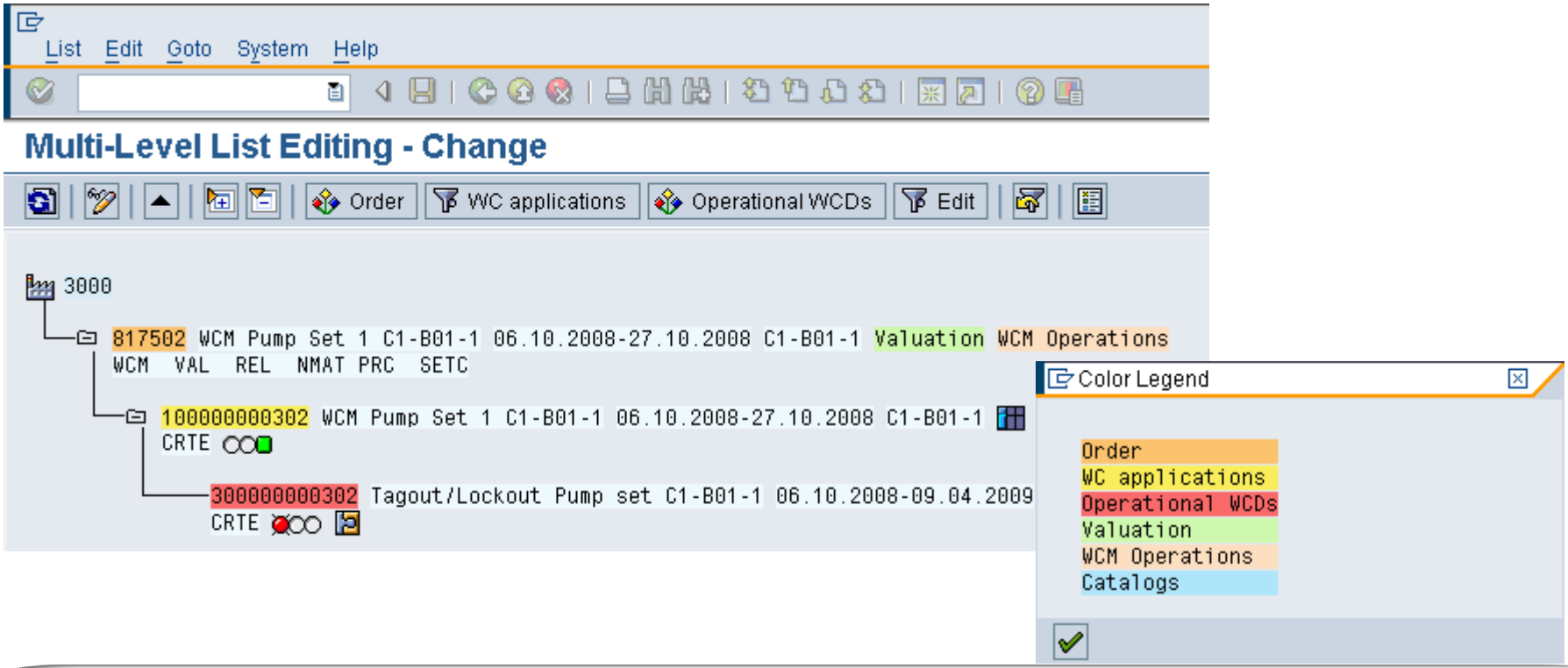
To these operations the permits “A010 - Work Safety“ and “ETG - Tagged“ are assigned.

