UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 13, 2026

Michael Schultheis
Site Vice President,
Palisades Energy, LLC
Palisades Nuclear Plant
27780 Blue Star Memorial Hwy
Covert, MI 49043-9530

SUBJECT: PALISADES NUCLEAR PLANT – NRC INITIAL LICENSE EXAMINATION REPORT 05000255/2026301

Dear Michael Schultheis:

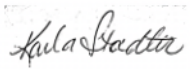
On August 17, 2026, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Palisades Nuclear Plant. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on August 3, 2026, with Derek DeBusscher and other members of your staff. An exit meeting was conducted via Microsoft Teams on September 3, 2026, between yourself and James Nance Senior Operations Engineer, to review the proposed final grading of the written examination for the license applicants. During the exit meeting, the NRC resolutions of any post-examination comments submitted by the facility, initially received by the NRC on August 17, 2026, were discussed.

The NRC examiners administered an initial license examination operating test during the week of July 27, 2026. The written examination was administered by Palisades Nuclear Plant training department personnel on August 5, 2026. Nine Senior Reactor Operator and six Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on August 31, 2026. Six applicants passed all sections of their respective examinations. Nine applicants were issued Preliminary Results letters. Three were issued senior operator licenses and three were issued operator licenses.

The as-administered written examination and operating test, as well as documents related to the development and review (outlines, review comments and resolution, etc.) of the examination will be withheld from public disclosure until August 17, 2028. Hower, since nine applicants received a Preliminary Results letter because of a written examination grade that was less than 80 percent overall or less than 70 percent for the SRO Only portion of their exam, the applicants were provided copies of the written examination. For examination security purposes, your staff should consider that written examination uncontrolled and exposed to the public.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations*, Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,


Signed by Karla Stoedter on 10/13/26

Karla Stoedter, Chief
Division of Reactor Safety
Operator Licensing Branch
Region III

Docket No. 50-255 and 72-007
License No. DPR-20

Enclosure:
1. Examination Report 05000255301
2. Post-Examination Comments, Evaluation, and Resolutions
3. Simulator Fidelity Report

cc: distribution via digital communications platform
B. Daniel, Acting Training Director

Letter to Michael Schultheis from Karla Stoedter dated October 13, 2026.

SUBJECT: PALISADES NUCLEAR PLANT – NRC INITIAL LICENSE EXAMINATION REPORT 05000255/2026301

DISTRIBUTION:
Jason Schussler
RidsNrrPMPalisades Resource
RidsNrrDlp1Orlb3
RidsNrrDroIrib Resource
Mohammed Shuaibi
Diana Betancourt-Roldan
Deborah Piskura
All-CNRI-R3DRS-Staff
All-CNRI-R3DRP-Staff
Ikeda Betts
Maryia Bahdanovich-Kniazkova

ADAMS Accession Number: ML26286A267
PKG: ML25156A225
e-Concurrence case: 20261008-02825

U.S. NUCLEAR REGULATORY COMMISSION

REGION 3

Docket No:	50-255
License No:	DRP-20
Report No:	05000255/2026301
Enterprise Identifier	L-2026-OLL-0027
Licensee:	Palisades Energy, LLC
Facility:	Palisades Nuclear Plant
Location:	Covert, MI
Dates:	July 27, 2026, to August 17, 2026
Examiners:	J. Nance, Senior Operations Engineer, Chief Examiner G. Roach, Senior Operations Engineer, Examiner B. Jebbia, Senior Operations Engineer, Examiner P. Gresh, Operations Engineer, Examiner R. Chan, Operations Engineer, Examiner B. Fuller, Senior Operations Engineer U/I
Approved by:	Karla Stoedter, Chief Division of Reactor Safety Operator Licensing Branch Region III

SUMMARY OF FINDINGS

ER 05000255/2026301; 7/27/2026-8/17/2026; Palisades Energy, LLC, Palisades Nuclear Plant. Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional Nuclear Regulatory Commission (NRC) examiners in accordance with the guidance of NUREG-1021, “Operator Licensing Examination Standards for Power Reactors,” Revision 12.

Examination Summary:

Six of fifteen applicants passed all sections of their respective examinations. Three applicants were issued senior operator licenses and three applicants were issued operator licenses. Nine applicants were issued Preliminary Results letters for failure of one or more sections of the administered examination. (Section 4OA5.1).

REPORT DETAILS

4OA5 Other Activities

.1 Initial Licensing Examinations

a. Examination Scope

The NRC examiners and members of the facility licensee's staff used the guidance prescribed in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12, to develop, validate, administer, and grade the written examination and operating test. The written examination outlines were prepared by the NRC staff and were transmitted to the facility licensee's staff. Members of the facility licensee's staff developed the operating test outlines and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of June 22, 2026, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited all license applications for accuracy. The NRC examiners administered the operating test, consisting of job performance measures and dynamic simulator scenarios, during the period of July 27, 2026 through July 31, 2026. The facility licensee administered the written examination on August 5, 2026.

