
Review Tracking Report

Review #:2007-002

Program: Conventional Facilities Advisory Committee (CFAC)

Date Performed: 5/8/2007

Date Closed:

Comments: Next meeting scheduled for September 25 and 26, 2007.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F01 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The committee suggests that the committee chairman and the project CF division director agree in advance on a charge letter for the meeting and the project documents needed in advance. This will help maximize the effectiveness of the committee meeting. More interactive discussions may be the most productive way to take advantage of the CF Advisory Committee.

Owner: Marty Fallier

Action: Develop agreed upon charge letter with committee chairman in advance of meetings.

Response: Charge letter to be developed in advance of meetings.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F02 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: It would be helpful for the committee to see the project responses to the previous committee report comments at the beginning of the next meeting.

Owner: Marty Fallier

Action: Develop responses to the previous committee report and provide to committee at the beginning of the next meeting.

Response: Responses to be provided at the beginning of the next meeting.

| | | | | |
|-----------------------|------------------|---------------------|-------------------------|----------------------|
| Finding #: F03 | Priority: | Status: Open | Scheduled Close: | Actual Close: |
|-----------------------|------------------|---------------------|-------------------------|----------------------|

Description: The tailoring approach to DOE CD approval is important to maintaining schedule. CD-3 approvals should be delegated to the Office of Science.

Owner: Jim Yeck

Action: Discuss with Program Office and include in PEP.

Response: To be discussed with the Program Office.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F04 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The cost and schedule presented at this meeting will change due to project response to changes in the DOE funding schedule. The affects could be significant in changing the construction sequence.

Owner: Steve Dierker

Action: Develop performance baseline in support of CD-2.

Response: Baseline schedule development underway for CD-2 review.

Review Tracking Report (Cont.)

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F05 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: A comprehensive programming document should be completed prior to proceeding with the major Title I design effort.

Owner: Marty Fallier

Action: Consider whether to develop a comprehensive programming document prior to proceeding with the major Title I design effort.

Response: Produced ACD 90% study to refine /develop program. Functions and Requirements for Title I in progress.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F06 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The project will need to provide a comprehensive list of major equipment types, pumps, fans, etc. limiting the selection to specific grades of industrial grade products that will meet the vibration design criteria. Emphasis should be placed on large rotating equipment, such as fans and pumps, with a clearly defined list of acceptable manufacturers. Design criteria should be established to minimize the vibration affects of the high pressure systems.

Owner: Marty Fallier

Action: Develop a comprehensive list of major equipment types, pumps, fans, etc. limiting the selection to specific grades of industrial grade products that will meet the vibration design criteria, with emphasis placed on large rotating equipment, such as fans and pumps, with a clearly defined list of acceptable manufacturers. Establish design criteria to minimize the vibration affects of the high pressure systems.

Response: An outline specification was prepared for T-I 90% however additional emphasis on industrial grade/vibration compliant equipment needs to be incorporated. Will be updated for final T-I. High pressure water system design will be by ASD with CF input into design criteria.

| | | | | |
|-----------------------|------------------|---------------------|-------------------------|----------------------|
| Finding #: F07 | Priority: | Status: Open | Scheduled Close: | Actual Close: |
|-----------------------|------------------|---------------------|-------------------------|----------------------|

Description: A provision for the accommodation and placement of user support equipment should be clearly defined. This equipment can be a major contributor to localized noise and vibration that can affect the beam line and those of neighboring users. The design should accommodate the placement of larger air compressors, vacuum pumps, water pumps, and fans. User exhaust fans should be placed outside the building envelope, they are typically roof mounted. Consideration should be given to the curved experiment hall roof. The future exhaust fans on the roof will require frequent access for maintenance.

Owner: Marty Fallier

Action: A specification for beamline design, including criteria for design and placement of user equipment will be developed as part of Title II design. A preliminary design for user equipment location, sizing & equipment exhaust will be prepared during Title I.

Response: Further evaluation of user beamline equipment and exhaust requirements will be required as beamline designs mature. A preliminary design for a common exhaust system and a segregated exhaust system for hazardous exhausts that can't be comingled has been prepared and will be included in the evaluation.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F08 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The location of the experiment hall mechanical rooms in the infield should be given additional consideration with regard to vibration. It was noted that some consideration is being given to moving this equipment into the Lab Office Buildings (LOB) located on the outfield wall which may provide better isolation of rotating equipment. This change may result in a construction cost savings. The consolidation of the LOB and the experiment hall air handling equipment could reduce costs.