Detailed Process
Generate WCM Objects Automatically



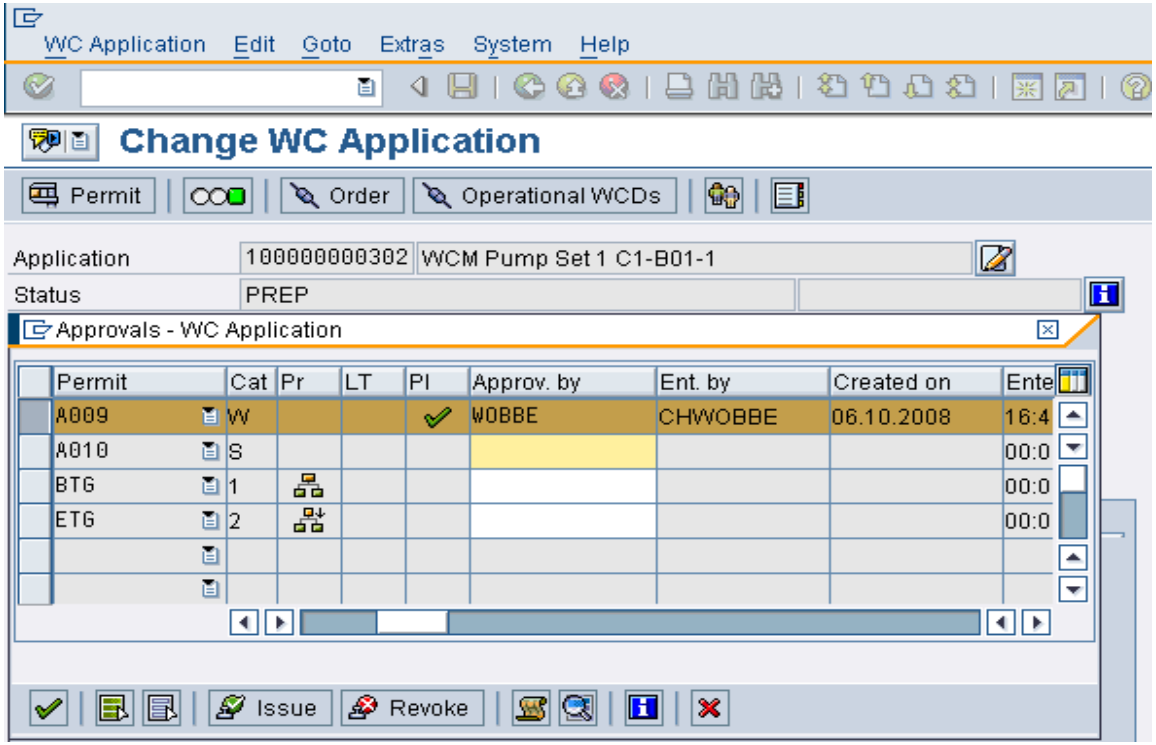
On the basis of the valuation, the maintenance planner will get the proposal for a Work Clearance Application and an Operational WCD. The icon starts the automatic creation of WCM objects.

