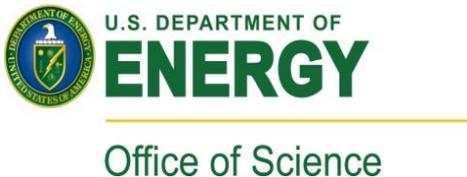


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**DOE Fermi Site Office  
Fermi National Accelerator Laboratory  
Fermi Research Alliance, LLC**

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Assurance System Peer Review  
Out-Brief Presentation  
August 2011



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# Outline of Briefing

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- Summary of Results
- Observations by Key Assurance Role
  - Corporate Office
  - Laboratory Management
  - Site Office
- Notable Practices
- Improvement Opportunities
- Path Forward for the Team

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# Summary Impressions

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## Overall Assessment:

- All parties are focused on mission accomplishment and eliminating barriers rather than compliance - *“Stamp out creeping bureaucracy” Robert R. Wilson*
- A solid, trusting relationship among FSA, FSO and Fermilab has been built which supports mission accomplishment and the long term viability of the Lab
- The preparation for this review provided enhanced understanding of roles, reinvigorated the partnership, and increased transparency among all three parties essential to CAS implementation
- Some CAS elements are mature (e.g., ES&H, Finance) but not integrated or consistently implemented; however, most elements of the CAS are newly constructed, documented, and/or implemented with little performance or effectiveness data as a system
- While directionally correct, the design and implementation approach appears to be somewhat of an “overlay” on structures, processes and systems that seem to work vs. integral to them
- All parties are “ready and willing” with a shared vision, but a plan and a project management approach are needed to make it happen

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# Observations: Corporate Parent

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- FRA is executing its governance role through:
  - An engaged Board with a diverse membership appropriate for Fermilab's mission
  - A well constructed committee structure (visiting and standing)
- FRA providing excellent stewardship for Fermilab:
  - Investments:
    - Corporate reach-back
    - URA visiting Scholars program
    - Strategic Outreach – advocacy
    - Executive Education from U of C
    - College tuition support – scholarships; tuition remission program
    - 10 joint faculty appointments at Lab and U of C
    - Lab collaboration council – including seed grants for scientific endeavors
    - Over \$10M has been invested by FRA since 2007 in Fermilab
  - Committee oversight:
    - Physics Committee – staffing
    - Science Planning Committee – longer term mission work and capability planning
    - CAS Review Committee – assessed readiness for CAS Peer Review

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## Observations: Corporate Parent (continued)

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- There is regular, frequent, and effective communication between FRA, the Lab and FSO – excellent transparency; “*CAS has revitalized our partnership*”
  - FSO is invited to attend open session of the Board
  - Board interface and FSO meet every other week
- It did not appear that FRA and Fermilab understand that implementation of CAS is a shared responsibility:
  - FRA - Governance
  - Fermilab – Laboratory Performance Management

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# Observations: Laboratory Management

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- CAS implementation against the H clause was a very recent priority
  - Four of the ten H Clause requirements are in the initial stages of Institutional implementation:
    - CAS Implementation Plan
    - Institutional metrics and targets to assess performance
    - Trend Analysis
    - Integration of the assurance system with other management systems
- High reliance on Expert vs. Process-based systems (Fermilab's management culture appears highly dependent upon personal interactions)
- Clearer understanding of CAS (approach and methods) at lower levels of management
- Multiple areas are using CAS tools but implementation and use are not consistent nor optimized:
  - Issues Management and associated thresholds for inclusion
  - Trend Analysis, or independent verification and correction of negative / compliance trends before they become significant issues
  - Metrics or Key Performance Indicators

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## Observations: Laboratory Management (continued)

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- CAS is not yet integral to the lab's culture; implementation requires a significant cultural shift to be successful at Fermilab similar to the ISM mindset:
  - Systematic – process based
  - Formalized – documented
  - Ownership – line management
- FermiDash shows promise in delivering KPIs to management; doesn't appear to be any prioritization of existing metrics before all the metrics are loaded from existing sources
- Enterprise Risk Management Summary shows promise in delivering value to Lab Management, the Board, and the Site Office
  - Key risks are well understood by management: Project schedules; operational issues – running the accelerators; financial issues – cost and budget scenarios; cyber security

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## Observations: DOE Site Office

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- Site Office has a long standing and trusted relationship with the laboratory
- Relationship with FRA continues to mature: communications are routine and considered value-added
- Site Office has on-line access to a wealth of information providing transparency into lab operations
  - FSO sees the role of the FermiDash as critical to the maturation of CAS
- With regard to the evaluation of the contractor's performance:
  - Conduct a formal mid-year with FRA/Fermilab, but specific discussions regarding PEMP/notable outcomes occur on an on-going basis
  - Site Office evaluations are fairly well aligned with that of Fermilab, denoting some level of common understanding of mission risk
  - Site Office is envisioning an oversight approach that more fully aligns ongoing operational awareness (transparency into performance) with the CAS
  - FSO moving toward an approach of "insight" vs. traditional oversight

