CAS Management and Scope - Source Requirement (2.a)

*"The contractor must establish an assurance system that includes assignment of management responsibilities and accountabilities and provides evidence to assure both the Department of Energy's (DOE) and the contractor's managements that work is being performed safely, securely, and in compliance with all requirements; risks are being identified and managed; and that the systems of control are effective and efficient."*

CAS Effectiveness Validation Source Requirement (2.b)

*The contractor assurance system, at a minimum, must include the following:*

- *(2.b(1)) "A method for validating the effectiveness of assurance system processes. Third party audits, peer reviews, independent assessments, and external certification may be used and integrated into the contractor's assurance system to complement, but not replace, internal assurance systems."*

- *(2.b(6)) "Metrics and targets to assess the effectiveness of performance, including benchmarking of key functional areas with other DOE contractors, industry, and research institutions."*

| Level 1 –Implemented and Meets Requirements | Y/N | Comments |
|---|---|---|
| Roles & Responsibilities for assurance systems are clearly defined and documented | | |
| Assurance system processes are used to assure that work is performed safely, securely and in compliance with requirements | | |
| Risks are identified understood and managed | | |
| Performance metrics established and reviewed by contractor management and made available to DOE and Corporate Management | | |
| Metrics and targets are used to assess the effectiveness of performance | | |
| A method for benchmarking of key functional areas with other DOE contractors, industry, and research institutions is established | | |
| Establish a method for validating the effectiveness of assurance systems | | |

| Level 2 – Enhanced | Score 1-5 | Comments |
|---|---|---|
| Verify Roles, Responsibilities, Accountabilities, Authorities (R2A2) (management system/functional area/assurance systems) is flowed down and fully implemented | | |
| Performance metrics are established at multiple levels in the organization | | |
| Performance metrics and metrics system periodically reassessed for effectiveness including benchmarking | | |
| Performance metrics, including leading and lagging indicators, are supportive of predictive performance | | |
| Management engagement with performance metrics are interactive and leads to improvement actions | | |
| Performance information/data flows up and down the organization | | |
| Management reviews of performance data periodically drill down to greater detail in select functional areas | | |
| Management reviews performance data periodically and includes DOE and Corporate/Parent Companies | | |
| Effectiveness reviews are integrated with other process/system reviews (ISMS/QA/Business/Financial, etc.) | | |
| Independent assessments are planned/scheduled based on prioritized areas of risk | | |
| Multiple external reviews formats are employed (3rd party audits, certifications, parent reviews, etc.) | | |
| Site specific criteria as needed | | |

**Self-Assessment and Feedback- Source Requirement** *(2.b(2))*

*"Rigorous, risk-informed, and credible self-assessment and feedback and improvement activities. Assessment programs must be risk-informed, formally described and documented, and appropriately cover potentially high consequence activities."*

| Level 1 – Implemented and Meets Requirements | Y/N | Comments |
|---|---|---|
| An assessment program that formally describes a rigorous, risk-informed, and credible self-assessment process, including feedback and improvement activities | | |
| Rigorous self-assessment activities are performed | | |
| Risk-informed basis for self-assessment selection is used | | |
| Self-assessments are credible and are performed in accordance with requirements | | |
| Self-assessments appropriately cover potentially high consequence activities | | |

| Level 2 - Enhanced | Score 1-5 | Comments |
|---|---|---|
| An annual and multi-year strategy/plan is developed to integrate various input and ensure that all functional areas and facilities are periodically assessed | | |
| Assessors are trained in effective assessment techniques | | |
| Lead Assessors are qualified in effective assessment techniques | | |
| The assessment strategy/plan includes required and management directed assessments | | |

| Level 2 – Enhanced (continued) | Score 1-5 | Comments |
|---|---|---|
| The quality of assessments is evaluated and results are used to promote assessment improvement | | |
| The assessment strategy/plan is periodically updated to address emergent issues based on performance monitoring | | |
| Risk determinations for assessment planning consider safety basis impact, level of hazard, potential impact to mission, and degree of change associated with the activity, business vulnerabilities, etc. | | |
| Assessment program health is monitored, such as the issues found during assessment and the number of issues identified from events and external assessments | | |
| Management supports the assessment program by participating themselves and providing resources to participate | | |
| Management owns results of the assessment program and promotes action resolution | | |
| Effective software is used to facilitate the performance of assessments and the processing of assessment results | | |
| Assessments are viewed by the staff as a path to improvement rather than a necessary evil | | |
| Site-specific criteria as needed | | |

