PREDEC 2016 Conference
The Turnover Process at Chalk River Labs from Operations to Decommissioning
2016 February 16-18
The Turnover Process

Chalk River Laboratories

• 200 facilities (2 million square feet)
• New Government Owned/Contractor Operated (GoCo) organization (focus to accelerate the Decommissioning of legacy facilities)
• Turnovers need to be documented and managed to ensure Health, Safety, Security and Environmental (HSSE) risks are identified, eliminated or effectively controlled
Safe Shutdown

Permanent Safe Shutdown State Plan

• Declare a facility “redundant”
• Develop a permanent safe shut down state plan (PSSSP).

This document would include:

• Scope
• Description of facility (history, purpose)
• Current status (services, maintenance)
• Permanent safe shutdown activities performed
• Known Deficiencies
• Radiological and contamination levels
• Records (template in the Appendix)
License Amendments

Transferring Nuclear Facilities from an Operating State to a Storage-with-Surveillance (SWS) or Decommissioning State

• CNL – operates under a Site Licence and License Condition Handbook
  o *identify programs that must be implemented and maintained*
  o *contains a table of radioactive release limits*

• *The CRL Handbook provides compliance verification criteria for conditions set out in the licence*
  o *compliance criteria for each licence condition*
  o *appropriate delegation of authority to CNSC staff*
  o *reference to licensee documentation & codes and standards*
  o *reference to CNSC regulatory documents*
  o *specific commitments made by the licensee*
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Matrix Organization - Composed of various business lines

At CRL, CNL remains the licensee, regardless of the facility state (construction, commissioning, operations, decommissioning)
Storage-with-Surveillance (SWS)

- SWS - a period which the remaining structures, equipment, contaminated materials and site are kept in a safe condition under care and maintenance.
- The SWS Plan provides the following information:
  - purpose and scope of the plan
  - facility description and operating history, including any failures or known significant incidents
  - all functional remaining services and systems
  - the required monitoring, surveillance and testing activities required
  - existing building hazards including radiological, chemical, industrial and criticality control
CNL Internal Transfer - Operations to Decommissioning

CNL Transfer document & Transfer Certificate are prepared. This turnover document typically includes:

- Introduction and Purpose
- Facility Boundaries
- Known Deficiencies
- Facility Status
- Shutdown Status
- Hazards
- System / Equipment
- Drawings / Maps / Records
- Significant Environmental Aspects
- Inventory of Nuclear Materials
- Fire & Building Code Violations / Deficiencies
- Safety Related Systems List
- Regulatory Commitments
- Governing Documents
- Documentation and Records
- Interfaces
Detailed Decommissioning Plan (DDP)

The DDP should include the following elements:

• Brief description & history including incidents or accidents
• Statement about final radiological, physical and chemical end-state
• Description of any specific requirements/controls
• Remain gaps or uncertainties
• Decommissioning strategy & work packages
• Schedule, cost estimate and financial guarantee
• Description of the waste management plan
• Assessment of the potential environmental effects
• Information on the supporting programs (QA,ER,RP,EP,HR,OSH)
• List of federal and provincial regulatory agencies involved
• Final radiation survey requirements and listing of records and retention periods
KEY LESSONS LEARNED

• The CRL site has operated for more than 70 years, during the time facilities have been modified, cleaned up and re-used to support various missions over that time frame. Some of the facilities ceased operations in the 50’s and remain in Storage-with-Surveillance (SWS) today. Some of the historical data to support today’s decommissioning goal is either lost or there is no record available.
# KEY LESSONS LEARNED

Numerous issues that have affected configuration management

<table>
<thead>
<tr>
<th>Loss of Historical records</th>
<th>Quality of records</th>
<th>Completion of records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Destroys records facility in 1950’s</td>
<td>Poor quality scans and originals</td>
<td>Record Copy – Missing signature &amp; sign-off</td>
</tr>
</tbody>
</table>
KEY LESSONS LEARNED

Numerous issues that have affected configuration management

**Verification**
Information provided on the record is critical

**Configuration**
Physical plant configuration does not always match paper configuration

**Turn Over State**
In the past, the liability was turned over in an “as-is” state
KEY MESSAGE

Knowledge Management

Proper Shutdown & Turnover

Incorporate Lessons Learned
Thank you. Merci.

Questions?

Facility Manager
Facilities Decommissioning
Canadian Nuclear Laboratories

paul.pottelberg@cnl.ca
Tel. (613) 584-8811 ext 43842
Cell (613) 639-4173