Detailed Process
Overview of the Multilevel List



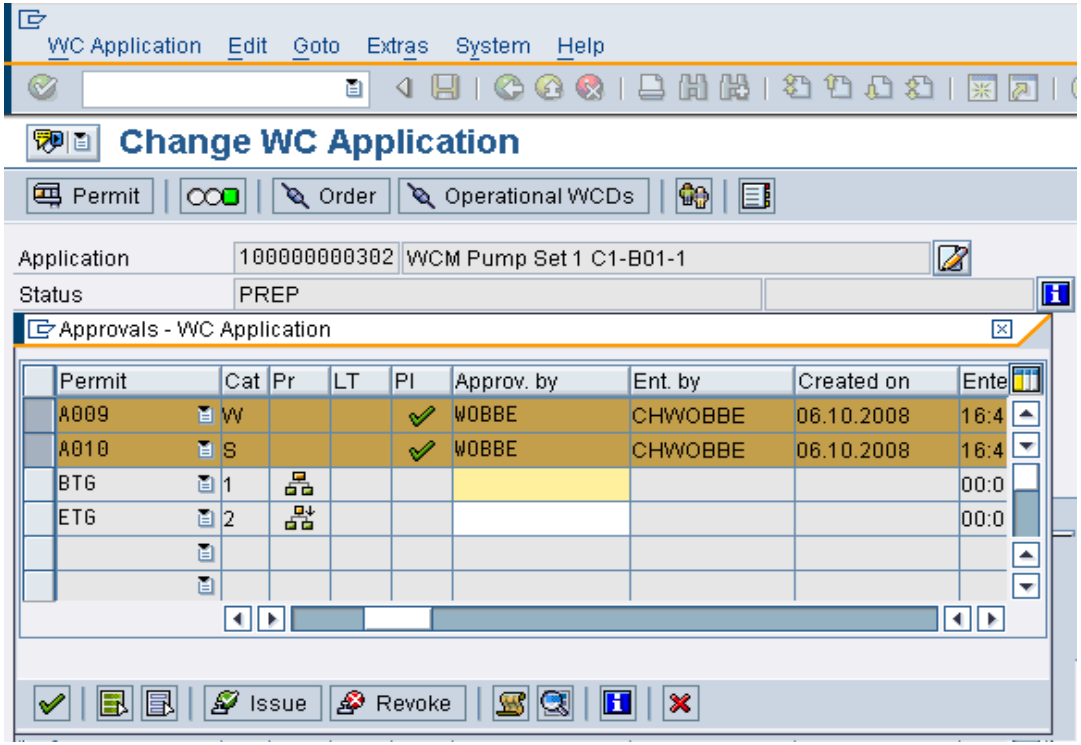
In the system the assignment of the Work Clearance Application and the Operational WCD is shown. The safety engineer checks the planned switchings and sets the status “prepared”.

Detailed Process
Grant Approvals



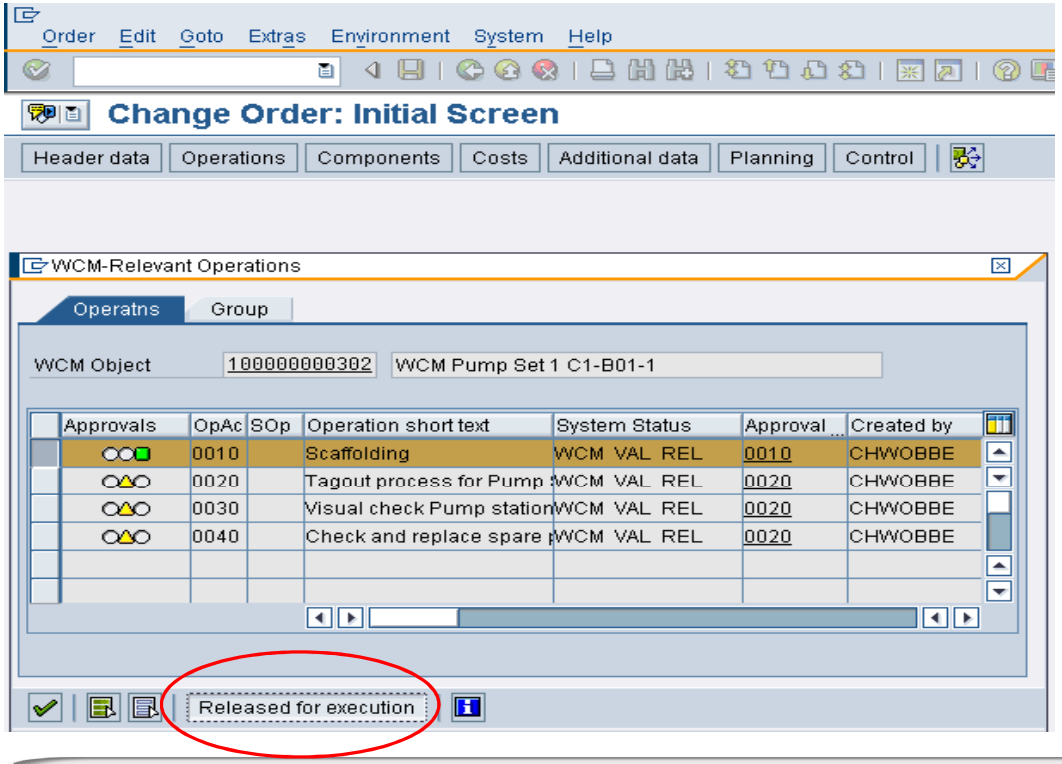
As a first approval A009 “Hot Work“ is granted. This however is not relevant for the processes for lockout/tagout. As a second approval “A010 - Work Safety“ is granted.