Owner: Marty Fallier

Action: Evaluate infield vs building exterior routing of services for mechanical rooms.

Response: Evaluation indicated cost premium for routing utilities to exterior was >\$2.5M. Vibration analysis indicates minimal difference in vibration impacts. Exterior routing also hindered LOB design flexibility and future long beamline options.

Review Tracking Report (Cont.)

Finding #: F09 **Priority:** **Status:** Closed **Scheduled Close:** 9/25/2007 **Actual Close:** 9/24/2007

Description: The responsibility for the design philosophy for areas like temperature control and vibration mitigation is being pursued aggressively by the BNL conventional facility staff. It is not clear how this effort will be applied to the design work by the A/E firm. Past experience has shown that the A/E will always proceed with the most conservative approach usually resulting in increased costs to the project. Resolving these costs can result in project delays due to extended negotiations and costly redesign efforts. The design philosophy should be established early on in the Title I effort and the decision process clearly defined.

Owner: Marty Fallier

Action: Design responsibility needs to be identified and decision process clearly defined.

Response: Design philosophy for temperature control and vibration stability are developed jointly by A/E and CF Staff. Responsibility documented in A/E SOW. Design decisions made through joint concurrence of CF and A/E.

Finding #: F10 **Priority:** **Status:** Closed **Scheduled Close:** 9/25/2007 **Actual Close:** 9/24/2007

Description: The general structure for the CF team should be adequate to manage the work. Co-location of the team will be helpful to the project.

Owner: Marty Fallier

Action: Consider benefits of co-locating CF team.

Response: CF Staff all co-located in Building 817.

Finding #: F12 **Priority:** **Status:** Closed **Scheduled Close:** 9/25/2007 **Actual Close:** 9/24/2007

Description: The next major acquisition needed is the CF Assistant Director for Construction Management; this position should be filled in the near future with an experienced construction manager.

Owner: Marty Fallier

Action: Fill vacant position for Assistant Director for Construction Management

Response: S. Sawch joined the NSLS-II team on 9/10/07 as the Assistant Director for Construction Management.

Finding #: F14 **Priority:** **Status:** Closed **Scheduled Close:** 9/25/2007 **Actual Close:** 9/24/2007

Description: The experimental facilities interface manager should be hired as soon as possible and both interface managers should be part of the design review team.

Owner: Steve Dierker

Action: Fill vacant position for Experimental Facilities Interface Manager.
Assign interface managers to CF design review team.

Response: Lino Miceli joined the NSLS II team in June 2007 as the Experimental Facilities Interface Manager, joining the existing interface managers for the accelerator facilities and conventional facilities.

Finding #: F15 **Priority:** **Status:** Closed **Scheduled Close:** 9/25/2007 **Actual Close:** 9/24/2007

Description: The award of the AE Title I is awaiting CD-1 approval and a resubmitted proposal by HDR. The revised proposal and negotiation should be expedited to maintain the CD-2 schedule. The contract award is on the critical path so it should be awarded as soon as possible after CD-1.

Owner: Marty Fallier

Action: Award A/E Title I design as soon as possible after CD-1.

Response: The A/E T-I/II Contract was awarded in September 2007. The Advanced Conceptual Design contract was already in place and work was underway prior to the award of the A/E T-I/II contract.

Review Tracking Report (Cont.)

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F16 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: Currently there are no partial early design packages identified for the AE design, except site preparation. The project should determine if there are schedule advantages to issuing early concrete foundation/slab or structural steel design packages for construction. Structural steel delivery times at some recent projects have had excessive (up to 10 months from NTP to site delivery) durations for delivery.

Owner: Marty Fallier

Action: Consider schedule advantages that may be achieved by issuing early design packages for construction.

Response: Reevaluated planned construction packages and schedule impacts. The funding limited schedule would not benefit from early steel/concrete packages and coordination risks would be increased. Steel costs/delays have abated for now.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F17 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The success of using in house construction management with staff augmentation by a construction management subcontractor is dependent on the quality of the Assistant Director CF Construction Manager that is hired. The CM group should be on board in time to have a meaningful input on the constructability, construction sequence and schedule developed during Title I.

