

D.C. Cook Nuclear Power Plant 5 Year Dose Reduction Plan



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5 Year Dose Reduction Plan

What is it?

- Summarizes the existing programs for dose reduction.
- Outlines exposure reduction activities to be implemented.
- Provides a vehicle to prioritize, direct, and track dose saving/ALARA initiatives.
- Periodically reviewed and revised as the station and industry demands change.

5 Year Dose Reduction plan

Why?

- Primary purpose is to establish exposure reduction activities which will help achieve dose reductions; projecting D.C. Cook into the first quartile of dose performers.
- Additionally, the Nuclear Regulatory Commission, the Institute of Nuclear Power Operations, American Nuclear Insurers, and others use cumulative radiation exposure as an indicator of nuclear plant performance.

5 Year Dose Reduction Plan

Who owns it?

- Owned by the Plant (buy-in from all departments)
- Approved by the Plant ALARA Committee
- Approved by the Plant Health Committee
- Engineering Study of Top 5 Reduction Initiatives

5 Year Plan Index

- Executive Summary
- Introduction
- Statement of Purpose
- Plant Dose History and Projection
 - DC Cook's Current 3 year Average
 - Industry Median
 - Industry Upper Quartile
- Administrative ALARA Program
 - ALARA Procedures
 - Training
 - ALARA Committees
 - Departmental Dose Reduction Plans
 - Shielding
 - Hot Spot Tracking
 - ALARA Cost Benefit Analysis

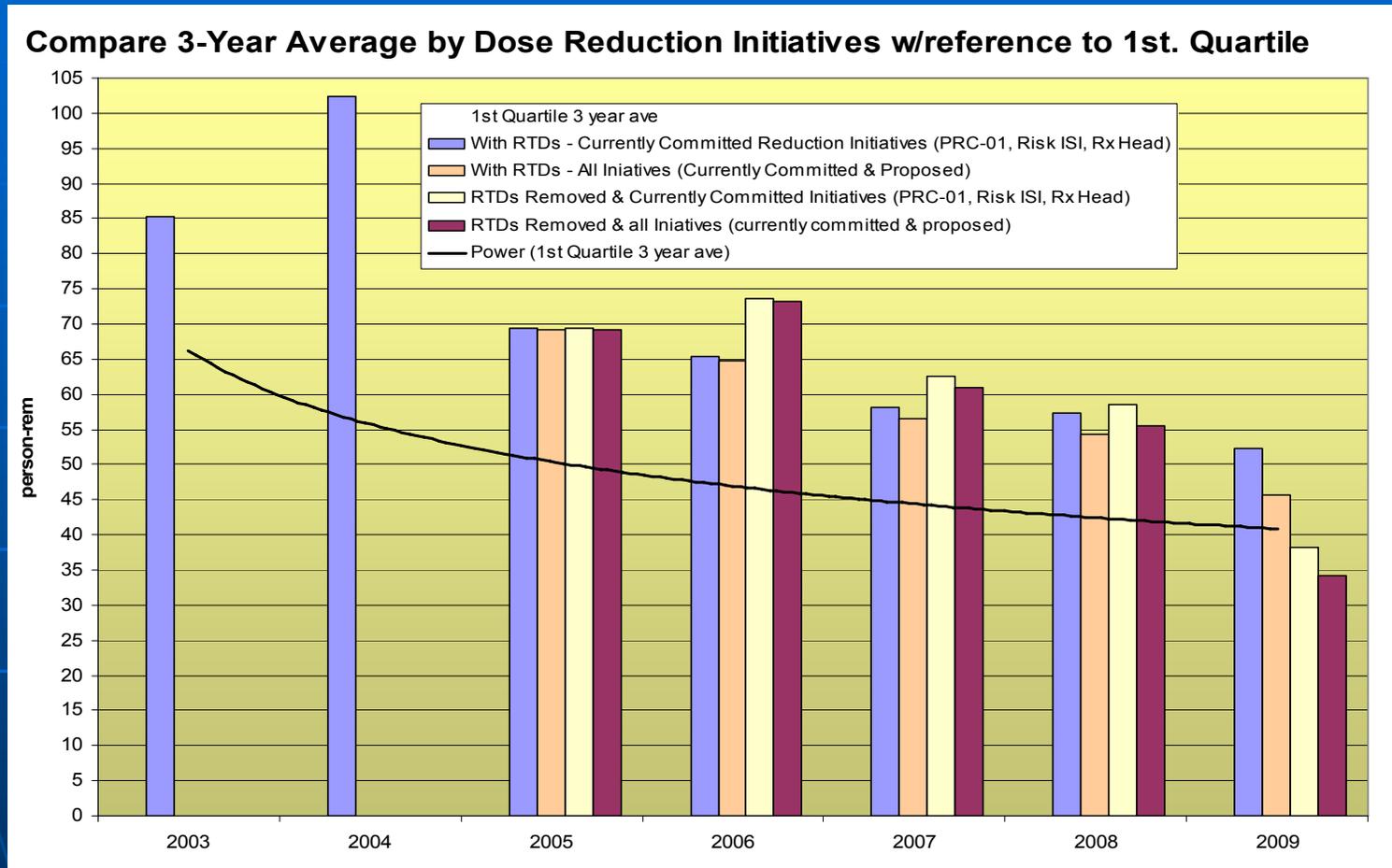
5 Year Plan Index (continued)