Detailed Process
Grant Approvals



The approval “A010 - Work Safety“ is the prerequisite to start the operation „Scaffolding“ in the order.

Detailed Process
Grant Working Permits



The traffic light of the first operation is now green. The operation can now be issued “Released for execution“. The traffic light for all other operations is yellow. This means that not all other permits have been granted yet.

Detailed Process Lockout/Tagout

Operational WCD Edit Goto Extras Switch System Help

Change Operational WCD: Switching Screen

Tagged

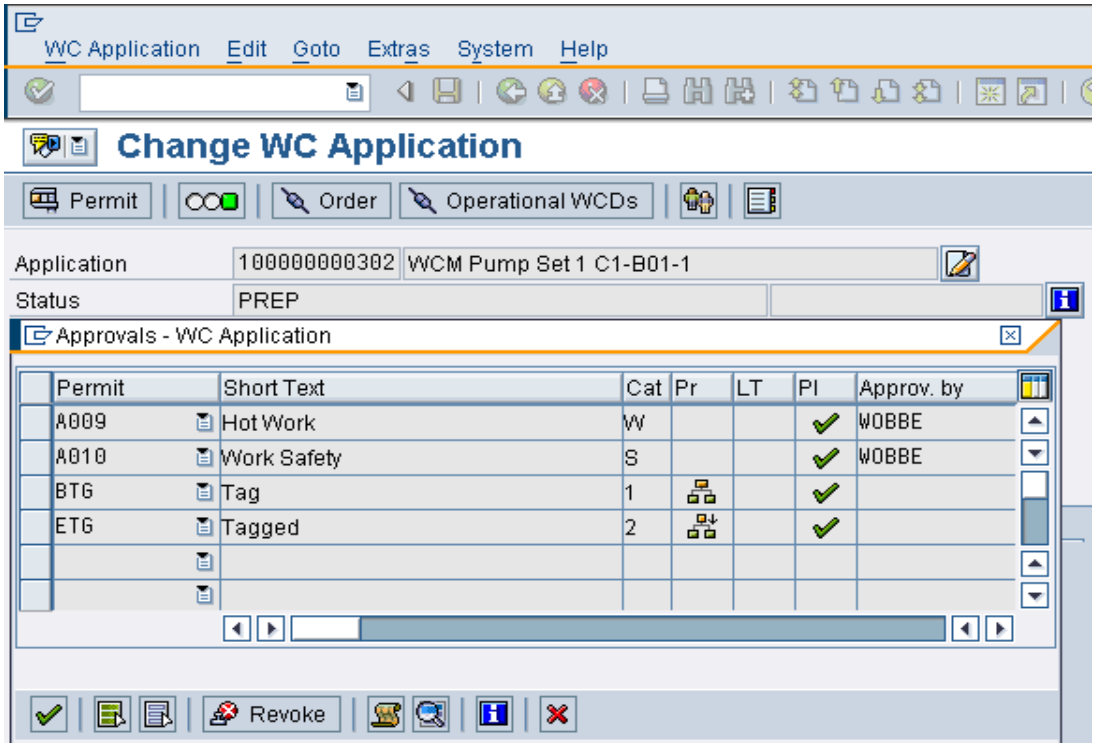
WC Document	300000000302 Tagout/Lockout Pump set C1-B01-1
Status	PREP PROC PTAG

