



Edition 7/2004

Work Clearance Management Newsletter

Dear Readers,

In our seventh WCM newsletter our [top story](#) is the progress report of [Ringhals](#). Ringhals was one of our first customers.

Our productive customers now include companies in the industries of utilities, service provider, oil & gas, public sector and mining. These customers are spread out across the four corners of the globe, in countries such as Belgium, Spain, Sweden, Germany, USA, Canada, India, Singapore, Thailand, Korea and Australia.

In the utilities industry alone, we can already count among these customers 14 nuclear plants – with the highest safety requirement demands – and more than 45 fossil-fuel power plants.

Please note the dates and events where WCM is featured.

We hope you enjoy reading this newsletter,

Yours sincerely,

Uwe Kirchner

Michael Lesk

Christoph Wobbe

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Top Story

Safe nuclear plant maintenance and outage planning with Work Clearance Management

suppliers in North Europe. The total capacity is 3,000 megawatt, which is approximately 18% of the total consumption in Sweden. SAP [WCM](#) is used at Ringhals in four nuclear units.

Ringhals have had ERP system support since the beginning of the eighties. Initially an in-house designed main-frame system. In line with the strategy to get a more modern ERP system before the millennium, SAP was selected in 1997. At the end of 1998, R/3 was started with a big bang over a weekend. Most former administrative system support was transferred to SAP. SAP components for [PM](#), [PM-WCM](#), MM, QM, PS, FI, CO, HR together with locally added modules as “MM Nuclear Waste Administration” and “HR Access Administration were implemented”.

We started with SAP version 3.1H and will now upgrade from the version 4.6C currently being used to SAP R/3 Enterprise this autumn, after the outage period.

The Swedish nuclear plants have a long tradition of well-developed system support for work management. This system support is strongly integrated with outage planning and controlling of work performance via clearances for operation and radiation/fire protection. It was therefore a demanding effort to set up the early version of [WCM](#) together with PM. The broad aspect of [WCM](#) as support for both personal security and outage control and planning was required. A support that also should be easy to understand and practical to use.

With [WCM](#) we ended up with a good acceptable solution. But unfortunately this necessitated including some local enhancements, mostly regarding planning and enhanced template handling.

At Swedish nuclear power plants outages/stops are based on making clearances of larger areas, within which it is possible to work on several objects and perform many jobs. [WCM](#) at Ringhals is set up to fully support this philosophy of using larger “main clearance areas”. To this end, we have developed methods which have been enhanced over many years in order to improve security, planning and efficiency. How? Below are some sections describing the main ideas:

- The larger clearance areas are created as enhanced templates, which are both controlled and approved – i.e. ready to use. At Ringhals this type of enhanced templates are known as “Operational Clearance Templates” (OCT). When creating an active clearance (WCD) from an OCT, you may only change time planning. Information and tagging are already approved and therefore locked for changes. The idea is to use more of non busy time for the time wasting work with control and approval clearances. Each unit has created a base of hundreds of OCTs for permitting jobs in different smaller and larger areas.
- Clearance planning for an outage/stop is initiated with a selection of appropriate OCTs to be used. Based on actual workload, a local report gives a proposal on which OCTs should be used in order to optimize total clearance work – a strategy to perform actual workload with a minimum of clearance effort. The created/copied WCDs for the selected OCTs are connected in Primavera to the overall planning for the outage. Time limits are propagated to the actual “main WCDs”.

selected “main clearance areas”, for example, a need to drain a pump.

- Basing clearance and main planning on these “main clearance areas” gives maintenance a certain amount of flexibility. As long as delayed jobs and the fixing of additional detected jobs can be handled within the time limits of the actual “main clearance area”, it won’t affect the main outage planning. These changes may therefore be handled in a simpler way at a low level. To facilitate this possibility, the essential restricting time frame from the related “main clearance area” is displayed on the planning screen for connected objects (sub-WCDs, WCAs and maintenance orders).
- The 100 – 150 “main clearance areas” used for a typical outage are an appropriate level for planning and control of the outage. This includes different levels of authorization checks, using WCM reports, for closed “main clearance areas” – all planned jobs started, are jobs delayed, are jobs remaining before restart?

At Ringhals [WCM](#) is today accepted as a natural modern maintenance tool for the daily work. We have used the [WCM](#) support during 5 years at our four units, more or less according to our initial setup.

For the future we are now looking at how we may go one step further by using the actual enhanced standard functionality of [WCM](#), and at the same time get rid of our initial local enhancements.

In these direction we are discussing issues such as:

- Better planning functionality, integrated with graphical tools, initially for time planning (Primavera) but also a graphical presentation of clearances and tagging. We need better functions for replanning, such as move/adjustments of whole structures of objects when the shut down of a “main clearance area” has to be postponed or extended.
- A more intuitive editor for tagging.
- Ways to improve and decrease clearance administration, such as more direct usage of the system including electronic signatures instead of actual usage and signing of all printed papers.

If you have any questions please contact :

[Anders Andersson](#) (Ringhals IS/IT Management)

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New Functionalities – SAP R/3 Enterprise PLM Extension 2.00 (EA-APPL 200)

Assigning of Lock Numbers to Switching Operations

In the Operational WCD you can assign a lock number to each switching operation. This number can be printed out with the operational tags and the operational lists. In the list editing, this number can be selected. You can change this number as long as you not have confirmed the tagging.

prerequisites for the completion have been met.

User Specific Settings

You can define different settings for working with WCM objects. For example you can define whether confirmation prompts appear for particular activities.

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Forthcoming Events/Training Courses

[Distribution Europe 2004](#)

Date: April 27 – 28, 2004

Location: Amsterdam, Netherlands

[POWER-GEN Europe](#)

Date: May 25 – 27, 2004

Location: Barcelona, Spain

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