- Benchmarking
- Source Term Reduction
 - Source Term Reduction Team
 - Hot Spot Removal
 - Cobalt Reduction
 - Chemistry Program
 - Foreign Material Exclusion Program
- Worker Productivity Enhancements
 - ALARA Work Planning
 - ALARA In-progress and Post Job Reviews
 - ALARA Suggestion Program
 - Mock-ups
 - Exposure Trending
 - Contaminated Square Footage

5 Year Plan Index (continued)

- Effective Exposure Reduction Practices
 - Design Changes/System Enhancements
 - Remote monitoring
- Exposure Reduction Projects to be Investigated

DC Cook Dose History and Projections



The line in the graph above represents the projected top quartile performance through 2009. The bars indicate DC Cook's performance based upon our actions and depicts the actions required to achieve the desired results. The assumptions and dose reduction actions taken are detailed in section 9 of the 5-Year Plan.

Description of RTD Bypass Line Replacement

- RT Bypass Lines are removed and internal thermal couples are installed in the primary loop to accomplish similar operational functionality while achieving a significant reduction in Cook outage person-Rem.
- Specifically, a significant reduction in lower containment dose rates was achieved in Unit 1 after the removal of the RTD bypass lines were accomplished.

The reduction in outage person-rem attributable to the RTD bypass line replacement was not a one time dose reduction: the outage dose saving continue for the life of the station

This includes the additional 20 years of operation based on the approval by the US NRC in 2005 of the Cook, Units 1 & 2 plant life extension petition.