CONF	ITG	BTG	PTAG	ETG	BTUG	PTST	ETUG	BUG	EUG	PROT
0	0	0	3	0	0	0	0	0	0	0

1	2	Counter	IC	Technical Object	Short Text	O	Tag. Cond.	TT	TS	Untag.Cond.	UT	US
		10	F	C1-B01-1A	Valve 1	M	CLOSED	A	10	OPEN	A	10
		20	F	C1-B01-1B	Valve 2	M	OPEN	A	30	OPEN	A	30
		30	E	P-3000-N001	Electric pump 001	E	OFF	A	20	ON	A	20

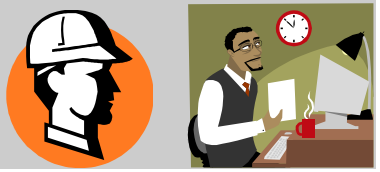
The single objects are tagged out by the operation. The tagging is confirmed in the system.

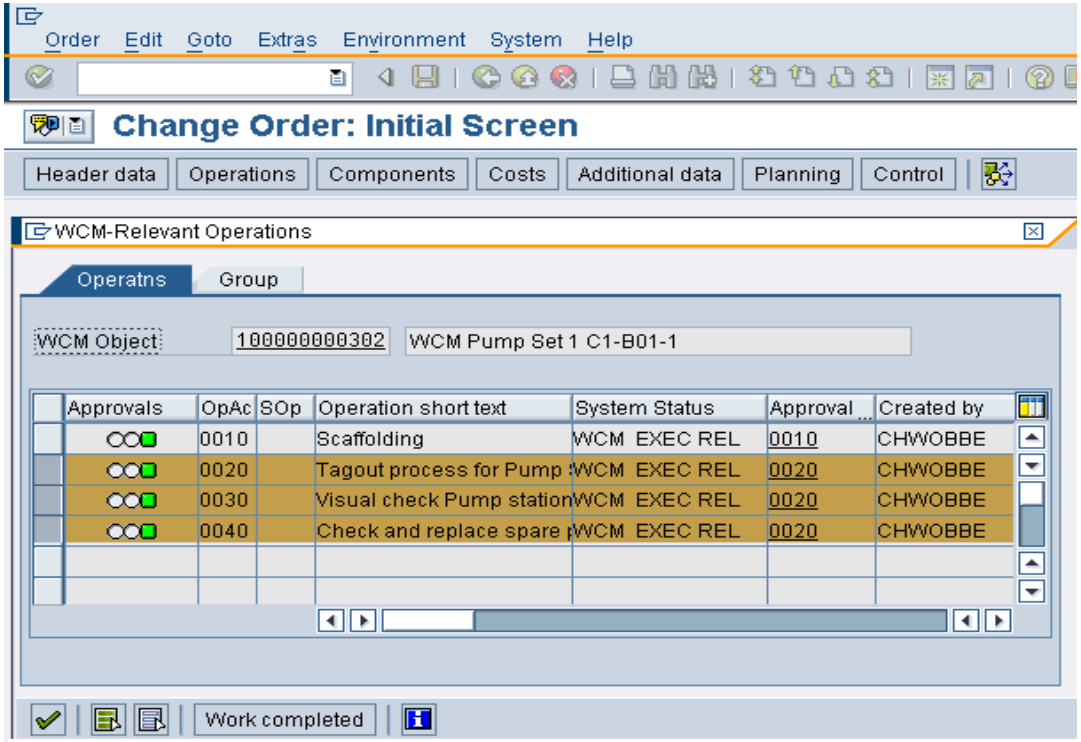
Detailed Process Approvals



With the confirmation of the switching in the Operational WCD, the approval “ETG - Tagged“ is automatically been granted in the Work Clearance Document and in the Work Clearance Application. This is the prerequisite to start the work of all other operations.