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## Observations: DOE Site Office (continued)

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- Site Office is reevaluating its oversight program under CAS:
  - Site has utilized tri-partite assessments for a number of years (Line, ESH, and FSO)
  - FSO will continue to hold near-term discussions with lab regarding integration of FSO assessments within overall lab assessment activities to further identify oversight efficiencies
- Site Office recognizes transition to increased contractor accountability requires changes in learned behavior for both the DOE and its contractors
- FSO already recognizes impacts from CAS:
  - Changes in relationship with corporate parent in terms of increased engagement and ownership
  - Enhanced integration at the Directorate level within the Lab
- FSO will see additional effectiveness from CAS when
  - DOE sees the corporate parent ask for feedback
  - The lab reaches back for support...just starting to be evident

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## Observations: DOE Site Office (continued)

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- FSO Manager envisions changes under CAS in terms of Site Office perspective and function:
  - A broader awareness of everything the Site Office is responsible for providing within the context of the Contract
  - Not reorganizing, but revisiting linkages between its Contract Management Plan, the APP, and its Oversight Plan
    - Contract is the vehicle for DOE's relationship with the Contractor
    - Getting the right people to provide the right outcomes
    - Focusing on results and less on processes (i.e. performance vs. compliance)
  - FY2012 is expected to be a transition year for FSO, but is dependent upon lab progress

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## Notable Practices

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- Open relationship between Lab and FSO forms a strong foundation for CAS implementation
- Transparency of information and access to Lab and Board meetings for FSO
- Development of the CAS End State document among Fermilab, FRA and FSO:
  - Provides clear statement of what is to be achieved
  - Can guide the development of project plan for CAS implementation/maturation
  - Can guide the assessment of CAS implementation and effectiveness
- Assignment of all contract clauses/orders/directives to responsible management system/manager is a good foundational step in implementing CAS:
  - Clear “line of sight” to requirement implementation
  - Clear accountability for implementation/compliance

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# Opportunities for Improvement

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- Refresh the “end state”
  - Develop a 1 to 3 year CAS vision for the Lab that is appropriate and scalable for future mission growth and projects
  - Process-centric vs. personality dependent
  - Sustainable performance management and assurance system
- FRA/FSO/Fermilab collectively “push pause” after cramming for the exam:
  - Internalize that CAS is not an “add on”; it should result in streamlining and fewer resources invested in all forms of assurance
  - Based on prep and review experience – re-baseline expectations and refresh end-state
  - Projectize CAS implementation
    - Build on the MS gaps, end state, and current status
    - Build and execute a resource loaded project plan
    - Identify a single person as the project manager responsible for implementation (utilize a well known consensus builder); determine who will own the system thereafter
  - Get better one step at a time, not perfect all at once (incremental improvement – e.g., use of metrics)
  - Start with practice -> then work documentation -> align rhetoric
  - Calibrate expectations on timing, performance, and outcomes of putting your CAS in place
  - Create a well paced, affordable lab improvement agenda

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## Opportunities for Improvement (continued)

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- Work on understanding all forms of performance – project, line, and operational
  - Enable complete understanding of performance (e.g. bring performance data together such as from multiple tracking systems)
  - Begin to do more insightful analysis of performance data; build this capability
- More fully utilize the Board and its Committees in CAS
  - Visiting Committee to status implementation; the Board should not be surprised about implementation status
  - Committees engaged in lab plan, peer reviews, capability reviews to assure alignment of need, strategy and messaging to key customers
  - Determine how the Board will support and enable the implementation of CAS
- Build a stronger alignment from lab strategy down through organizational unit/individual staff performance expectations
- Use available resources to help in the transition; Use the “*CAS Nation*” to benchmark, leverage, and advise
- Continue to partner to aggressively pursue opportunities for streamlining (e.g., combine FMFIA and CAS Assurance Letters)

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## Next Steps and Peer Review Team

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### Going Forward – Key Dates:

- Factual Accuracy Draft Available – September 15, 2011
- Integrated Comments Provided to Review Team – September 22, 2011
- Final Report – September 29, 2011

### Thank you!

- Corporate Parent and Chair: Anita Gursahani, UCOP
- Laboratory COO: Mark Murphy, COO Ames Laboratory
- Site Office Manager/DOE: Jeff Roberts, Argonne Site Office
- Assurance SME/Coordinator: Bryan Mohler, PNNL
- Assurance SME: Stephen Smith, JLab
- Assurance SME: Howard Hatayama, LBNL