- Ensure proper LCO, online risk, shutdown risk and equipment availability management.
- Effectively manage pre-outage schedules.
- Ensure efficient coordination of load maneuvers.
- Load schedule to 90% of available resources.
- Perform thorough multi discipline reviews.
- Control the scope.
- Set realistic and challenging activity durations.
- Schedule with the proper levels of details.
- Properly coordinate with daily and outage work control.
- Maintain a schedule performance indicator.

16. Effective Meeting Management

- Ensure meeting objectives align with process requirements.
- Establish clear objectives and deliverables.
- Ensure proper consistent and accountable attendance.
- Practice a clear leadership and focused execution.
- Ensure unresolved issues get actions, owners, and due dates.
- Come to meetings on time, prepared and ready to provide input and answer questions.

17. Coordination of Work Groups and Leadership

- Ensure proper preparation and planning.
- Foster individual ownership for all aspects of the project.
- Develop clear documentation of sufficient detail.
- Promote risk awareness and quality focus.
- Establish clearly defined responsibilities and accountabilities.
- Team with Work Control to ensure efficient resource utilization, solid schedule performance and error-free execution.
- Promote a culture of continuous improvement through the use of both internal and external feedback, performance indicators and project assessments.
- Match the level of oversight with commensurate level of project complexity and significance.
- Assign knowledgeable and engaged supervision.
- Conduct effective briefs, walk downs, pre-staging and document reviews.
- Establish clear milestones and manage to milestones.
- Communicate deviations to established milestones and get help to mitigate problems.
- Establish clear communication channels and respect for proper communication and line of authority.
- Provide a means of managing workload and coordination of station resources to perform work.

18. Schedule Discipline

- Get the right input to schedules.
- Demand thorough multi disciplines review of schedules.
- Establish coordinated hands off and proper work sequencing.
- Control the scope.
- Ensure proper preparation to preclude poor performance.
- Monitor milestones – take prompt and effective mitigation.

19. Flawless Execution

- Ensure the level of oversight is commensurate with level of complexity and significance.
- Perform effective Pre-Job Briefs, walk downs, and pre-staging of document reviews.
- Communicate deviations to establish milestone and get help to mitigate problems.
- Ensure clean hands off between work groups and shift changes exist.
- Manage emergent issues.
- Establish effective integration of the Outage Control Center (OCC) without subverting individual and work group accountabilities.
- Carefully monitor cost and schedule performance indicators to establish project plan.

20. Respect for Process Planning and People

- Executives and managers endorse and provide expectation for process results.
- Promote a proper use of prioritization code, and do not evaluate priority based on biases or self-serving interests.
- Trust the process to work, while not over reacting, to short term trend in performance indicators.
- Do not circumvent the work control process.
- Avoid cycling personnel.
- Develop the plan, work the plan.
- Manage issues and problems. Assign issue owners and response teams with clear deliverables and due dates.
- Ensure decision on work performance and budget allocation supports established outage milestones.

21. Develop and Maintain Effective Outage Plans

- Align plans based on system performance goals and material condition priorities.
- Establish safe and effective system windows for efficiency and risk management.
- Align with the cycle plan to ensure only true outage work is performed during outages.
- Ensure thorough review of outage plans.
- Ensure outage plan is aligned with Business Plan, budget, and resource curves.
- Properly manage the cost, dose, and duration.

22. Project Management

- Clearly define and carefully review problems.
- Carefully conduct a thorough conceptual design phase.
- Ensure the project is properly scoped, analyzed, estimated, sequenced, funded and reviewed.
- Identify and plan for appropriate contingencies.
- Brief external support organizations on scope and expected deliverables; carefully review bid's established objective.
- Ensure project objectives are clearly defined, and that testing activities clearly establish project success.
- Carefully monitor field changes to ensure original objectives are met and desired benefits are obtained.

23. Cost Control

- Demand thorough and detailed estimates.
- Perform rigorous economic analysis.
- Develop challenging cost goals and ensure contracts and deliverables have proper incentives established.
- Establish effective targets, milestones and performance indicators.
- Forecast, monitor and accrue cost diligently.
- Promptly communicate to management any new risks, new opportunities and deviations to established targets or milestones.

