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Critical Analysis Team Report Number 15

22 June 2000

The Critical Analysis Team has completed a very brief overview of the status of the silos project. In particular, the CAT is pleased that Silo 3 appears to be on the road to recovery. Information the CAT has received indicates significant progress toward a better managed and organized project. The CAT hopes that the Preliminary Design Package (to be received June 30th) will indicate a project building a sound technical basis.

The CAT is also pleased that construction management appears to be in place and functioning well in the field.

Below are a short list of concerns of the CAT, many of which have been mentioned in previous CAT reports:

Recommendation 15-1: The OU-1 project experience should be used as a test bed for lessons learned in contractor and subcontractor oversight of the site workforce. OU-1 is a much simpler project than OU-4, maximizing this concern. Determining the cause of OU-1 difficulties and identifying ways to mitigate them in OU-4 may have beneficial cost and schedule impacts.

Recommendation 15-2: FDF should train its source selection boards to ensure interviews do a better job of determining a contractor's project managers capability. The contractors' project managers for both AWR and Silo 3 have changed as the projects have moved forward. This points to a weakness in the bid interviewing process.

Recommendation 15-3: Project managers should be documenting project history (e.g. telephone records, field checks, construction photos, documented field change requests, etc.) with an eye toward claims. As the various silos projects move forward, claims avoidance and claims prevention activities become more important. Key project team members should have procedures and training to identify potential claims.

Recommendation 15-4: The CAT continues to review organizational charts as silos project changes personnel. While any project must evolve, the silos project appears to be evolving more than one might expect and should focus on the importance of continuity in project management.

Recommendation 15-5: On major procurement items (e.g. tanks, remote arms, etc.) FDF should be active in validating contractor progress. An example is the Framatome arm to be used in Silo 3. The CAT is encouraged that FDF has made site visits to determine the progress and applicability of the arm. Another example is an AWR procurement in which FDF has provided independent oversight of the procedures and QA programs of a subcontractor providing tanks to the project.



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Recommendation 15-6: FDF should standardize buttons and switches (e.g. coloring, action, types, off and on indicating lights, alarms) because the silos project will require site union workers to perform in multiple facilities for multiple contractors. Consistency and simplicity in instrumentation are important across facilities.

Recommendation 15-7: Time and motion studies for waste retrieval Silo 3 activities should be completed. The man-hours associated with operating and maintaining the Framatome arm may be much greater than anticipated, the CAT is concerned about the ability of this system (and delumper) to support the design basis retrieval rate.

Recommendation 15-8: The Framatome delumper should be tested to determine its capability to pulverize compacted Silo 3 waste to ensure it will work. The test could be a simple, inexpensive way to determine the effectiveness of this key piece of equipment.

Recommendation 15-9: Both Silo 3 and AWR should seriously consider an alternative to arm based retrieval in the event these technologies fail. While Silo 3 is more vulnerable to an arm based failure (because AWR presumably would be able to sluice absent the EMMA), fall-back positions are critical in projects such as this where so much is contingent on the operation of unproven remote arms.

Recommendation 15-10: The silos project should consider comparing existing project management systems to DOE Order 4700.1 philosophy and strengthen those areas that are not compatible. A new DOE-Headquarters initiative is preparing a project management manual to implement DOE Order 413.N, Life Cycle Asset Management. This manual will require a DOE 4700 structured approach to managing projects.