

Management of Change



May 1st, 2019



Portlands Energy Centre

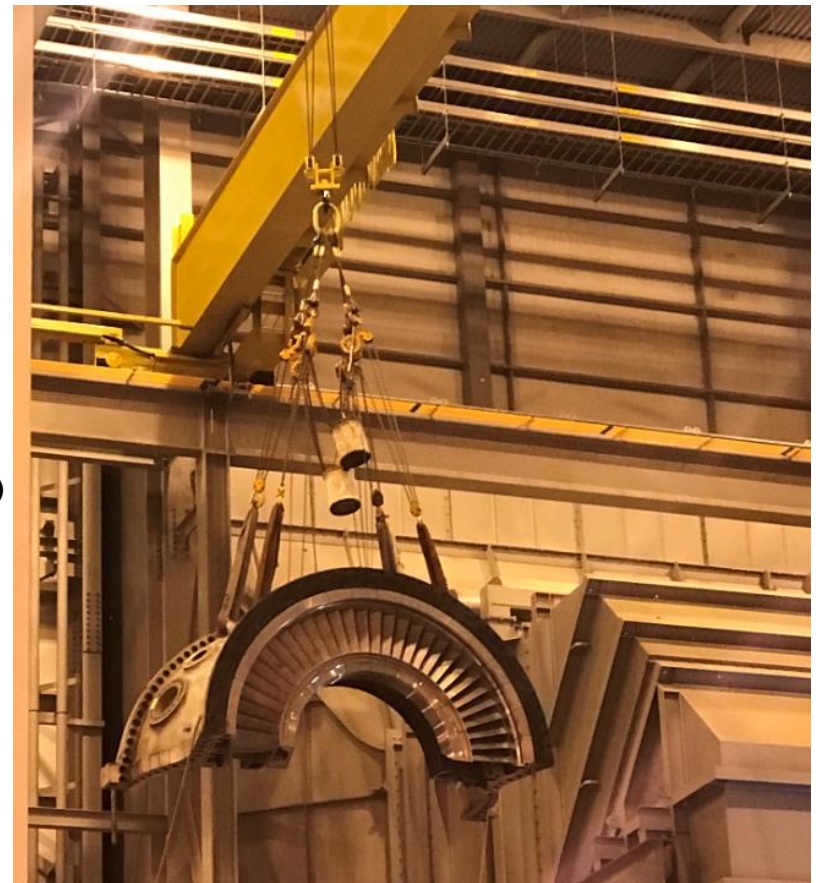
What is Portlands Energy Centre (PEC)?

- A 550 MW natural gas fired power plant located in the Toronto Port Lands
- Consists of 2 gas turbines, 2 heat recovery steam generators and 1 steam turbine
- Staff of 32 with everything done on site
 - Operations
 - Maintenance
 - Administrative
 - Financial
 - Environmental Reporting
 - Engineering Support
 - Commercial (gas/electricity)



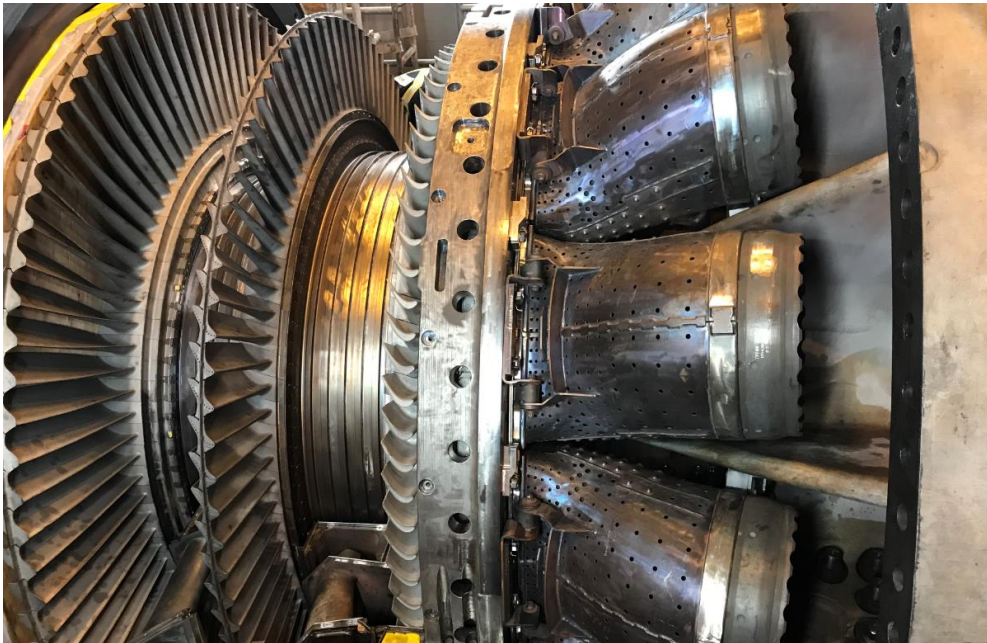
What is Maximo Used for at Portlands Energy Centre (PEC)?

