

April 23, 2008

Mr. Keith J. Polson
Vice President
Constellation Energy Group
P.O. Box 63
Lycoming, NY 13093-0063

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNIT 2 - SENIOR REACTOR
OPERATOR INITIAL EXAMINATION REPORT NO. 05000410/2008301

Dear Mr. Polson:

This report transmits the results of the senior reactor operator (SRO) licensing examination conducted by the NRC during the period of March 10 through March 17, 2008. This examination addressed areas important to public health and safety and was developed and administered using the guidelines of the "Examination Standards for Power Reactors" (NUREG-1021, Revision 9, Supplement 1).

Based on the results of the examination, eight of the nine SRO applicants passed all portions of the examination. One SRO applicant failed the Job Performance Measures section of the examination. The nine applicants included eight instant SROs and one upgrade SRO. Mr. D'Antonio discussed performance insights observed during the examination with training department personnel during an outbrief on March 14, 2008. On March 31, 2008, final examination results, including individual license numbers, were given during a telephone call between Mr. D'Antonio and Mr. Thomas Shortell, Manager of Training.

There is one finding of very low safety significance (Green) identified in this report. This finding involved inappropriate training on the evaluation of the pressure suppression pressure curve in the Primary Containment Control Emergency Operating Procedure.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). These records include the final examination and are available in ADAMS (Master File - Accession Number ML073040288; RO and SRO Written - Accession Number ML081010232; RO and SRO Operating Section A - Accession Number ML081010159; RO and SRO Operating Section B - Accession Number ML081010170; and RO and SRO Operating Section C - Accession Number ML081010219. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Mr. K. Polson

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Should you have any questions regarding this examination, please contact me at (610) 337-5046, or by E-mail at Samuel.Hansell@NRC.GOV.

Sincerely,

/RA/

Samuel L. Hansell, Jr., Chief
Operations Branch
Division of Reactor Safety

Docket No.: 50-410
License No.: NPF-69

Enclosure: Initial Examination Report No. 05000410/2008301

Mr. K. Polson

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Mr. K. Polson

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DRS Master Exam File (C. Bixler) (w/concurrences)

DRS File

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 50-410

License No: NPF-69

Report No: 05000410/2008301

Licensee: Constellation Energy Group

Facility: Nine Mile Point Nuclear Station, Unit 2

Dates: March 17, 2008 (Written Examination Administration)
March 10-14, 2008 (Operating Test Administration)
March 18-27, 2008 (Examination Grading)
March 22, 2008 (Final facility post exam comments, end of Examination period)

Examiners: Joseph D'Antonio Senior Operations Engineer (Chief Examiner)
Ray McKinley Operations Engineer
Gilbert Johnson Operations Engineer
Richard DeVercelly Reactor Technology Instructor (under instruction)

Approved by: Samuel L. Hansell, Jr., Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000410/2008301; exam dates 3/10-3/17, 2008; Nine Mile Point Nuclear Station, Unit 2; Initial Operator Licensing Examination. Eight of nine applicants passed the examination (no reactor operators, eight senior reactor operator (SRO) instants, and one SRO upgrade).

The written examinations were administered by the facility and the operating tests were administered by four NRC region-based examiners, one under instruction.

One Green finding was identified during this examination. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" rev 3, dated July 2000.

A. NRC Identified and Self-Revealing Findings

A Green finding was identified by the NRC because senior reactor operators were trained to interpret and execute the Primary Containment Control Emergency Operating Procedure (EOP-PC) step PCP-10 in accordance with guidance of the Transient Mitigation Guidelines (TMG) section of the Operations Department Manual. This guidance results in failure to perform the EOP step as written. As a result, exam crews observed by the inspectors did not perform an emergency reactor vessel depressurization when suppression chamber pressure exceeded the limits of the pressure suppression pressure curve. Short term corrective action included a night order book entry directing operators to follow the Primary Containment EOP as written. Long term corrective action for this finding will include clarification of the TMG to ensure EOPs are performed as written.

This finding is greater than minor because it affects the Mitigating Systems Cornerstone objective of maintaining reliable performance of the operators in responding to initiating events. This finding is not suitable for SDP evaluation, but has been reviewed by NRC management and determined to be of very low safety significance. This is because it involves an issue of procedure quality and implementation identified in a training and evaluation setting, rather than an operator error during an actual plant event.

REPORT DETAILS

1. REACTOR SAFETY

Mitigating Systems - Senior Reactor Operator (SRO) Initial License Examination

a. Scope of Review

The NRC examination team reviewed the facility developed written and operating initial examination and together with Nine Mile Point Unit 2 training and operations personnel verified or ensured, as applicable, the following:

- The examination was prepared and developed in accordance with the guidelines of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors, Revision 9, Supplement 1." A review was conducted both in the Region I office and at the Nine Mile Point Unit 2 plant and training facility. Final resolution of comments and incorporation of test revisions were conducted during and following the onsite preparation week.
- Simulation facility operation was proper.
- A test item analysis was completed on the written examination for feedback into the systems approach to training program.
- Examination security requirements were met.