On August 17, 2026, the licensee submitted documentation noting that there were five post-examination comments for consideration by the NRC examiners when grading the written examination. The post-examination comments and the NRC resolution for the post-examination comments are provided in Enclosure 2 to this report.

b. Findings

(1) Written Examination

The NRC examiners determined that the written examination, as proposed by the licensee, was within the range of acceptability expected for a proposed examination. Less than 20 percent of the proposed examination questions were determined to be unsatisfactory and required modification or replacement.

During validation of the written examination, several questions were modified or replaced. All changes made to the proposed written examination, were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and documented on Form 2.3-5, "Written Examination Review Worksheet." The Form 2.3-5, the written examination outlines, and both the proposed and final written examinations, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS) on August 17, 2028, (ADAMS Accession Numbers administrative files ML25156A224, examination outlines ML25156A226, proposed exam ML25156A227, and as-administered exam ML25156A223.

The NRC examiners graded the written examination on August 26, 2026, and conducted a review of each missed question to determine the accuracy and validity of the examination questions. There were five questions associated with operator actions in response to abnormal and emergency events, five questions associated with plant systems, and two questions associated with generic nuclear topics where

post-examination analysis identified generic weaknesses in that more than 50 percent of the applicants responded incorrectly to these questions.

(2) Operating Test

The NRC examiners determined that the operating test, as originally proposed by the licensee, was within the range of acceptability expected for a proposed examination. Less than 20 percent of the proposed operating test portion of the examination was determined to be unsatisfactory and required modification or replacement.

During the validation of the operating test, several Job Performance Measures (JPMs) were modified or replaced, and some modifications were made to the dynamic simulator scenarios. Changes made to the operating test portion of the examination, were made in accordance with NUREG-1021, “Operator Licensing Examination Standards for Power Reactors,” and documented on Form 2.3-3, “Operating Test Review Worksheet.” The Form 2.3-3, the operating test outlines, and both the proposed and final as administered dynamic simulator scenarios and JPMs, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS on August 17, 2028, (ADAMS Accession Numbers administrative files ML25156A224, examination outlines ML25156A226, proposed exam ML25156A227, and as-administered exam ML25156A223).

The NRC examiners completed operating test grading on August 31, 2026. Post-examination analysis revealed generic weaknesses in locating certain in-plant components and determining the appropriate Technical Specifications and which Limiting Conditions for Operations (LCOs) to enter into during scenarios and while performing certain Administrative Job Performance Measures (JPMs).

(3) Examination Results

Nine SRO and six RO applicants were administered examinations. Three SRO applicants were issued senior operator licenses, and three RO applicants were issued operator licenses.

.2 Examination Security

a. Scope

The NRC examiners reviewed and observed the licensee's implementation of examination security requirements during the examination validation and administration to assure compliance with Title10 of the Code of Federal Regulations, Section 55.49, “Integrity of Examinations and Tests.” The examiners used the guidelines provided in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors,” to determine acceptability of the licensee’s examination security activities.

b. Findings

None.

4OA6 Meetings

.1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on August 3, 2026, to Derek DeBusscher, Assistant Operations Manager – Shift and other members of the Palisades Nuclear Plant Operations and Training Department staff.

.2 Exit Meeting

The chief examiner conducted an exit meeting on September 3, 2026, with Michael Schultheis, Site Vice President via Microsoft Teams. The NRC's final disposition of the station's grading of the written examination and post-examination comments were disclosed and discussed during the exit meeting. The chief examiner asked the licensee whether any of the retained submitted material used to develop or administer the examination should be considered proprietary. No proprietary or sensitive information was identified during the examination or debrief/exit meetings.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

M. Schultheis, Site Vice President
D. DeBusscher, Assistant Operations Manager-Shift
P. Rhoades, Facility Operations Representative
B. Daniels, Operations Training Supervisor
B. Kosbar, Regulatory Exam Author
K. Steffic, Regulatory Assurance Manager

U.S. Nuclear Regulatory Commission

J. Mancuso, Senior Resident Inspector
T. Okamoto, Resident Inspector
J. Nance, Senior Operations Engineer, Chief Examiner
G. Roach, Senior Operations Engineer, Examiner
B. Jebbia, Senior Operations Engineer, Examiner
P. Gresh, Operations Engineer, Examiner
B. Fuller, Senior Operations Engineer, Examiner U/I
R. Chan, Operations Engineer, Examiner

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

None.

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access and Management System
AOP	Abnormal Operating Procedures
EOP	Emergency Operating Procedures
NRC	U.S. Nuclear Regulatory Commission
RO	Reactor Operator
SRO	Senior Reactor Operator
SWR	Simulator Work Request
TS	Technical Specifications

Facility/Applicant Comments and NRC Resolutions

Question #5

- The Unit is at 100% power
- Single Charging and Letdown is in service
- P-55A, Charging Pump, is running

Subsequently

- The CCW line to P-55A develops a leak
- P-55A trips

P-55A tripped due to high ___(1)___ temperature.
Per AOP-22 (PRESSURIZER LEVEL CONTROL MALFUNCTIONS), the letdown orifice stop valves (HS-2003, 2004, & 2005) ___(2)___ closed prior to starting another Charing Pump.

