



July 2009



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Independent Project Reviews

By Robert J. Heinzman

For major capital projects, structured reviews of progress and planning are often done at significant milestones/transition points to validate activities as being consistent with objectives and, as appropriate, to identify/review additional methodology, the pursuit of which could enhance the overall execution of the project. These Independent Project Reviews (IPRs) are often referred to as "Cold Eyes Reviews" since, in order to assure objectivity, the reviewers come from other organizations having little or no working experience with the project being reviewed. However, the reviewers usually have extensive experience with major capital projects in general, thus making them ideally qualified to perform an IPR.

Although the activities are intended to be "independent," the support of the assigned project team is essential in order to facilitate the transfer of valid information to the reviewers and to provide clarifications during their information gathering and review activities.

Objective

The primary objectives of a project IPR are to provide an impartial assessment of the overall status of the project, to appraise the adequacy of the plans, procedures and schedules, and to evaluate the project team's ability to achieve its stated Safety, Quality, Cost and Schedule objectives. The IPR can be requested to assess the project team's readiness to proceed to the next defined project milestone in terms of its definition, resource basis, development plans, and overall technical basis. In addition, the adequacy of the cost and schedule basis for the remaining execution work can be validated as well as the identification of potential leads for reductions in investment costs for the project.

Key Focus Areas

In planning for an Independent Project Review, particular attention should be drawn to the following project elements:

- **Coordination Procedures.** As the project transitions from a development mode to an implementation one, a formal coordination mechanism is needed to integrate the objectives of the various project functions, i.e., planning, operations, materials management, et.al.
- **Team Building.** When the project team is developed specifically for the project, an active team building program can be an asset in the pursuit of an organizational "vision."
- **Monitoring and Control Procedures.** Continual reassessment of the current work progress and the required quality of the planned deliverables, versus availability of resources needed to manage the project requirements and priorities.

Work Highlights

Heat Transfer Equipment



Continued to provide continuous, onsite fired equipment

and heat exchanger design and troubleshooting support at the engineering office of a major oil company.

Marine Terminal Engineering



Met with refinery, loading arm supplier,

and contractor personnel regarding a replacement loading arm project during an onsite visit at a refinery in Europe. Reviewed and made recommendations associated with the supplier's proposal to ensure that it met the necessary technical requirements. Follow-up review activities are anticipated as the project proceeds to detailed engineering, shop testing, and site installation and commissioning.

- **Change Management System.** An effective system that can control changes and ultimately assist in controlling cost and schedule.
- **Organizational Development.** Early initiation of organizational development and human resource planning with special emphasis on team members who may be destined for later project organizational assignments.
- **Organizational Management.** Existing organizational management systems and procedures that have been reviewed, validated, and updated as necessary for compatibility with the project and its planned objectives.
- **Document and Information Management.** Based on the knowledge that document management practices have grown beyond the traditional "file room" concept, information technology methods and computer tools have been created and tested in practice so as to provide the reliable and efficient handing of texts and data.

Methodology

Prior to the start of the IPR, its members review and understand the objectives of the IPR, current project design basis memoranda, project execution plans, and project organization. In addition, the IPR members can receive copies of cost estimates, estimate basis memoranda, coordination procedures, and copies of reports of any previous IPRs.

An IPR is often organized in functional areas with leaders identified for each area. IPR teams usually consist of three to five persons, although some persons can review more than one area. Depending upon project size and technical basis, there often may be as many as eight to twelve areas to be reviewed. These typically include: organization and staffing; engineering and facilities; materials management; execution planning and contracting; cost schedule and controls; management systems and procedures; government regulations and requirements; and other areas depending upon the scope of work.

A typical program for an IPR can include up to two days of in-depth presentations to the full IPR membership by the key project team personnel. Following that, IPR functional members meet with their project team counterparts for in-depth discussions in groups ranging in size from six to eight (usually about evenly split between project team and IPR members). Subsequently, follow-up sessions are held with project team members at all levels.

Close Out

Based on the in-depth discussions and upon the attainment of consistent positions, a draft of the summary closeout report is prepared for review by key members of the project team and the IPR. For any areas of the draft that are contentious, the lead members of the project team and the IPR will endeavor to reconcile the areas of concern. However, if reconciliation appears to not be possible, the lead of the IPR will undertake the responsibility for producing the final summary report which will be submitted to the project's management.

Summary

The purpose of this article was to provide the reader with a summary knowledge of the Independent Project Review process. Obviously, the content and activities for an IPR for any specific project will be dependent upon the characteristics and timing of the project. However, the principle objectives will remain virtually the same. The IPR, if properly done, can enable an owner to view the "forest" as being more than a bunch of trees.

Robert Heinzman has over 50 years experience in the development and management of major capital projects for the process industry. Specific expertise at management/supervisory and working level roles includes project management/engineering, contracting/subcontracting, project execution planning, cost engineering/control, construction management/engineering, schedule engineering/control. Please contact Vince Carucci (vcarucci@carmagen.com) if you'd like more information on Carmagen's process engineering expertise.

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