The NRC examiners administered the operating portion of the examination to all applicants from March 10, 2008 to March 14, 2008. The written examination was administered by the Nine Mile Point Unit 2 training staff on March 17, 2008.

b. Findings

Grading and Results

Eight of nine SRO applicants passed all portions of the initial licensing examination. One SRO instant applicant failed the walkthrough portion of the operating examination.

The facility had no post-examination comments.

Examination Administration and Performance

No findings of significance were identified.

Enclosure

1RO2 Evaluation of Changes, Tests, or Experiments

a. Scope of review

The examiners observed the execution of Emergency Operating Procedures (EOPs) during the simulator examination and evaluated the facility justification for grading operator actions.

b. Findings

Introduction. A Green finding was identified by the NRC because senior reactor operators were trained to interpret and execute the Primary Containment Control Emergency Operating Procedure (EOP-PC) step PCP-10 in accordance with guidance of the Transient Mitigation Guidelines (TMG) section of the Operations Department Manual. As a result, the crews did not perform an emergency reactor vessel depressurization when suppression chamber pressure exceeded the limits of the pressure suppression pressure curve. This inappropriate guidance resulted in the failure to perform the EOP step as written.

Description. The performance deficiency was the result of initial operator instructors training operators to execute EOP-PC step PCP-10 in accordance with the guidance of the TMG rather than following the explicit wording of that EOP.

Boiling Water Reactor (BWR) EOPs are based on the BWR Owners Group Emergency Response Guidelines / Severe Accident Guidelines (EPGs/SAGs) which provide a step by step description of the required contents of each EOP. Individual plants then develop Plant Specific Technical Guidelines (PSTGs) and plant specific EOPs. Any safety significant differences between the owner's group EPGs/SAGs PSTGs requires documentation of justification and explanation in a plant specific differences document. These differences include "editorial changes incorporated to clarify the intent of the EPG/SAG steps" and "deviations from the technical basis documented in Appendix B of the EPGs/SAGs".

The TMG is not part of the PTSG. However, this section of the Operations Department Manual provides explanations and guidance for EOP implementation which, in the case of EOP-PC step PC-10, rises to the level of a deviation from the ERG technical basis. This step requires the operators to initiate an emergency reactor vessel depressurization if primary containment pressure cannot be maintained within the limits of the pressure suppression pressure curve. Paragraphs 2.4.1, 2.4.2, and 2.4.3 of the TMG state that the PSP curve will not be evaluated until drywell sprays have been placed in service and have been determined to be ineffective. This is a deviation from the ERG/SAG basis which, as written, states that not being able to remain within the safe area of the curve is evidence of ineffective sprays. The examiners determined that the TMG interpretation was not justified.

Three operator exam crews implemented the inappropriate TMG written guidance during the administration of the same dynamic simulator operating test. The simulated

equipment malfunctions and increase in primary containment pressure should have resulted in the SROs directing a reactor vessel emergency depressurization when the pressure suppression pressure curve safe limit was exceeded. Instead, the SROs delayed execution of the emergency depressurization in an attempt to first initiate primary containment cooling sprays. On average, the pressure suppression pressure safe limit was exceeded for 15 minutes before the SROs directed the EOP required reactor vessel emergency depressurization. All primary containment parameters remained below design limits during all three simulated events.

Analysis. This finding is greater than minor because it affects the human performance attribute of the mitigating systems cornerstone. Specifically, Nine Mile Unit 2 trained operators to implement EOP-PC step PCP-10 in a manner that deviated from the requirements of the BWROG EPG/SAG and the PSTG for that step. This adversely impacts the objective of maintaining reliable performance of the operators in responding to initiating events. The exam team conducted a Phase I characterization and screening of the finding in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Finding for At-Power Situations." This finding is not suitable for SDP evaluation, but has been reviewed by NRC management and determined to be of very low safety significance. Short term corrective action included a night order book entry directing operators to follow the Primary Containment EOP as written. Long term corrective action for this finding will include clarification of the TMG to ensure EOPs are performed as written. This issue has been entered into the facility corrective action program as condition report NM 2008-2013. Because this finding does not involve a violation of regulatory requirements and has very low safety significance, it is identified as FIN 05000410/2008301-01.

4OA6 Exit Meeting Summary

On March 31, 2008 the NRC provided conclusions and examination results to Mr. Thomas Shortell, Training Manager, via telephone. License numbers for seven of the eight applicants who passed all portions of the examinations were also provided during this call. The license number for the remaining applicant was withheld pending completion of their required six months of site specific experience. Mr. Shortell was informed that the NRC will issue this individual's license when he has completed the required Nine Mile Unit 2 site experience.

The licensee did not identify any information or materials used during the examination as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

ATTACHMENT
SUPPLEMENTAL INFORMATION
KEY POINTS OF CONTACT

Licensee Personnel

Tom Shortell	Manager, Operator Training
Bob Brown	General Supervisor, Operations Training

NRC

Joseph D'Antonio	Senior Operations Engineer
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LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>ITEM NUMBER</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
05000410/2008301-01	FIN	Inappropriate EOP guidance