**Issues Management - Source Requirement** *(2.b(3), (2.b(3)(a)*

- *(2.b(3)) "A structured issues management system that is formally described and documented and that:"*

- *(2.b(3)(a)) "Captures program and performance deficiencies (individually and collectively) in systems that provide for timely reporting, and taking compensatory corrective actions when needed."*

**Issues Management - Source Requirement** *(2.b(3)(b))*

*"Contains an issues management process that is capable of categorizing the significance of findings based on risk and priority and other appropriate factors that enables contractor management to ensure that problems are evaluated and corrected on a timely basis. For issues categorized as higher significance findings, contractor management must ensure the following activities are completed and documented:*

- *(2.b(3)(b)(1)) A thorough analysis of the underlying causal factors is completed;*

- *(2.b(3)(b)(2)) Timely corrective actions*

- *(2.b(3)(b)(3)) Effectiveness review*

- *(2.b(3)(b)(4)) Documentation of the analysis process and results*

- *(2.b(3)(b)(5)) Communicated to Senior Management (Not included here see Performance Analysis)*

| Level 1 – Implemented and Meets Requirements | Y/N | Comments |
|---|---|---|
| A structured issues management system that formally describes and captures program and performance deficiencies (individually and collectively) and provides for timely reporting, that establish and manage timely corrective actions and compensatory corrective actions when needed | | |
| Categorizes the significance of findings based on risk and priority | | |

| Level 1 – Implemented and Meets Requirements (continued) | Y/N | Comments |
|---|---|---|
| Tailors response for higher significance findings to ensure:<br><br>▪ A thorough analysis of the underlying causal factors is completed;<br>▪ Timely corrective actions<br>▪ Effectiveness review<br>▪ Documentation of the analysis process and results | | |

| Level 2 – Enhanced | Score 1-5 | Comments |
|---|---|---|
| The number of systems used for issue management is minimized, ideally to a single system or an integrated system, to enhance effectiveness of analysis and trending | | |
| Screening teams are established for review significance and ownership determinations and closure appropriateness | | |
| Individuals involved with Issue management processes are trained and proficient | | |
| The management team is familiar with and ensures the use of causal analysis techniques. | | |
| Corrective action plans are reviewed by the appropriate level of management to ensure effectiveness and timeliness | | |
| Management promotes the use of the issues management process as an important core part of their business, encourages a low threshold for issue reporting and positively recognizes personnel for reporting issues | | |

| Level 2 – Enhanced (continued) | Score 1-5 | Comments |
|---|---|---|
| Metrics related to issues management are routinely reviewed and evaluated by the senior management team to monitor the health of the program. | | |
| Management review teams are employed to routinely monitor issues and corrective actions with a higher degree and level of oversight provided for more significant issues | | |
| Issue management software supports the monitoring of schedules of action resolution, including notices to assignees and management for upcoming action dates and overdue actions | | |
| Plans are developed for benchmarking reviews to enhance effectiveness for issue management system | | |
| Site-specific criteria as needed | | |

*Feedback & Improvement – Source Requirement (2.b(5))*

*"Continuous feedback and improvement, including worker feedback mechanisms (e.g., employee concerns programs, telephone hotlines, employee suggestions forms, labor organization input), improvements in work planning and hazard identification activities, and lessons learned programs."*

| Level 1 – Implements and Meets Requirements | Y/N | Comments |
|---|---|---|
| Methods for continuous feedback and improvement, including worker feedback mechanisms are established | | |
| Methods for continuous feedback and improvement for work planning and hazard identification activities are established. | | |
| Methods for continuous feedback and improvement for lessons learned programs are established. | | |

| Level 2 – Enhanced | Score 1-5 | Comments |
|---|---|---|
| Managers routinely interface with workers to capture worker feedback. Results of interface opportunities are documented and observed issues are captured in the issues management system | | |
| Managers support the use of worker-led learning teams or other Human Performance Improvement (HPI) tools to identify and recommend workplace improvements. | | |
| Fact findings are performed soon after events to provide information needed for causal analysis | | |
| Operating experience/lessons learned are used throughout the organization and workers know how to create and access operating experience/lessons learned information | | |
| The use of operating experience/lessons learned information is monitored and trended | | |

| Level 2 – Enhanced (continued) | Score 1-5 | Comments |
|---|---|---|
| Responsible managers and subject matter experts participate in industry working groups and benchmarking reviews to share experiences and bring improvement opportunities to their programs | | |
| Continuous learning is valued by the management team, as evidenced by the strong application of internal and external operating experience/lessons learned | | |
| Site-specific criteria as needed | | |

