**Shutdown Planning and Scheduling Guidelines**

1. Planner (one or more based on workload and duration) assigned full time to manage the Master Work List with adequate lead time
2. "Rule of Thumb": allow one-month preparation time for each week or partial week of outage
3. Cut-off Date for adding new work is set at a minimum of three weeks prior to the start date.
4. All parties are involved in Walk-Throughs to understand work scope and execution for their crews and for the overall outage
5. Make sure the following are correct:
* Work scope definition
* Operations plan for shutdown and start-up
* Mechanic job packages
* Resource staffing and coordination
* Safe execution
1. S/D expectations and process
* Assign Dedicated Shutdown Roles
* Set and Enforce Cut-off Date for work list
* Hold to Established Start Date
* Create a Single Master Work List and Schedule
1. Typical critique Feedback
* Many add-on jobs: work out grew resources
* Poor work definition and coordination
* Outage start date was moved several times
* Parts and materials not available due to changes
* Delays due to lack of safety preparations
* Start-up delays occurred returning to service
* Planned as part of daily workload without dedicated resources
1. Shutdown Roles
* Shutdown Coordinator (Key Role from Operations)
* Shutdown Planner/Scheduler (Key Role from Maintenance)
* Area Maintenance Manager
* Maintenance Team Manager
* Area Maintenance Coordinator
* Contractor Coordinator
* Material Coordinator/Area IMS
* Reliability Department Representatives
* Mechanics
* Production Supervisors/Building Coordinators
* Flex/Contractors and Support Resource Representatives
* Engineering Representatives with Management support
* Area Safety Representative
1. Daily S/D status meeting
* Mid-afternoon/prior to shift change each day, review the following items:
* Jobs completed today (update Master Schedule)
* Learn from delays/problems to adjust the Schedule
* Determine carry-over's and impact on Tomorrow
* Go over Tomorrow's Jobs: equipment preparation, resource conflicts, permitting and material staging
* Make action item assignments and follow up daily
1. S/D Measures
* Turnaround Duration
* Turnaround Man Hours
* Turnaround Costs
* Scope Change: % Work Added after the Cut-off Date
* Start Date Compliance: Number of Times Changed
* Execution Performance Audits
1. Critique Meeting
* What was done well and what can be improved?
* With all parties involved in the outage, review activities for each group by the following stages:

 A. Planning and Scheduling

 B. Pre-turnaround Preparations

 C. Work Execution

 D. Operational Start-up

 E. Post-shutdown Activities