



Ontario Power Generation

Collaboratively Developed Vendor Trades Supervisor Training to Improve Human Performance

ONTARIO **POWER**
GENERATION



Agenda

- Darlington Nuclear Generating Station
- Darlington Refurbishment
- Performance Gap
- Developing a Solution
- The Solution
- The Results



Darlington Nuclear Generating Station





Darlington Nuclear Generating Station

- Located in the Municipality of Clarington in Durham Region, 70 km east of Toronto.
- 4 CANDU Nuclear Generating Units.
- Net Output: 3500 MW
- Provides about 20 per cent of Ontario's electricity needs, enough to serve a city of two million people.
- First Unit Complete: 1990.
- Refurbishment of the 4 units has begun.



Refurbishment

- Canada's largest clean energy project.
- Increase life of station by 30 years

Problem?

- Very large number of augmented staff required.
- Most of these are from outside industry.
- Therefore, large culture shift is required.
- Target population? Supervisors!



Solution: New Training Program

Traditional Approach:

- Create training program based on needs
- Impose requirement on Vendor

Our Solution:

- Collaborative development and delivery
- “One Team”



Solution: New Training Program

- Curriculum Review Board formed which included:
 - OPG training
 - OPG Human Performance
 - OPG Project Oversight
 - Representatives of 5 biggest vendors

- **Common goal:** Determine Training Requirements for Vendor Supervisors **As a Team**



Training Committee

- Determine program content
- Review and approve training products
- Review issues from field
- Key to program success





Training Program

Six Elements:

Prerequisite Training

**Nuclear Construction Supervisor
Academy (NCSA)**

Dynamic Learning Activity (DLA)

Field Observation and Coaching (O&C)

Oral Review Board (ORB)

Declaration of Competence



Pre-Requisite Training

Prerequisite Training

Nuclear Construction
Supervisor Academy
(NCSA)

Dynamic Learning Activity
(DLA)

Field Observation and
Coaching (O&C)

Oral Review Board
(ORB)

Declaration of Competence

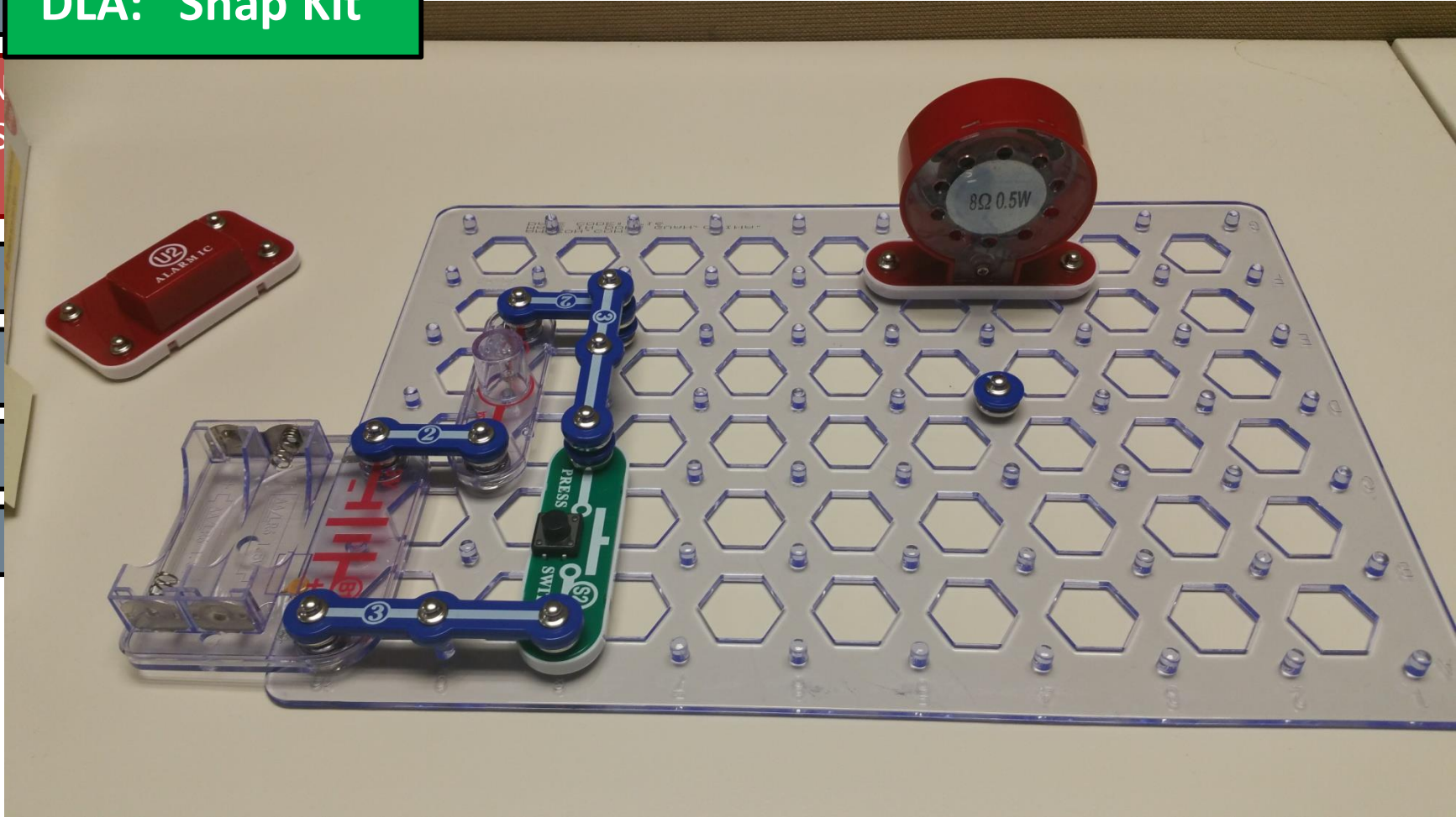
- OPG-Supplied training events
- Primarily Computer-Based Training
- Topics include:
 - Falling Object Prevention
 - Correct Component Verification
 - Health and Safety Law



