Post Occupancy Review and Lessons Learned Procedure

1. Purpose / Background
   The Laboratory and Facility Design and Construction Review Services (LFDCRS) SOP, calls for the team to conduct a Post Occupancy Review of EHS issues. The purpose of the Post Occupancy Review is to determine Lessons Learned. Lessons Learned are compiled in a document to enable their application in future construction projects, thereby continuously improving the process.

   A Lesson Learned is a “good work practice” or innovative approach that is captured and shared to promote repeat application. A lesson learned may also be an adverse work practice or experience that is captured and shared to avoid recurrence.

   The transfer of Lessons Learned to future projects provide the benefits of increased compliance, reduction in delays in project completion, reduction in project costs, improved relations with regulators, more efficient process, and a streamlined Certificate of Occupancy process.

   The Post Occupancy Review helps implement the MIT Environmental, Health and Safety Policy, which includes in part, “achieving and maintaining compliance with federal, state and local environmental, health and safety laws and good practices in all of our departments, laboratories, research centers, facilities and operations” and the Guiding Principles, in particular, #11 “standard operating procedures” and #14 “primary responsibility for EHS compliance”.

2. Scope
   Post Occupancy Review of EHS issues is conducted for all Capital Projects (new buildings and major renovations) and selected other renovation projects as determined by the Service Team Leader in coordination with the Project Manager and DLC.

3. Prerequisites
   None.

4. Procedures
   4.1 Post Occupancy Review
   At the beginning of the Project, identify key personnel (EHS, DOF Project Management and DLC) in the project life and describe the process as contained in this Post Occupancy Review and Lessons Learned Procedure so that they can begin to document/collect information as the Project proceeds.

   - Review should begin following Certificate of Occupancy and move to new building, no later than one month after the move has been completed.
   - Collect information from all stages of the building project.
   - Contact personnel to determine their experience in project, including: what went right/what went wrong.

   **Format of review as it pertains to EHS issues:**
   - Does completed building / renovation meet original user requirements?
o Are users satisfied with end product?
o Note areas of efficient design and functionality
o Note changes from original design. Was building designed and built to compliance with local codes or were post-design and/or post-construction modifications needed to satisfy local authorities?
o Note remedial work required, including any relationship to building design or construction (e.g., placement of evacuation routes, indoor air quality issues associated with building materials, building security concerns, etc.)
o Note changes in occupancy, specifically whether the space change has changed from a less hazardous use to a more hazardous use.
o Certificate of Occupancy reviews
o Note adequacy of EHS Review process: was EHS involved early enough and in enough detail, etc.
o Other comments / observations
o Review project meeting minutes, notes, emails, project documents and any other pertinent information on the project.
o Document notes etc.
o If necessary, discuss at meeting or by email.

Review EHS issues:
o Building designed and built to compliance with local codes
o Modifications/variances needed to satisfy local codes and authorities
o EHS decommissioning/decontamination concerns
o Environmental impact issues (site conditions, etc.)
o Asbestos or lead removal issues
o Transport, storage, use and disposal of hazardous materials (chemical, radioactive or biological)
o Areas to collect hazardous materials waste and nonhazardous, recyclable materials
o Type and amount of hazardous materials per floor
o Areas for receiving and distributing hazardous materials
o Green/sustainable building features –what features were considered, what was implemented, and obstacles (real or perceived) to features not considered or implemented.
o Crane set up
o Fire protection/life safety features
o Building security
o Emergency egress
o Review need for automatic sprinkler and fire alarm upgrade in renovations to surrounding existing buildings (Factory Mutual Global (FM) (MIT insurer) and Massachusetts Building Code requirements)
o Emergency preparedness and response
o Adequate access for emergency vehicles
o Building ventilation and exhaust
o Lab safety features
o Lab equipment (lasers, etc.)
o Construction mitigation plan — mitigation concerns to MIT Community: such as vibration/noise, dust, odors, debris, vehicle and pedestrian traffic, fire exiting during construction, temporary separation walls, crane operations
Early input from Cambridge Fire Department, Fire Prevention and Cambridge Inspectional Services and other relevant agencies (LEPC, MWRA, Cambridge Biosafety Committee, FM, others) during Conceptual/Planning and Design stages
- Satisfy Cambridge Local Emergency Planning Committee (LEPC) requirements
- Other EHS issues

- Develop final Post Occupancy Review Report which reviews EHS issues and identifies Lessons Learned (see Section 4.2 and Appendix A).
- Review by key personnel and others.
- Issue final report.
- Disseminate report to key personnel identified in section 4.1 and the LFDCRS Service Team.
- Make any necessary changes to existing SOPs or Design Guidelines.

