

Safety Audit Preparation and Documentation on Capital Construction Projects

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ABSTRACT

The Project Owner takes necessary steps to develop and maintain strong safety culture in the organization and on all construction projects. The Owner can then more effectively foster a strong safety culture on all of their construction projects, irrespective of whether the project is enrolled in an Owner Controlled Insurance Program (OCIP) or Contractor Controlled Insurance Program (CCIP). All through the project activities, safety audits are performed and corrective actions are taken.

In this paper the author will include various stages of safety audits, when to perform audit for greater effectiveness, the documentation and the distribution. The author will include various aspects of the audit process, from planning audit areas, conducting audits, reporting audit findings and tracking of Corrective Action Plan (CAP) until the project closed out. The author will include the following items:

1. Owner's Development of Safety Program and inclusion in the bid package.
2. Contract requirements for Safety manual submission by the contractor for Owner's approval.
3. Trainings provided by the Owner or Contractor or an independent third party to all individuals expected to perform construction work at the construction site.
4. Strict safety enforcement at the construction site.
5. Safety Audit briefing to the contractor and other key players at the project start and a brief audit check list items categories and format, to allow project staff to maintain documentation.
6. Safety Audit frequency, advance scheduling and notification to get maximum effectiveness.
7. Typical Safety Audit Findings documentation (records) as a measure of project safety performance.
8. Corrective Action Plan (CAP), tracking and allowable duration.
9. Back check of deficiencies correction, documentation review and safety measure status update.
10. Safety Audit Reports and updates. Proper filing of Audit reports as critical item to ensure adherence to internal standards and other governmental regulatory standards.
11. Entrance and Exit Interviews.
12. Safety Incentive Award.

By performing the safety audits effectively, the safety awareness of the program will increase, and accidents will be avoided/minimized, thus creating a safe environmental and regulatory compliance on the project.

GENERAL:

In order for any construction project to be safe and successful with low experience modification ratio, it is important for the Owner to get involved in the safety program, on day to

day basis, enforce, monitor, control, report a good safety program and audit it on a regular basis. Any updates and corrective action should be done immediately. This safety first and audit culture increases the awareness of the workers. Auditing the program keeps everyone on their toes and provides an extra safety management tool for their own benefit.

Owner’s Audit Program Preparation and Requirements:

The first step is the safety audit program preparation on the part of Owner, hiring qualified staff to prepare a plan. The Owner staff should prepare a step by step expectation and monitoring points (guides). Items such as when to submit the plan, what to include, responsibility, trainings, documentation, updates, corrective action, reporting and reward etc, should be included in this plan. The contents and expectation by the Owner from the contractor, should be a part of the requirement in the contract bid documents. The Owner should include some unannounced audits to keep everyone on the alert at all times. Contract should require the contractor to provide site specific Safety program submittal. The contract should include specific language on the Safety program submittal and its review and approval by the project Owner.

In order to keep the prime responsibility with the contractor and sub contractor, other specific details such as safety hazard analysis, pre-approval, site safety training, first aid/ safety training, contractor’s safety staff credentials, emergency evacuation plan etc, should be spelled out in the specification, as a requirement for the contractor to submit and implement. Safety Audit requirements should be a separate line item with potential- monetary and stop notices attached to it. (Audit Point 1)

Contractor’s Submission of Safety Plan with the Bid Documents:

Most Owners require the contractor to submit a generic corporate Safety Plan with the bid, in order to evaluate the past performance, loss time accidents and their Experience Modification Ratio (EMR). (Sometimes safety

plan is also evaluated as part of Pre-qualification of the contractor. (Audit Point 2)

Contractor’s Submission of the Project and Site Specific Safety Plan:

Now that the Owner has expressed his/her expectations from the contractor, the contractor submits the detailed and site specific safety plan, incorporating the Owner’s minimum contract requirements and any additional requirements their own Corporate office might have to give them a low EMR. A time frame of 30 days from the Notice to Proceed (NTP) and before the construction start is a reasonable expectation on larger projects. The approved Safety program is a critical component of the safety audit development, as the contractor will be held accountable for all elements contained in the Safety program. The review of the site safety plan should include, input from the Owner as well as Insurance representatives to assure that all the rules and regulations are addressed in the program. Contract language should also include a written statement that in the event of a discrepancy between the approved safety plan and a Local, State or Federal requirement, the most stringent (higher) standard shall apply. This plan must be approved prior to construction start. (Audit Point 3)

Contractor’s Key Safety Staff Approval:

Depending on the size of the project, there are several safety staff assigned by the contractor. The Resumes of the key safety staff must be submitted by the contractor for approval by the Owner. There must always be a single person responsible from contractor’s side for the overall safety program of the construction work. During his/her absence an alternate must be named in advance to perform that function. The responsibility should not be switched back and forth under a normal situation to maintain proper protocol. Other safety staff may be assigned by the contractor to assist him/her. The safety manager from Contractor’s side and from the Owner’s side must be in constant communication ,for the project safety. From the job function reporting point of view, it is important that the Contractor’s safety manager works independent of the site superintendent to maintain integrity,

and avoid any compromise or give safety dilution perception. (Audit Point 4)

Safety Training to the Entire Project Staff Working/Visiting the Site (Contractor, Owner, Designer and Others):

After the Notice to Proceed (NTP) and prior to work start, all workers, staff, consultants and contractors working on the construction site must be safety trained. The training should be specific for the type of work involved on the project. The training details must be pre-established. There should be one focal person assigned to provide this training. This person could be from the Owner's side or from the Contractor's side. In order to maintain the accountability, the contractor should maintain the documentation of all people trained on the project. A personalized hard hat with the sticker may be provided. The documentation of the date of the training and expiration date should be maintained. Should there be training update required, it should be monitored and flagged. For occasional visitors a small and quick version of safety training is recommended. Training must be mandated by the Owner for all contractor forces working on the project. The Owner may elect to provide some additional project specific trainings, (while mandating the completion of other training) to few key staff, These trainings may OSHA 10 hour, fall protection, crane and rigging or Environmental, SWPPP and likewise. All training records must be audited during the course of the construction project. (Audit Point 5)

Safety Trained Person's Adherence to the Safety Rules:

The training received carries no value if it is not practiced on the project. Strict safety and training contents enforcement at the construction site must be made. Contractor compliance with all safety and training rules is also an important audit area. This element will be audited on a daily and weekly basis as construction proceeds and new contractor and sub-contractor's crew arrive on site to perform various construction activities. A zero tolerance for violation of any safety and training requirements is crucial to ensure a safe workplace. Failure to properly

monitor and enforce this element will quickly erode the foundation of a successful safety culture. (Audit point 6)

Submittals, Construction Equipment and Work Plan for Specific Project Construction Activity:

The contractor must be required to submit a specific work plan, sequence of activities, special equipment/ tools required and job hazard analysis, for complex specific risk oriented work on the project. This submittal document must be reviewed and approved by the designer and other qualified safety staff. High risk activities must be monitored and paid special attention to avoid mishaps. Certain activities require working in pairs while others required constant supervision. The construction should proceed according to the pre-approved plan. Site conditions and specific time constraints may override the plan, should any unusual circumstance or imminent danger occur during the work activity. (Audit Point 7)

Daily Site Work Overview Safety and Other Tool Box Meetings:

It is advisable to conduct quick and short overview of the activity at the beginning of the day with the entire construction work crew. This helps in the daily activity log as well as avoids overlapping activities interference. In addition to the daily quick overview meetings, there should be other regular tool box meetings conducted on the project to share the information, lessons learned items, new development in the industry and other specific safety topics. A documentation of all the safety related meetings with the subject and attendance log must be kept at the project site for audit. (Audit Point 8)

Formal Scheduled Audits by the Owner's Safety Representative:

Owner representative should schedule meetings with the Contractor's safety representative and conduct formal audits of the safety program and specific plan. It could be quarterly or semi-annually, depending on the size of the project. Enforcement of various items on

the safety plan should be reviewed, documented and recorded. Any deficiencies found should be recorded and noted for the corrective action. A corrective action plan (CAP) must be requested from the contractor with the schedule of completion. Ground rules to follow, frequency of audits, advance scheduling where applicable and audit exit conferences with audited parties to explain exceptions and CAP process, must be included in the audit plan and discussed with the Contractor’s safety Manager, well in advance. (Audit Point 9)

Unannounced/Unscheduled Audits:

In order to keep all the project staff on alert at all the times, it is imperative to perform unannounced/ surprise audits to verify that the contractor and sub-contractors are performing daily operations, as per contract and safety plan/ program requirements. Such audits may include Personal Protection Equipment (PPE) audits to verify adherence to Project safety plan and OSHA requirements, Traffic Control Plan (TCP) audits verifying a stamped TCP from the local municipality or state agency on site and the traffic control adoption per the approved plan, crane/rigging audits to verify crane operator training completion and other critical lift plan elements etc. Unannounced surprise audits are effective in gaining a “real world” view of the contractor’s site safety performance and record keeping. (Audit Plan 10)

Entrance and Exit Conferences:

The Owner safety Audit staff should conduct entrance conference at the beginning of the project. The safety audit program must be explained and identified to the Contractor and key stakeholders at the pre-construction phase of project. At the same time after the audit, a closure of open issues is required. The auditor must have an exit conference with the contractor’s safety staff to explain their findings, required corrective actions and required schedule of completion of open issues.