Nuclear Construction Supervisor Academy

DLA: "Snap Kit"

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Modules

Nuclear Construction Supervisor Academy

Module 1 - Setting The Foundation... Why Nuclear Is Different

Module 2 - Supervisors Are The “Linchpins”

Module 3 - Setting Expectations

Module 4 - Observation and Coaching

Module 5 - A Bias Toward Safety



Dynamic Learning Activity (DLA)

Prerequisite Training

Nuclear Construction
Supervisor Academy
(NCSA)

**Dynamic Learning
Activity (DLA)**

Field Observation and
Coaching (O&C)

Oral Review Board
(ORB)

Declaration of Competence



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Paired O&C

Prerequisite Training

Nuclear Construction
Supervisor Academy
(NCSA)

Dynamic Learning Activity
(DLA)

Field Observation
and Coaching (O&C)

Oral Review Board
(ORB)

Declaration of Competence

- Two Paired O&C's completed for actual work in the field
- “Co-Piloting”





Oral Review Board (ORB)

Prerequisite Training

Nuclear Construction
Supervisor Academy
(NCSA)

Dynamic Learning Activity
(DLA)

Field Observation and
Coaching (O&C)

Oral Review Board
(ORB)

Declaration of Competence

- Conducted by Vendors, with OPG observer
- Ensures supervisors are ready to perform their role





Declaration of Competence

Prerequisite Training

Nuclear Construction
Supervisor Academy
(NCSA)

Dynamic Learning Activity
(DLA)

Field Observation and
Coaching (O&C)

Oral Review Board
(ORB)

Declaration of
Competence

- A letter from the Vendor to OPG which states that the supervisor is trained and competent for the role.





Training Program Summary

Computer and Classroom

Prerequisite Training

2 Days of Classroom

**Nuclear Construction Supervisor
Academy (NCSA)**

1 hour shop

Dynamic Learning Activity (DLA)

At Worksite

Field Observation and Coaching (O&C)

Interview

Oral Review Board (ORB)

Letter

Declaration of Competence



Results

- Field observations show an increase in Vendor's performance around safe work preparation
- Some performance gaps still existed





Continuing Training

- Review of field performance highlighted issues including Pre-Job Briefs, and Housekeeping
- A continuing Training program was designed and developed by the Review Board





Important Aspects for Success

- Collaboration between Vendor and Company
- Curriculum Review Board
 - Original Design of Program
 - Ongoing oversight and updates



Questions