24. Work Management

- Participate in Nawah work control process.
- Review schedule for conflicts; challenge job duration, preparations and interferences.
- Identify and remove unnecessary barriers.
- Perform pre-job walk downs to verify required support, preparation and equipment staging.
- Verify equipment is properly taken out of service and isolated.
- Work to the schedule – start and complete each job on time.
- Notify supervision of a scheduled job delay greater than 10 minutes.
- Notify the Work Week Manager (WWM) or Outage Control Center (OCC) of a schedule job delay greater than 30 minutes.
- Incorporate lessons learned to improve future job performance.

25. Response to Emergent Issues

- When problems arise, regroup and assign proper response team to evaluate the issue and determine proper corrective action.

26. Pursuit of Excellence (Continuous Improvement)

- Be self-critical.
- Prevent complacency; identify opportunities for improvement.
- Reinforce desired behaviors and correct weaknesses.
- Perform self-assessments and benchmarking.
- Monitor for and take actions on adverse performance trends.
- Identify, document, share and act to improve upon Lessons Learned.
- Do things right the first time.

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Outage Management Fundamentals

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Nawah Energy Company

OR-REF-0009 Rev. 00

1. Reactor Safety

- Maintain Plant parameters within operating limits.
- Operate and maintain the plant in accordance with procedures.
- Recognize and adhere to all regulatory requirements and environmental permits.
- Practice effective decision making consistent with WANO guidelines.
- Understand plant consequences of every action taken.
- Believe instrument response and indication unless proven otherwise.
- Maintain a questioning attitude; ask “why?”.
- Raise safety concerns to your supervisor.
- Maintain qualification and proficiency in assigned emergency response role.
- Ensure fire doors are latched after use.

2. Industrial Safety

- Be responsible for your own safety.
- Review Lessons Learned and applicable Operating Experience (OE) when planning work.
- Adhere to safety postings and barriers.
- Use the appropriate Personal Protective Equipment (PPE) for work to be performed.
- Ensure equipment is in a safe condition prior to beginning work.
- Know your personal limits both physically and mentally.
- Use installed safety equipment.
- Do not bypass required equipment safeguards.
- Comply with chemical Material Safety Data Sheet (MSDS) requirements.
- Stop and correct unsafe behaviors or conditions.
- Be alert for changing conditions.
- Report all injuries big or small.

3. Radiological Safety

- Ensure you are on the correct Radiological Work Permit (RWP).
- Maintain strict compliance with RWP.
- Know the work area dose rates and contamination levels.
- Know your accumulated dose; do not exceed limits.
- Adhere to radiological boundaries; do not alter.
- Practice As Low As Reasonably Achievable (ALARA):
  - Pre-plan work to minimize dose.
  - Move work to low dose areas if possible.
  - Use low dose waiting areas – do not loiter.
  - Use minimum number of workers to safely perform the job.
  - Use remote-handling tools if possible.
  - Maximize distance between you and radiation sources.
  - Avoid hot spots.
- Be proactive in identifying potential dose reduction opportunities.
- Practice good housekeeping.

4. Security

- Follow directions given by Nuclear Security Force personnel.
- Understand that all individual, materials and vehicles on company property are subject to search for prohibited material.
- Properly display and control security badge.
- Immediately notify security of a lost badge within protected or vital areas.
- Ensure security doors are latched after use.
- Maintain positive control of visitors at all time.
- Immediately report security or fitness for duty violations.
- Adhere to security postings and barriers.

5. Human Performance (HU)

- Understand and properly use the applicable HU tools for tasks.
- Use Self-Check/STAR and Point-Touch-Verbalize for component identification and equipment manipulation.
- Use Peer Check (PC) when requested.
- Use Three-Way Communication when providing direction or exchanging critical information.
- Use the Phonetic Alphabet when communicating alphanumeric information.
- Use Peer Review where possible.
- Identify and eliminate error-likely situations.

6. Procedure Use and Adherence (PU&A)

- Verify correct produce revision.
- Ensure procedure is appropriate to accomplish desired task.
- Use procedures according to designated level of use.
- Obtain clarification on procedures steps, to ensure understanding, prior to taking action.
- Adhere to procedures as written.
- Stop and revise identified procedure errors prior to continuing use.
- Use Placekeeping. Designate step completion using circle/slash.
- Re-verify conditions prior to continuing a suspended evolution.
- Take ownership for procedure quality.