Owner: Marty Fallier

Action: Expedite contract for construction management subcontractor to support Title I efforts.

Response: Reevaluated planned procurement of CM services. Have broken effort into design phase services and construction phase services. Contract awarded and design phase services in progress.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F19 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: It is suggested that the Ring Building contractors be prequalified.

Owner: Marty Fallier

Action: Consider prequalification of potential Ring Building contractors.

Response: Procurement plan is for evaluated bids. It is anticipated that some measure of prequalification will be applied prior to solicitation as part of contractor outreach process. Will review with procurement group and CM.

| | | | | |
|-----------------------|------------------|---------------------|-------------------------|----------------------|
| Finding #: F20 | Priority: | Status: Open | Scheduled Close: | Actual Close: |
|-----------------------|------------------|---------------------|-------------------------|----------------------|

Description: The project should detail and integrate the procurement schedule into the total project schedule.

Owner: Steve Dierker

Action: Consider whether to detail and integrate the procurement schedule into the total project schedule.

Response: Development of advance procurement plans are underway and will be integrated into the project schedule for all divisions.

| | | | | |
|-----------------------|------------------|---------------------|-------------------------|----------------------|
| Finding #: F21 | Priority: | Status: Open | Scheduled Close: | Actual Close: |
|-----------------------|------------------|---------------------|-------------------------|----------------------|

Description: Specific contingency should be spread across the schedule based on the risks identified in the risk registry.

Owner: Steve Dierker

Action: Ensure that risks are accurately identified, and contingency is adequate.

Response: Development of risk registry and resource loaded schedule and contingency allocation for the entire project is in progress.

Review Tracking Report (Cont.)

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F22 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The contingency appears adequate for the stage of the project, but the committee did not review the detailed specific risks and associated contingencies.

Owner: Marty Fallier

Action: Ensure that risks are accurately identified, and contingency is adequate.

Response: Although not final for T-I, will provide updated risk information at the next meeting.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F23 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: Title I schedule is already aggressive so the team should consider reducing the number of Title I reviews that are scheduled.

Owner: Marty Fallier

Action: Determine whether the current schedule permits the scheduled number of reviews, and consider reducing this number accordingly.

Response: The T-I 50% review has been eliminated.

| | | | | |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|
| Finding #: F24 | Priority: | Status: Closed | Scheduled Close: 9/25/2007 | Actual Close: 9/24/2007 |
|-----------------------|------------------|-----------------------|-----------------------------------|--------------------------------|

Description: The CF team may want to review the durations for Title I and Title II design activities based on the actual design start date and negotiations with the AE. The construction schedule durations seem reasonable but recommend getting CM input as to whether this represents the most efficient execution of the construction.

Owner: Marty Fallier

Action: Consider whether to review the durations of the Title I and Title II design activities based on the actual design start date and negotiations with the AE.
Consider whether to get CM input as to whether the construction schedule represents the most efficient execution of the construction.

Response: A/E SOW revised in concert with discussions with A/E. CM preparing bottoms up schedule for comparison.

| | | | | |
|-----------------------|------------------|---------------------|-------------------------|----------------------|
| Finding #: F25 | Priority: | Status: Open | Scheduled Close: | Actual Close: |
|-----------------------|------------------|---------------------|-------------------------|----------------------|

Description: It is important to set up a procedural method of configuration control due to the serious impact that project changes can have on the CF cost and schedule.

Owner: Jim Yeck

Action: Continue to evaluate configuration control needs and implement a system that satisfies these needs.

Response: A project-wide configuration control system is in development. CF is currently using parameters matrix and action tracking log for configuration control.

| | | | | |
|-----------------------|------------------|---------------------|-------------------------|----------------------|
| Finding #: F27 | Priority: | Status: Open | Scheduled Close: | Actual Close: |
|-----------------------|------------------|---------------------|-------------------------|----------------------|

Description: The AE CF estimate should be traceable when brought into the BNL cost estimate and scheduling system.

Owner: Marty Fallier

Action: Consider whether/how to make A/E estimate traceable when brought into the BNL cost estimate and scheduling system.

Response: The A/E estimate has been mapped to the WBS at level 4 & 5 and is in process of being resource loaded into the schedule at lower WBS levels. Further consideration of how this can be integrated into the project cost estimate database is underway to provide a consistent level of information across all divisions.