

Chockie Group International, Inc.

Management of Contractors at Nuclear Power Plants

New Challenges for Regulatory Oversight

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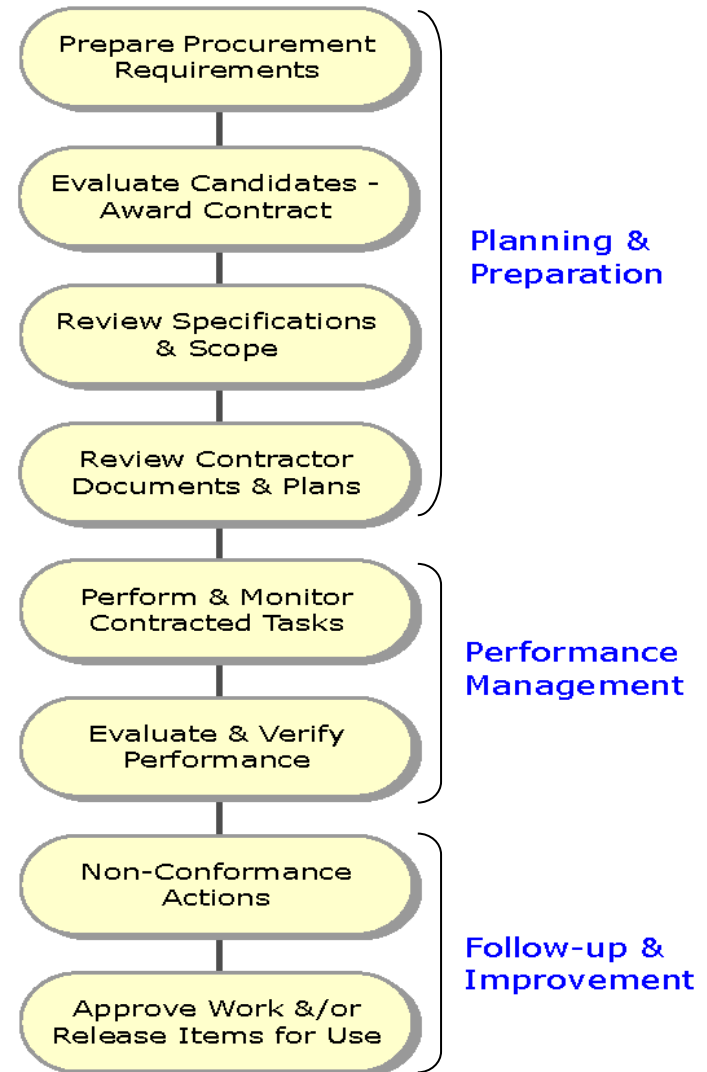


Oversight of Licensees Management of Contractors

- Contractors
 - An important & integral part of business
- Contractor-related accidents and incidents
 - shown serious weaknesses with implementation of contract management processes
- New challenges
 - aging of the workforce, staffing, cost saving efforts
- Proactive steps are required
 - to address existing problems and new challenges

Contract Management Process

- Tailored to meet licensees specific needs & requirements
- The issue is not the contract management process itself
- Problems are due to weaknesses in the implementation of the process





Implementation Problems



Lack of supervision

- # 1 contributing factor



Design changes

- Not recognizing safety significance of changes or informing others of changes

Lack of training

- Incorrect assumptions about skills & knowledge



Implementation Problems



1 contributing factor

- Lack of supervision

- Deficiencies in quality assurance programs of company & contractor
- Incomplete or insufficient documentation
- Lack of review of vendor information
- Inadequate monitoring upon completion of work



Implementation Problems

- Design changes
 - Not recognizing potential safety significance of changes
 - Not informing others of changes
 - Not following quality assurance procedures