Audit Schedule:

An audit schedule is developed and utilized to notify the contractor or sub-contractors of the scope of project. Unannounced

audits are not included in the audit schedule but are performed on an “as-needed” basis by the Owner. The formal audit schedule allows the contractor or sub-contractor to pull the appropriate documents and records prior to audit and enhances the overall effectiveness of the audited areas. Unannounced audit are sample check of the enforcement of few items.

On a typical three (3) years construction project, it is advisable to perform formal scheduled audit every 6 months with a close out of findings (open issues) within a month. Unscheduled Audits should be quick, short and specific. They could include enforcement of items such as personal protective equipment (PPE), house keeping, material storage, traffic control, site security, evacuation plan, training/ certification documents verification, trenching/ shoring, hazardous material removal/ transport, drug and alcohol program, forklift safety, electrical safety, crane/ rigging etc.

Audit Checklist:

Audit checklists are developed specifically for use by the Owner’s safety auditor. All checklists are provided in advance of scheduled audits to the party being audited. Unannounced audits may also use the previously developed audit checklists. Audit checklist will include auditor’s name, date of audit, location of audit, name of person(s) interviewed during the audit, audit area(s) with a description of the audit contents, comments on the individual audit area(s), results of audit area(s), a notification of whether a Corrective Action Plan (CAP) is required and general audit comments. All findings are shared with the audited entity or entities after the audit are concluded, at the exit interview. All CAPs must be agreed upon during the exit interview and the written CAP must be attached to the audit report for tracking purposes. CAPs completion must be verified and signed off. An updated audit report must be issued.

CAP must be appropriately verified by the auditing party/Owner’s representative. The process of verification of the CAPs closure (completion) must be defined. This must be completely documented as per the plan requirements. In the event of OSHA, CPUC or other regulatory entity involvement, regulatory staff may request an audit of your audit findings

and associated CAP so detailed records are imperative to verify compliance. Status reports on deficiencies that are in the process of being corrected but are not completed. It is important to maintain a complete record of the closed corrections status for auditors. OSHA/ CPUC and other regulatory agencies mainly focus on the process, proper documentation, open & closed corrective action plans (CAP) and audit trail of the Owner. They cite Owner and Contractor's for non compliance of the procedures.

Audit Findings Reporting:

Audit findings are formulated into official written reports for document control requirements. Audit reports should contain an executive summary, table of audited areas, actual audit checklist utilized in the audit process and corrective action plan as applicable. Follow up audits to verify the progress or completion of CAPs may be rolled into subsequent reports to show the process whereby the exceptions/ deficiencies are corrected. Some CAPs will naturally have a greater urgency for correction if Federal, State or Local regulations identified the exceptions/deficiencies or if any exception is an imminent danger to health or worker well being or general public. If the identified exception is an imminent danger, a specific time frame should be issued for the correction of the deficiency. A stop work order would be issued with no work to proceed until the exception is corrected and verified/signed off by the auditor.

Audit Reporting to the Government Agencies:

Major audit findings may be reported at the Federal, State and local regulatory agencies levels. This provides contractor's performance report on the project. If there are many severe incidences on the project, the contractor is put on a tough position for future projects. They can then plan on their preventive and corrective measures. Their insurance rates are likely to increase till they improve their safety program and bring back the confidence to the industry.

Safety Incentive Program:

The contractor should be recognized and rewarded for their good performance. The safety is a collective and team work by all the stakeholders on the project. A safety incentive program may be created to award contractor compliance and further foster the safety culture on the project. Making the safety audit process part of the overall criterion for project safety along with benchmarks for workers compensation injuries, lost time injuries and general liability claims, adds to the contractor realization that the Owner has a superior safety culture and will not compromise or allow sub-standard performance in project safety. Cost savings to the project Owner may be quantified by comparing claim history on the project with claim rates on comparable projects in the State.

CONCLUSION/RECOMMENDATION:

It is very important and imperative to conduct the safety audits on all projects – small or large. The step by step process helps a safety construction work at the site and creates a win-win situation for all the stakeholders. Detailing out the plan, participating and implementing it should be a normal business culture in the construction industry.