- Work Management
- Outage Planning and Scheduling
- Procurement and Inventory Management
- Permits (Hot Work, Confined Space)
- Health and Safety
 - (Hazard, Observation and Incident Reporting)
- MOC (Management of Change)
- Project Management
- Outage and Project Cost Reporting
- Risk Management



Why Management of Change (MOC)?

- To obtain approvals before changes are made
- To ensure that regulatory Codes and Standards have been reviewed and applied
- To ensure that drawings and related documentation have been updated
- To ensure that staff have been informed of the changes
- To have auditable evidence that the necessary activities have been performed



MOC History at PEC

- PEC developed an MOC using an Microsoft Access Database
- The System was not well received and was only being used by a few individuals
- Problems with the System could only be corrected by someone familiar with programming Microsoft Access
- Not linked to our Assets and Work Orders in Maximo and previous CMMS system
- This resulted in many 'surprises' or lack of documentation for previous changes



Advantages of Maximo MOC

- Allows workflow for Approvals and Actions
- Pre-populates Actions based on the type of Change selected
- Links to related documentation like Work Orders and Project numbers
- Allows the attachment of background documents



What does Maximo MOC look like?

Quick Insert

New MOC

Favorite Applications

MOC

Work Order Tracking

MOC KPIs

Last Run: 5/1/19 9:00 AM

[Update](#)

Status	KPI	Actual	Target	Variance
	MOCs Backlog (APPR or AUTH)	33	0	33

Inbox / Assignments

Description

Last Memo

Route Workflow

Next Assignment Due: 5/1/19 6:23 AM

[Refresh](#)

MOC1024 Install secondary vibration monitoring on each FGC has actions requiring your completion

Jason is now maintenance manager



MOC1065 #1 LP Steam Header Block Valve 1HS1915 actuator motor has actions requiring your completion

Jason is now maintenance manager



MOC1104 Relocation of Safety Shower/Eyewash has actions requiring your completion



MOC1089 Install upgraded R0 blading has actions requiring your completion



MOC1076 Replace CTG S17 stator vanes has actions requiring your completion



MOC1117 HP and IP drum phosphate control (re CBD manual operation) has actions requiring your comple



MOC1125 Move air and service water lines to facilitate installing BFP lifting beams has actions requ



MOC1111 Replace Fuel Gas Filter CTG 01 discharge isolation valve 670503 has actions requiring your c



MOC1130 Relocate ladder access for HRSG stack has been assigned to you for review & approval



MOC1143 New Plant de-sync/re-sync (Touch and Go) PECOP has actions requiring your completion

on third draft



1 - 10 of 26 | [Next Page](#) >>

MOCs Where I am the Initiator

MOC	Description	MOC Type	MOC Category	Status
MOC0129	The reject/flush line from Reverse Osmosis Unit 1 has dev	PERM	PHYSICAL	NEW
MOC0138	Ammonia Tote Piping Modifications. In order to address s	PERM	PHYSICAL	NEW
MOC0139	Acid Line - union leak repair.	PERM	PHYSICAL	NEW
MOC0147	CTG Air Inlet Pulse Air system. The final stage of the p	TEMP	PHYSICAL	NEW
MOC0153	FBV2415 Seat Replacement. New seats with inconel butter	PERM	PHYSICAL	NEW
MOC0154	CKV-680 Replacement on Unit 1. Defective valve cut out a	PERM	PHYSICAL	NEW
MOC0155	HP and IP CBD Valve and D/S Piping Replacement.	PERM	PHYSICAL	NEW



Portland's Energy Centre

What does Maximo MOC look like?

