EVOLUTION OF NUCLEAR CRITICALITY SAFETY TRAINING AT ATOMIC ENERGY OF CANADA LTD. TO MEET ITS CHANGING NEEDS

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Outline

• Introduction
• History
• Development of the Nuclear Criticality Safety (NCS) Training
• Results
• Continuing Improvements
Introduction

AECL
History

• Criticality safety was part of an overall nuclear materials control course

• Material did not meet all ANS 8.20 or the new Canadian regulatory document for NCS

• Tendency for criticality safety aspects tended to be obscured

• Training was provided to employees without real direction
Development of the NCS Training

- Gap analysis performed to identify deficiencies between existing material, ANSI standards and regulatory documents
- Scope for who needed training was expanded
- 5 Categories for employees were created
- Course materials organized using a standardized approach to training.
Development of the NCS Training

• Every employee starts at the same category
• Categories are based on work performed and location
• Amount of training will depend on categorization
Development of the NCS Training

Category A

Category B

Category C (ER)

Category C

Category D

UNRESTRICTED / ILLIMITÉ
Development of the NCS Training

- Management were directed to categorize employees
- Focus of the training was on Category C and D employees
- Field visits
- Developing basic awareness training
- Develop training specific to Emergency Responders
Results

• Initially all training was in class

• Computer based training seen as an alternative to reach a wider audience base

• Employees to have received Category A training risen from 729 to 2366 to date
Results

New 1 Day Training Attendance

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of people trained</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>61</td>
</tr>
<tr>
<td>2010</td>
<td>54</td>
</tr>
<tr>
<td>2011</td>
<td>204</td>
</tr>
<tr>
<td>2012</td>
<td>95</td>
</tr>
<tr>
<td>2013</td>
<td>204</td>
</tr>
</tbody>
</table>
Continuing Improvements

• Introduced computer based refresher for the one day of training

• Program is reviewing the initial Categorization

• Program will be reviewing area specific training