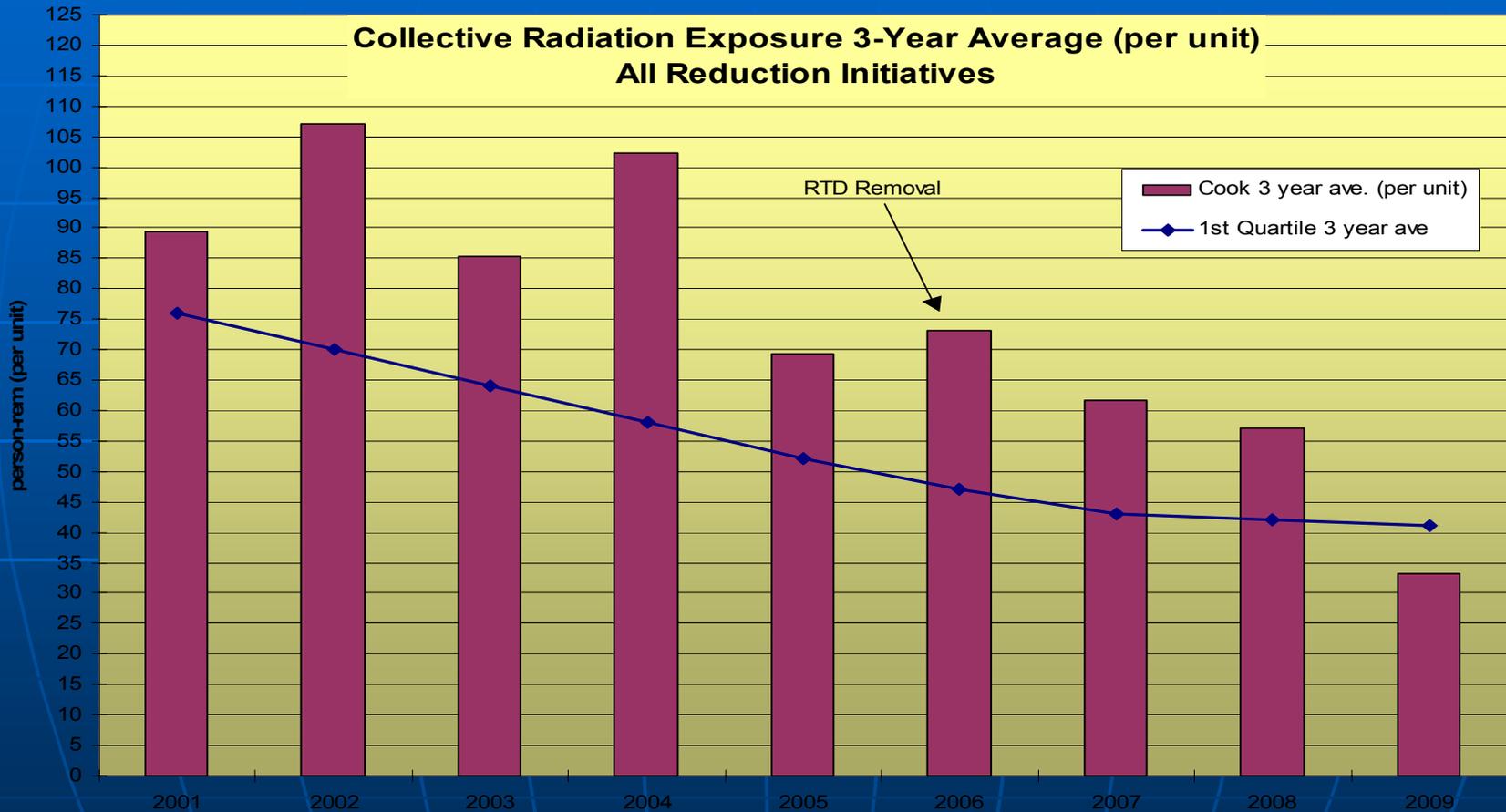
DC Cook Dose History and Projections

Year	Cook 3 year ave. (per unit)	Cook Annual	Cook delta to median	Industry Median	Cook delta To 1st Quartile	1st Quartile 3 year ave
1999	141	171	43	98	63	78
2000	105	338	23	82	26	79
2001	89	27	2	87	13	76
2002	107	278	30	77	37	70
2003	85	206	12	73	21	64
2004	102	130	33	69	44	58
2005	69	79	4	65	17	52
2006	73	230	13	60	26	47
2007	62	61	5	57	19	43
2008	57	52	2	55	15	42
2009	33	86	-20	53	-8	41

Shaded areas are forecasted numbers. Cook's annual dose projections are based upon removal of the RTD Bypass Manifolds and incorporation of the dose reduction initiatives listed in the 5-Year Plan. The projections also assume shorter refueling outage duration and provide the glide path to industry first quartile by 2009.

DC Cook Dose History and Projections

RTD Lines Removed & All Dose Savings Initiatives Incorporated (committed & proposed)



This graph details the red bar from the previous graph. The red bar represents DC Cook's lowest possible dose projections. It represents dose reductions accrued by the removal of the RTD lines and the implementation of the dose reduction initiatives listed in section 9 of the 5 Year Plan.

Completed Dose Savings Initiatives

- Installation of permanent S/G platforms
- Installation of permanent shielding on the NRV/QRV walls
- Use of PRC-01 Resin.
- Remote Monitoring Improvements
- Removal of Unit 1 & 2 RTD Bypass Lines in 2007

Dose Savings Initiatives

Implementation of the dose reduction initiatives listed in the 5 Year Plan is crucial for us to continue improving towards first quartile dose performance. Significant projects include:

- Storage of scaffold inside containment
- Storage of shielding in containment
- Installation of permanent fiber penetrations and communications lines
- Installation of jib cranes

ALARA Logos



The END

- Questions