List View | **MOC** | Actions | Approve and Authorize | Completion | Related Records | Log

MOC: MOC1071 | STG HPCV Leakoff Line - Flange Installation

Requested Date: 29/10/18 7:40 AM

MOC Type: PERM | Status: AUTH

MOC Category: PHYSICAL | Attachments

Current Workflow Assignments

Name	Description
Alan Chandler	MOC1071 STG HPCV Leakoff Line - Flange Installation has actions requiring your completion
Jason Eyles	MOC1071 STG HPCV Leakoff Line - Flange Installation has actions requiring your completion
Leopoldo Sartori	MOC1071 STG HPCV Leakoff Line - Flange Installation has actions requiring your completion

User Information

MOC Initiator: JASON_EYLES

Name: Jason Eyles

MOC Owner: JASON_EYLES

Name: Jason Eyles

Changed By: KEVIN_DICK

Changed Date: 10/12/18 9:54 AM

MOC Details

Location: PEC-GEN3-Df | STG 03 Turbine

Asset:

Scope:
Every outage for the valves on the STG, the HPCV leakoff lines had to be cut and rewelded. After reviewing the piping design specification, flanges were acceptable.

Reason for Change:

Justification:
Install flanges to make valve disassembly and reassembly quicker, while also saving costs associated with that work.

Projects

Project:

Risks

Include known Risks for performing and not performing the change

Risk Comments:
No risks, savings from making this change.



What does Maximo MOC look like?

[List View](#) | [MOC](#) | [Actions](#) | [Approve and Authorize](#) | [Completion](#) | [Related Records](#) | [Log](#)

MOC:
 MOC1071 | STG HPCV Leakoff Line - Flange Installation

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 29/10/18 7:40 AM

MOC Type: PERM | **Status:** AUTH

MOC Category: PHYSICAL | [Attachments](#)

Current Workflow Assignments | [Filter](#) | 1 - 3 of 3

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Actions | [Filter](#) | 1 - 7 of 7

MOC Action	Description	Action By	Completed?	Sign Off Date	Comments	Change Date	Change By
ASBUILT	Update relevant PEC drawings (complete Doi	JASON_EYLES	<input type="checkbox"/>			29/10/18 7:40 AM	JASON_EYLES
PERFWORK	Perform Work to Execute Change	JASON_EYL	<input checked="" type="checkbox"/>	29/10/18 7:51 AM	completed by GE during fall 2018 outage	29/10/18 7:40 AM	JASON_EYLES
REDLINE	Red-line markup field changes on appropriat	LEOPOLDO_	<input type="checkbox"/>			29/10/18 7:40 AM	JASON_EYLES
REDTEMP	Replace drawing(s) in the drawing Master list	ALAN_CHAN	<input type="checkbox"/>			29/10/18 7:40 AM	JASON_EYLES
REDUPDATE	Arrange CAD update of red-line markups	LEOPOLDO_	<input type="checkbox"/>			23/01/19 11:41 AM	ALAN_CHANDLER
SAMP	Update SAMPs	ALAN_CHAN	<input checked="" type="checkbox"/>	31/10/18 3:04 PM		29/10/18 7:40 AM	JASON_EYLES
SERVER	Store documents on file server	ALAN_CHAN	<input type="checkbox"/>			29/10/18 7:40 AM	JASON_EYLES

[Select MOC Actions](#) | [Select MOC Action Group](#) | [New Row](#)



What does Maximo MOC look like?

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Approvers

Approver Group	Approved?	Sign Off Date
ENGMOC	✓	29/10/18 7:52 AM
OPSMOC	✓	08/11/18 2:18 PM
MNTMOC	✓	10/12/18 6:21 AM

Authorizers

Authorizer Group	Authorized?	Sign Off Date
GMMOC	✓	10/12/18 9:54 AM



What does Maximo MOC look like?

[List View](#) | [MOC](#) | [Actions](#) | [Approve and Authorize](#) | **[Completion](#)** | [Related Records](#) | [Log](#)

MOC: 

MOC Type:  Status:

Requested Date: 

MOC Category:  [Attachments](#) 

Completion Details


MOC Actions Completed?

After Action Review Required?

Lessons Learned?

Documentation Attached?

Documents Filed (Library, Shared Drive, etc)?

 Please ensure that all related or follow-up Work Order records have been completed before the MOC record is updated to a completed status.

Closure Comments:

Completion Reviewed By:



Reviewed Date:



Results of implementing Maximo MOC

- The user pool has expanded significantly
- Most changes are being documented, even temporary ones
- Action items can be more easily tracked
- Post-implementation actions (e.g. Drawing updates) are no longer being forgotten
- Upwards of 150 changes documented in the last 1.5 years vs the same amount for the first 8 years of the facility



QUESTIONS????



Portlands Energy Centre