Implementation Problems

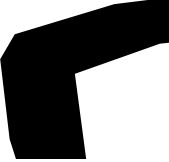


- Lack of training

- Insufficient or ineffective training of contractor, subcontractor, & company personnel
- Incorrect assumptions about skills & knowledge
- Lack of specific knowledge about equipment or facility
- Lack of awareness of safety significance of task
- Not being informed about quality assurance procedures



Implementation Problems

- Other common weaknesses
 - Excessive trust in the contractor
 - Underestimating the safety consequences of a project or task
 - Lack of adequate procedures
 - Emphasis on schedule and production over safety



Impending Challenges

Nuclear industry is facing challenges due to:



Aging work force

(both within licensee & contractor organizations)



Increased demand for skilled personnel

Cost saving initiatives



Aging Work Force



- Many key personnel reaching retirement age
 - Loss of most experienced, skilled, & knowledgeable staff
 - Loss of institutional memory – at licensee & contractor
 - Need for more oversight when those most experienced in contract management & oversight are departing

Aging Work Force



- Aging of the individual worker
 - Many contracted tasks put high demand on memory, vision, strength, range of motion, & reaction capabilities
 - Mental & physical capabilities decline with age

Demand For Skilled Personnel



- Lack of qualified skilled personnel to replace retiring staff
 - Long term issue of fewer & fewer students entering science and engineering programs
 - Many supporting job positions will likely be difficult to fill
- Loss of nuclear contractors
 - Leaving the business or consolidating



Cost Saving Initiatives

- Increased outsourcing
 - Ranging from outsourcing tasks to entire department operations
 - Once major department operations are outsourced few companies plan to take the work back in-house
 - Benefits found when contractor is integrated into company's culture and objectives clearly defined & communicated



Cost Saving Initiatives

- Reductions of company personnel
 - Remaining staff must have technical & managerial skills to properly plan, coordinate, & oversee contractor work
- Mergers among contractors
 - Creating safety culture difficulties



New Responsibilities for Contractors



- Need for more structured & formal assessment of safety & economic nature of work
- Not all tasks have same safety or economic significance
 - Importance may change over time

New Responsibilities for Contractors



- Benefits of formal risk assessment
 - Document risk assumptions
 - Inform relevant parties
 - Basis for scope and timing of oversight/supervision

Formal Project Risk Assessment Process

- 1 Identify Safety Hazards
- 2 Identify Harm or Damage
- 3 Evaluate Risks
- 4 Document Findings
- 5 Review & Revise



Increased Responsibilities for Licensees

- Need to be an “intelligent customer”
 - Technical & managerial competence
 - to determine safety implications
 - to effectively oversee work activities
 - either in-house or from a 3rd party

Increased Responsibilities for Licensees



- Integrate contractor into licensee safety culture
 - Contractor should be considered part of the licensee organization & work to same safety & quality standards



Increased Responsibilities for Licensees

- Continuous communication
 - At all phases of the contract management process
 - More effective use of contractor skills/experience to assess risk and recognize safety significance of changing situations

Proactive Steps for Regulatory Oversight

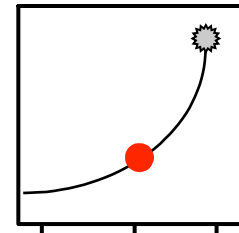
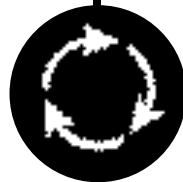


- Need to ensure licensees are taking proactive steps to address 3 key issues:
 - 1) Proper Planning
 - 2) Effective Communication – throughout the work process
 - 3) Continuous Safety awareness – by all parties

- 1) SKI Regulatory Guidebook - Management of Contractors

Guidebook Management of Contractors

Contractors



Past Present Future

| Regulatory Guidebook | Management
of Contractors



Conclusions

- Contractors, licensees, & regulators need to:
 - 1) Recognize the existing and future contract management situations they face
 - 2) Understand the safety implications
 - 3) Begin to take proactive actions
 - 4) Continue to refine the actions as the situations change
 - 5) Stay abreast of actions/programs that others are developing that might be appropriate for their situation