

Canadian Natural Enhances Safety with Maintenance Work Order Solution



“The link between the issued Construction Work Package and the engineering execution work orders in Maximo is crucial to avoid mistakes and avoid implementing the wrong solution in our plant. The Opidis integration allows us to make sure the construction execution team has the same information our engineers endorsed.”

**Bonnie Ashley, Engineering
Coordinator, Canadian Natural
Resources Ltd**

Canadian Natural Resources Limited (Canadian Natural) is one of the largest independent crude oil and natural gas producers in the world. It has an effective and efficient, diversified combination of assets in North America, the North Sea and Offshore Africa, that enable it to generate significant value, even in challenging economic environments. Canadian Natural continually strives for safe, effective, efficient and environmentally responsible operations while developing its asset base.

At its Horizon Oil Sands (Horizon) operation, Canadian Natural carries out surface oil sands mining and bitumen extraction, complemented by on-site bitumen upgrading with associated infrastructure to produce high quality synthetic crude oil (SCO). Supporting ‘paperwork’ is a necessary element of the plant’s operation, and with over one million documents in its repository, managing them effectively is essential to Horizon’s team.

Canadian Natural has been using Opidis (formerly McLaren Software) since 2004 to manage engineering documents and drawings along with governance documents such as standards, policies and procedures.



Maximo, the enterprise asset and maintenance (EAM) management system from IBM currently manages the physical assets at Horizon. However, in 2011 the plant's assets were managed in JDE Edwards' Enterprise One (E1) system and when the plant needed to enhance the version control of its documents used in the maintenance work order process, it turned to long-term solution provider, Opidis. The Company worked with Opidis to develop an EAM Connector solution, integrating E1 and the engineering document management solution (EDMS) for the support of maintenance work orders (MWO). Ensuring that maintenance staff have the most up to date set of documents is critical to them being able to carry out their work safely. In 2016, the Company migrated to Maximo to manage the plant's assets and the EAM connector was reconfigured to connect the EDMS to Maximo's Maintenance Work Order module.

At Horizon, there are four types of documents that may be attached to a maintenance work order for use by its staff:

- » Controlled documents, such as policies, procedures, and engineering drawings in the vault
- » Engineering documents, such as marked up drawings, vendor and supplier documents in a matching work order project
- » Supporting documents, such as pages from an operating manual, and

- » Field comments, usually made by maintenance staff after work order execution, such as follow-up requirements, photos and scanned sketches.

Managing Risk

Work orders are often compiled well in advance of the actual 'jobs' being completed; sometimes as much as six months ahead. When a work order is created in Maximo, a work order package is automatically created in the EDMS. Maintenance Planners then search for and add documents related to the intended work to it. The EAM Connector allows these work order packages to, not only be created, but also float documents to their latest revisions and then move them to a 'frozen' state to show which version of the document(s) were used. So, before anyone starts work, they can be sure that the drawings haven't changed in the intervening time.

A traffic light system gives a clear indication of the document status. Green means that a document has not been changed. Red means that the document in the package has been superseded and that there is a more up-to-date revision available. Documents marked yellow have been retrieved to a project for concurrent engineering or checked out for updating and future changes are possible. This gives the Maintenance Planners an easy way to interpret where they might need to review the drawings and documents they have attached to the work order.



“Opidis provides the workforce at Horizon the comfort and peace of mind with knowing that the document that is in the work order is the current, most up to date version. Combining Opidis and the Maximo workflow makes the process seamless and the only manual intervention is when Opidis indicates through the traffic light system that the document is not the current version alerting proactive action.”

**Richard Dyson, Maximo
Supervisor, Canadian Natural
Resources Ltd**

Quickly Done

The EAM Connector solution to manage maintenance work orders was developed collaboratively with Horizon. The Opidis consultants handled all the integrations and the system now has over 2,000 users licensed to use it.

While the project was driven by ensuring the safety of its staff and managing risk, Horizon is able to point to some other system benefits. Finding correct specifications and procedures is more efficient, as there is no longer a need for lengthy searches through many versions of the same document. The team is also repeating tasks less often to correct errors.

Opidis (formerly McLaren Software) is a leading supplier of collaborative document management solutions to Owner Operators and EPCs, globally. Focused on maintaining complex engineering assets and large capital projects, Opidis solutions provide a single source of truth for all engineering content including P&IDs, drawings, vendor documents, safety manuals, as well as mobile and commissioning solutions – throughout the asset lifecycle.