4.2 Lessons Learned

4.2.1 Prepare Lessons Learned documentation.
Identify positive outcomes.
Identify opportunities for improvement.
Put into matrix that has the following (see Appendix A):
- Recommendations/action items/corrective actions
- Priority:
  - compliance
  - good work practice
  - information
- Resolution: Benefits of using the lesson and suggestion of how the lesson may be used in the future and transferred to future projects
  - Possibly posting information on web page
  - Transmitted to Project Managers
  - Revisions to MIT Building Systems Design Handbook
  - Revisions to SOPs
  - New SOPs
- Building Stages:
  - Conceptual Planning
  - Design
  - Construction
  - Commission Building/Certificate of Occupancy
  - Building in Use
  - Building Maintenance
- Responsible Party for implementing recommendations/action items/corrective actions

4.2.2 Review Lessons Learned prior to future projects.

4.2.3 Measure effectiveness of implementing lessons learned recommendations on future projects.

An official hardcopy of this document exists in the EHS Office or on the EHS website.
See Legal Disclaimer at:  http://ehs.mit.edu/site/content/legal-disclaimer
5. Roles & Responsibilities

5.1 The LFDCRS Service Team: in coordination with the EHS Project Review Team, Construction Safety Officer, DLCs and DOF, conducts a post Occupancy review of EHS issues and adds resolution of issues to Lessons Learned documentation which is on file at the EHS Office. The LFDCRS Service Team Leader or person designated by the Service Team Leader would have the lead.

5.2 DLC EHS Coordinator and DLC Management: Assist in conducting Post Occupancy Review of EHS issues.

5.3 DOF Project Manager/responsible DOF Senior Management and DLC Project Manager: Assist in conducting Post Occupancy Review of EHS issues and implementing any recommended changes that are relevant.

6. Training

N/A

7. Monitoring Requirements

N/A

8. Record Management

Post Occupancy review and Lessons Learned documentation will be kept indefinitely, electronically in the EHS Office by the Laboratory and Facility Design and Construction Review Services Team and updated as needed.

9. References

9.1 Appendix

Appendix A: Post Occupancy Review and Lessons Learned Report Template

9.2 Standards

DOE Standard-7501-99, The Corporate Lessons Learned Program

9.3 Other SOP/ SOGs

Laboratory and Facility Design and Construction Review Services

9.3 Supplementary Documents


Policy on Post Completion Reviews, Massey University, August 2003

Society for Effective Lessons Learned Sharing Fact Sheets: Lessons Learned Listserver; Lessons Learned Corrective Actions; Information Dissemination Methods; Lessons Learned Writing Tips

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Appendix A

Post Occupancy Review and Lessons Learned Report Template

Project Title:

Project Description:

Discussion of EHS issues reviewed:

Lessons Learned:

Identify positive outcomes.

Identify opportunities for improvement.

Put into matrix that has the following:

<table>
<thead>
<tr>
<th>Lessons Learned Recommendations</th>
<th>Priority By</th>
<th>Resolution: Benefits of using the lesson and suggestion of how the lesson may be used in the future and transferred to future projects by:</th>
<th>Building Stages</th>
<th>Responsible Party</th>
</tr>
</thead>
<tbody>
<tr>
<td>o compliance</td>
<td>o compliance</td>
<td>o Possibly posting information on web page</td>
<td>o Conceptual Planning</td>
<td></td>
</tr>
<tr>
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</tbody>
</table>

Contact information for additional detail:

Prepared By:

Date Issued:

Status: