



Bringing the
Practical Touch
to Business
Improvement

Winterization Value Engineering
Improvement Project

Winterization Value Engineering Improvement Project

Success Story

1. Why are we doing it?

Our clients “Upgrader” plant consists of 4 large production units (PU’s) which convert crude bitumen in to ethanol, glycanol, gasoline etc.

The plant is located where extreme winter weather is the norm, to ensure production stability a winterisation preparation program is executed annually.

In the past 9 years, the winterization program has never been complete prior to the onset of winter. As a result, many freeze-up incidents have occurred, resulting in reduced production and additional maintenance activities.

A new production unit was identified as especially at risk: it had yet to go through a winter cycle, and it was uncertain whether Preventive Maintenances (PM) were appropriate or could be done., before the onset of winter



2. What was happening before?

As the winterization program had not been completed there were numerous Emergency and Priority 1 rush Work Orders (WO's), inevitable failures during winter. These Emergency or Priority 1 WO's were highly inefficient, a large draw on resources, and costly, affecting planned production.

The new PU had not been through a winterisation period or cycle therefore the ability to prepare for functionality through winter, was unknown.

3. How is it now?

Scope Clarification involved clean up of Winterization PMs:

- if not weather dependent, now spread the PM through the year
- if duplicate or no longer required now, eliminate the PM

Rationalization of Walkdowns involved limiting the walkdowns to 2 critical items, synchronizing these with Production Units (PU's) 3/4, proceduralizing the results, and re-setting the start/finish times:

- Insulation deficiencies
- Steam Trap survey and review

Optimizing PM Tasks involved re-organizing method for assigning tasks to Operators and capturing the data fast such that Maintenance can do the repairs in time.

Hoarding & Scaffolding involved:

- Replicating scaffold builds by using recent data rather than repeating site visits
- Creating accurate records for all PU's

Weekly PM team meet to improve internal communications.

4. What have we achieved?

Streamlined winterisation process created where winterization tasks were reduced from 500 to 334

Documented processes including criteria set for walkdowns & faster data capture for repair requirements

Utilisation of historic data to prepare scaffolding.

Process and plan for winterising new PU

Creation of performance and maintenance records for each PU

5. What benefits have we realised?

All winterization activities across the site completed by mid Oct as planned

Accurate planning and resource balancing.

Reduced the pressure and stress on the PM team, improved team communications and improved morale, team were allowed to define how to execute winterisation and PM's going forward.

Reduction in the number of Emergency and P1 WO from 25% to 15% of total WO



6. What was the value of the deliverables?

Maintaining production through reduction in Emergency and P1 WO

More engaged, productive and happier PM team

Ability to monitor PU performance and extend or bring in PM's according to performance