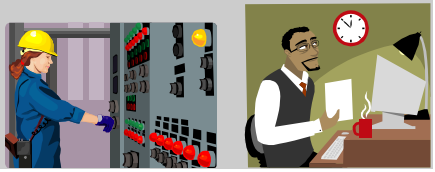
Detailed Process
WCM Operations

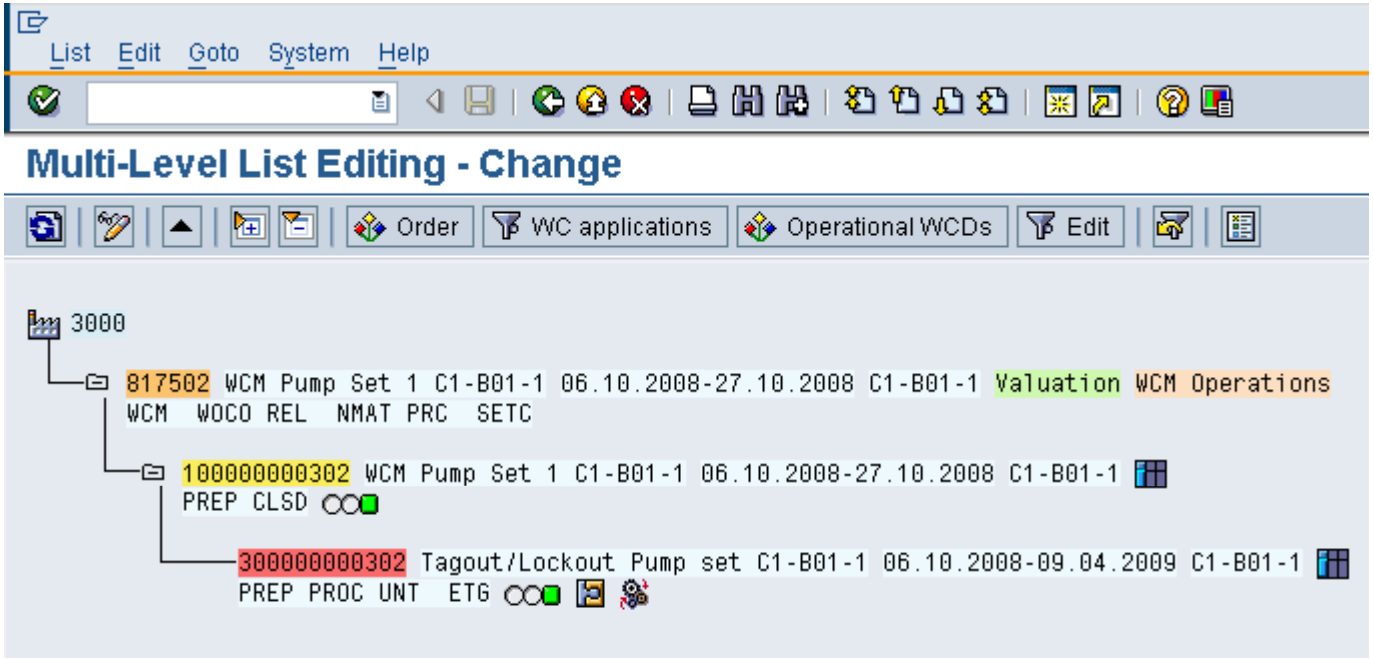




The traffic lights of all operations are now green. Safety is given and the operations are „Released for execution.“ The person in charge for maintenance carries out all maintenance tasks. As soon as the work has been finished, the operations are marked as completed (Status WOCO – Work completed).