**Performance Analysis (Communication and Use of Metrics) - Source Requirements*(2.b(3)(b)(5) and 2.b.(6))***

- *(2.b(3)(b)(5)) Communicates issues and performance trends or analysis results up the contractor management chain to senior management using a graded approach that considers hazards and risks, and provides sufficient technical basis to allow managers to make informed decisions and correct negative performance/compliance trends before they become significant issues."*

| Level 1 – Implements and Meets Requirements | Y/N | Comments |
|---|---|---|
| Issues and performance trends are communicated up the contractor management chain to senior management using a graded approach that considers hazards and risks | | |
| A method is established that provides performance analysis results that includes a sufficient technical basis to allow managers to make informed decisions and correct negative performance/compliance trends before they become significant issues | | |

| Level 2 – Enhanced | Score 1-5 | Comments |
|---|---|---|
| Management review teams are employed to routinely monitor issues and corrective actions with a higher degree and level of oversight provided for more significant issues | | |
| Trend codes are assigned to issues in order to support the analysis of performance data | | |
| A metrics dashboard is used to provide management a tool for highlighting program elements with changing performance | | |
| Performance data is reviewed to identify early indications of adverse trends. | | |
| Key performance data is periodically reviewed and evaluated by corporate/parent company management | | |

| Level 2 – Enhanced (continued) | Score 1-5 | Comments |
|---|---|---|
| Management understands, supports, and values the use of performance trending through metrics and analysis as evidenced by actions taken | | |
| The organization routinely benchmarks its performance against other projects and industry standards | | |
| Performance analysis processes are periodically assessed and refreshed as needed to ensure effectiveness | | |
| Site-specific criteria as needed | | |

**Program Implementation - Source Requirement (2.c)**

- *"The contractor must submit an initial contractor assurance system description to the Contracting Officer for DOE review and approval. That description must clearly define processes, key activities, and accountabilities. An implementation plan that considers and mitigates risks should also be submitted if needed and should encompass all facilities, systems, and organization elements. Once the description is approved, timely notification must be made to the Contracting Officer of significant assurance system changes prior to the changes being made."*

**Program Monitoring -Source Requirement (2.d)**

- *"To facilitate appropriate oversight, contractor assurance system data must be documented and readily available to DOE. Results of assurance processes must be analyzed, compiled, and reported to DOE as requested by the Contracting Officer (e.g., in support of contractor evaluation or to support review/approval of corrective action plans)."*

**Timely Communications – Source Requirement (2.b(4))**

- *Timely and appropriate communication to the Contracting Officer, including electronic access of assurance-related information."*

| Level 1 – Implements and Meets Requirements | Y/N | Comments |
|---|---|---|
| An initial contractor assurance system description is submitted to the Contracting Officer for DOE review and approval. | | |
| A method is established for timely notification to the Contracting Officer of significant assurance system changes prior to the changes being made | | |
| CAS data is documented and readily available to DOE to facilitate appropriate oversight | | |
| A method is established for communicating and reporting to DOE the results of assurance processes that have been analyzed and compiled, as requested by the Contracting Officer | | |
| Timely and appropriate communication to the Contracting Officer, including providing electronic access of assurance-related information | | |

| Level 2 - Enhanced | Score 1-5 | Comments |
|---|---|---|
| CAS Description documents are periodically updated and changes are reviewed with the site DOE office prior to submittal to ensure concurrence | | |
| A partnership is established with DOE that promotes the healthy interaction and exchange of performance information regarding issues and trends | | |
| All levels of management are trained in Human Performance Improvement (HPI) tools and champion their use | | |
| Metrics are established to monitor the effectiveness of management oversight such as time in field | | |
| Managers understand, value, and routinely use assurance system tools for monitoring and improving their programs | | |
| Independent Assessments of CAS elements are periodically performed | | |
| Management reinforces a strong safety culture where employees are encouraged to raise issues and report their own mistakes | | |
| Site-specific criteria as needed | | |