7. Briefs

- Prepare and review material prior to conducting briefs.
- Use Daily Briefs to cover:
  - Safety moment and related topics.
  - Plant status including abnormal plant conditions and line ups.
  - Increased monitoring requirements for adverse conditions.
  - Important scheduled and in progress work.
- Conduct the appropriate type of Pre-Job Brief (PJB) by considering the task and level of risk associated with it.
- Review Operating Experience (OE).
- Ensure “positive engagement” of all personnel.
- Conduct Post-Job Debriefs to identify follow up actions and Lessons Learned.

8. Accountability

- Own your performance - results and behaviors.
- Report to work on time and fit for duty.
- Maintain safe and professional dress.
- Meet or exceed minimum work hour expectations.
- Expect and be receptive to feedback and coaching.
- Review your work and sign to verify quality and content.
- Know your development areas and take actions to improve.
- Report problems to your supervisor.
- Verify that your personal working file reflects your performance.
- Ensure you receive routine formal appraisals.

9. Integrity and Transparency

- Use independent effort when being tested.
- Speak up and tell people the facts.
- Know what your signature means – read, understand, and agree.
- Always honor your commitments.
- Follow the Nawah rules and standards at all times.
- Be open and honest during investigations.
- Own mistakes made and events incurred; share Lessons Learned.
- Ask “why?” Raise concerns.

10. Condition Reporting and Resolution

- Initiate Condition Reports (CRs) for problems, errors made or found and concerns; notify your supervisors.
- Perform thorough and insightful apparent, common, and root cause evaluations.
- Identify and implement timely corrective actions to prevent recurrence.
- Verify effectiveness of corrective actions.
- Review sources of nuclear event reporting and take appropriate actions.

11. Training and Qualification

- Participate in training – “Come to learn”.
- Report for training by the scheduled starting time and return from breaks on time.
- Be accountable for your training performance and professional conduct.
- Wear appropriate PPE in training labs.
- Learn the fundamentals.
- Practice to gain proficiency.
- Provide mentoring to those in need.
- Provide meaningful feedback on the quality of training.
- Own and maintain your current licenses and qualifications.
- Verify qualifications prior to performance of work tasks.
- Identify training needs to improve performance.
- Pursue additional skills to broaden qualifications and enhance professional development.

12. Teamwork

- Share insights and experience with others.
- Solicit and respect different views and ideas to strengthen decision-making.
- Solve problems by involving others.
- Make additional effort to work across cultural barriers.
- Align to the team’s shared goals and objectives.
- Accept actions and complete on time.
- Conduct team critiques - learn and improve.
- Achieve team goals and meet individual expectations.

13. Intolerance for Unexpected Equipment Failure

- Champion initiatives that promote material condition excellence.
- Proactively identify degraded equipment condition and system performance.
- Initiate work requests.
- Determine impact of degraded equipment and set plant priorities to ensure timely repairs. Drive problem resolutions.
- Develop, execute and document thorough troubleshooting plans.
- Collect, preserve and document all physical evidence resulting from equipment failure.
- Develop operating contingencies for degraded or out of service equipment.
- Perform Preventive Maintenance (PM) as scheduled. Document feedback to improve PM program effectiveness and record failure history.
- Take immediate action to resolve unexpected or unacceptable performance of equipment if it occurs.

14. Develop and Maintain an Effective Cycle Plan

- Align plan based on material condition priorities.
- Bundle work for efficiency and risk management.
- Ensure system performance goals are reflected in plan.
- Ensure plan supports the conduct of safe and effective plant system outages.
- Ensure proper reviews are performed. Cycle plan must align with MCIP, business plan budget and resource curve.
- Align cycle plan to ensure true outage work is not performed on line.
- Provide a long range plan that includes predictive and periodic maintenance to maintain excellent material condition.
- Ensure planning is linked to the 30 year plan, business plan, budget and outputs to the cycles.

15. Schedule Efficiency

- Align the schedule with the cycle plan.
- Schedule work during the optimal season(s).
- Establish proper logic ties and identify time critical tasks.
- Meet milestones, goals and indicator for Limiting Condition of Operation (LCO), shutdown risk and equipment availability.