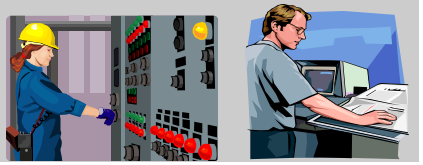
Detailed Process
Overview of the Multilevel List

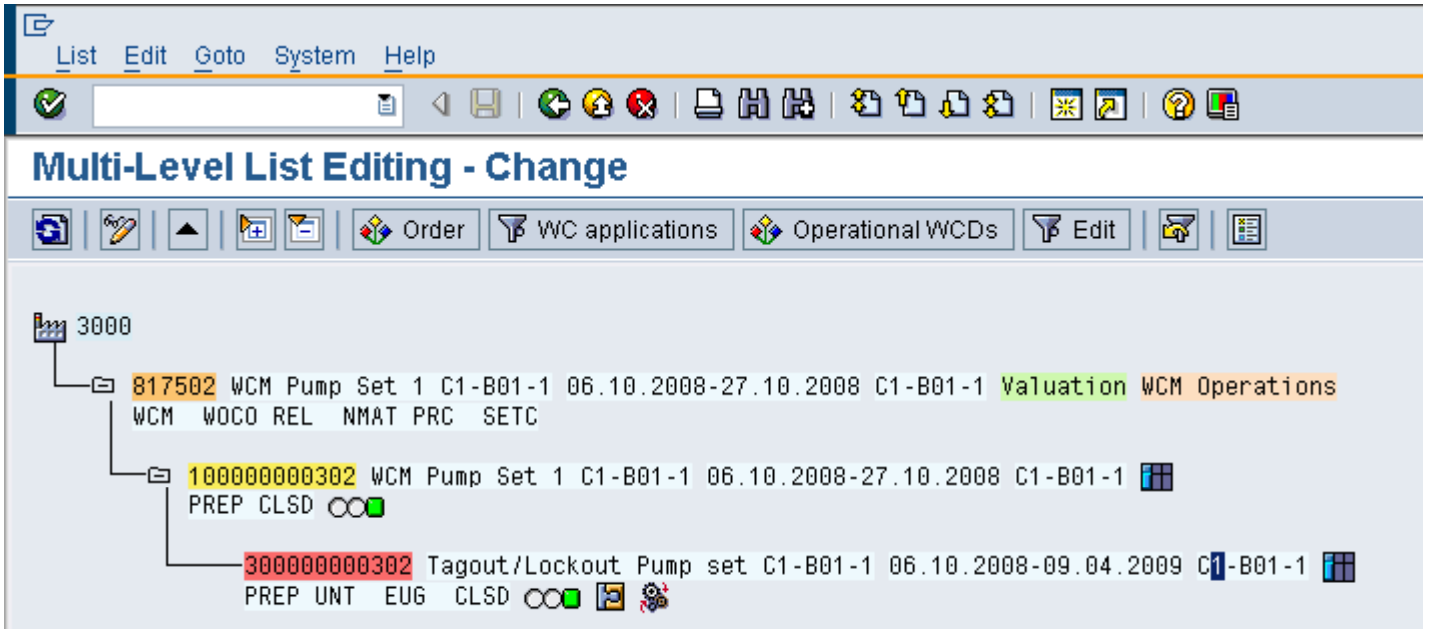




If all operations are finished, the Work Clearance Application gets the status „Closed“. The operators of the plant can now start the untagging process.

Detailed Process
Overview of the Multilevel List





The untagging has been confirmed and the safety planner closes the Operational WCD. The order is finished technically and commercially.

Questions and Answers

Copyright 2008 WCM GmbH

- You are not authorized to copy or pass on this publication or parts from this publication no matter in which form or purpose, without prior written authorization from WCM GmbH.
- All content and information in this publication can be changed by WCM GmbH without prior notice.
- SAP, R/3, mySAP, SAP NetWeaver and other mentioned SAP-Products and Services as well as the mentioned logos are brands or registered trademarks of SAP AG, Germany and other countries worldwide.
- All other mentioned product or services names or related logos are brands of the according companies.