

Regulatory Perspective on 55.46(c) Simulation Facilities

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- Plant-referenced simulator use
- Continued assurance of fidelity
- 2014 IP-71111.11 inspections
- Understanding our approach
- Goal: one industry standard



Plant-referenced simulator use

- 10 CFR 55.46(c) addresses use of a plantreferenced simulator
 - for conducting operating tests as described in 55.45(a)
 - for requalification training as described in 55.59(c)(3)
 - for performing control manipulations that affect reactivity to establish eligibility for an operator's license as described in 55.31(a)(5).

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- Extent of US simulation facilities consisting solely of a plant-referenced simulator that meet the requirements of 10 CFR 55.46(c)
- Currently 70 plant-referenced simulators in use
 25 Boiling Water Reactor (BWR) simulators
 - 45 Pressurized Water reactor (PWR) simulators



Continued assurance of fidelity

- 10 CFR 55.46(d) addresses continued assurance
- Conduct performance testing in a manner sufficient to ensure fidelity and that fidelity is met
- Correct modeling & hardware discrepancies
- Maintain provisions for license application, examination & test integrity



2014 IP-71111.11 inspections

- IP-71111.11 simulator inspections have not revealed any generic issues of regulatory concern
- Overall, discrepancies are being identified and processed in corrective action programs
- Exam/Requalification Inspection Schedules are posted on NRC's public web site on the Operator Licensing page
- IP reports are in NRC's Agency-wide Document Access and Management System (ADAMS)



Understanding our approach

April 2011 Revision 4

Appendix I

Licensed Operator Requalification Significance Determination Process (SDP) Introduction

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In regard to licensed operator performance, the primary measure is the collection of examination results each time the facility licenses conducts requalification examinations equired by 10 CFR 55 SQ(2)(2) (e. e. requalification operating the is required annually, e requalification written examination is required hermitity). Any individual

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U.S. NUCLEAR REGULATORY COMMISSION **REGULATORY GUIDE**

OFFICE OF NUCLEAR REGULATORY RESEARCH

REGULATORY GUIDE 1.149

NUCLEAR POWER PLANT SIMULATION FACILITIES FOR USE IN OPERATOR TRAINING, LICENSE EXAMINATIONS, AND APPLICANT EXPERIENCE REQUIREMENTS

A. INTRODUCTION

This guide describes methods acceptable to the staff of the U.S. Nuclear Regulatory Comm (NRC) for complying with those portions of the Commission's regulations associated with approval or acceptance of a nuclear power plant simulation facility for use in operator and senior operator training and license examination operating tests and for meeting applicant experience requirements

Title 10, of the Code of Federal Regulations, Part 55, "Operators' Licenses" (10 CFR Part 55) (Ref. 1), defines the term "simulation facility" in 10 CFR 55.4, "Definitions," as meaning one or more of (Ref 1), Adrins the term 'simulation facility in 10 CFR 554, "Definitions," an meaning one or more of the following compounds, since or in constraints, used for either the partial contect of operating tests for operating, sensing expected, and the constraints of the partial context of operating tests for operating, sensing expected, partial (1), planterformed expecting, planter of the partial context of operating tests of the partial constraints, and the partial operation of the partial context of operating tests simulation devices, approved under 10 CFR 53-6406. In particular, planterformed and sensor operative fields, and the operating test and planterformed and sensor operative fields, and the operative fields, and the operative requirements for applications for operative data sensor operative fields, and the operative and the operative requirements for applications for operative data sensor operative fields, and the operative requirements for applications for operative data sensor operative fields, and the operative data sensor operative requirements for applications for operative data sensor operative fields, and the operative data sensor o

This regulatory guide contains information collection requirements covered by 10 CFR Part 5 that the Office of Management and Budget (OMB) approved under OMB control number 3150-0018. overed by 10 CFR Part 55

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RG 1.149, Rev 4

ATTACHMENT 71111.11	
INSPECTABLE AREA:	ATTACHMELTON Licensed Operator Requalification Program and Licensed Operator Performance
CORNERSTONES.	Initiating Events (10%) Miligating Systems (10%) Barner Integrity (10%) Enretgaroy Preparedness (10%)
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Protecting People and the Environment



Goal: One Industry Standard

- Encourage the use of a single industry consensus standard (preferably the most recently adopted standard, ANSI/ANS-3.5-2009)
- Use of a single standard facilitates one inspection approach



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- US plant-referenced simulator ANSI/ANS-3.5 standard commitments as of Jan 2015
 - 53 of 70 or 76% on ANSI/ANS-3.5-2009
 - 5 of 70 or 7% on ANSI/ANS-3.5-1998
 - 12 of 70 or 17% on ANSI/ANS-3.5-1985