	(1)	**(2)**
A.	motor	are
B.	motor	are NOT
C.	fluid drive	are
D.	fluid drive	are NOT

Answer: D

A. Incorrect but plausible. For Part 1, CCW does not cool the CCP motors. It is plausible because it does cool the pump oil coolers. For Part 2, AOP-22 Step 8.d RNO requires the letdown orifice to be closed if the charging pump is in distress.

B. Incorrect but plausible. For Part 1, CCW does not cool the CCP motors. It is plausible because it does cool the pump oil coolers. Part 2 is correct.

C. Incorrect but plausible. Part 1 is correct. For Part 2, AOP-22 Step 8.d RNO requires the letdown orifice to be closed if the charging pump is in distress.

D. **CORRECT**. For Part 1, CCW cools the pump lube oil coolers / fluid drive. At 150oF fluid drive temperature, the CCP trips. For Part 2 and per AOP-22 Step 8, the letdown orifice isolation valve is NOT closed prior to starting another Charging Pump.

Question Development:

During examination outline development, Question 5 was selected as Knowledge and Ability (K/A) 000022A AK2.07, to be a Tier 1 question. Questions formulated from this tier are generally expected to test an applicant's knowledge of how to safely operate the plant during emergency and abnormal conditions.

Question 5 was developed by Palisades for use on the 2026 Palisades Initial License Written Examination. There were no technical or psychometric errors identified by the NRC examination review team or the Palisades Training Department staff regarding this question during examination review and facility validation.

Knowledge and Ability (K/A) Statement: Knowledge of the relationship between (APE 22) LOSS OF REACTOR COOLANT MAKEUP and the following systems or components (CFR: 41.7 / 45.7): CCWS Rating 3.2

Question Administration:

NUREG-1021, ES-4.3, item B.2.i, identifies that for applicants taking the RO written examination, six hours is to be allotted.

- One applicant asked a question during the examination regarding the letdown orifice isolation valve equipment part numbers. This information was provided to all applicants during the examination
- Seven (of fifteen) applicants correctly answered this question. All other applicants selected choice C. (46.6% pass rate)
- The question was originally assessed as an enhancement by the NRC Chief Examiner during review of the proposed exam due to recommended items to be added to the distractor analysis.
- A post-examination comment proposed an answer key change for Question 5. The facility/applicants contesting the question believe there are two correct answers for Question 5, answers C and D.

Facility/Applicant Comment:

Per AOP-22, P55A charging pump tripped on high fluid drive temperature. Step 8.b states, "verify charging pumps not in distress." With a lowering CCW and P-55A tripping charging pumps indicate in distress. Therefore, all pumps are tripped, and letdown is isolated prior to starting charging pumps.

Question 5 has two technically correct answers. Palisades' position is that both Answer C and Answer D are correct.

Per NUREG 1021, ES 4.4, C.3.c, the question stem was not clear or did not contain all pertinent information to distinguish between two answer choices.

Facility/Applicant Justification for Comment:

For Part 2 of the question, either answer choices C and D can be justified based on the procedural guidance provided. Given P-55A is identified as tripped due to high fluid drive temperature in the stem of the question, a candidate could reasonably conclude that the pump is in distress. Following AOP-22, Step 8.b directs the operator to proceed to Step 8.b.1 (RNO), which then directs entry into Step 8.d.1, where the operator is instructed to close the letdown orifice isolation valves in Step 8.d.4. Therefore, the letdown flow path would be isolated via the letdown orifice stop valves prior to starting a charging pump. A candidate adhering to the procedure as written could reasonably select the answer corresponding to closing the valves before starting a charging pump.

However, given that P-55A tripped due to a high fluid drive temperature, a protective feature, a candidate can reasonably determine the pump was not in distress. Therefore, Step 8.b ("VERIFY charging pump(s) are NOT in distress (e.g., rattles and bangs indicative of pumping non-liquid fluids)") would be answered YES, subsequently directing starting available charging pumps in Step 8.c without first closing the letdown orifice stop valves.

Based on the lack of information provided in the question stem to discern whether or not the charging pump was truly in distress or not, and per AOP-22 procedural guidance, both answers C and D are technically supportable and should be considered correct.

NRC Assessment:

The question stem addresses a CCW leak on the cooling line specific to charging pump P-55A. The applicant in their contention makes an assumption regarding the status of the CCW. Specifically, the applicant assumes the level in the CCW surge tank is lowering and cannot be recovered. There is no discussion as to whether the automatic makeup for CCW would account for this leak or whether operator actions which would be performed per AOP-36, Loss of Component Cooling would have been effective. Since level in the CCW surge tank would initially lower and the question stem indicated that a CCW cooled component (P-55A) had degraded cooling, the entry criteria of AOP-36 have been met and the actions of that procedure would be expected to be performed. Step 2 of AOP-36 has the crew check if CCW surge tank level is rising or stable. Based on the discussion above, the response not obtained step would be entered and the applicant would be directed to isolate the source of the leak (CCW to P-55A is isolable) and to start additional available primary make pumps to recover level in the surge tank. With no information regarding the status of isolating the leak or recovering surge tank level, the applicant would have to make an assumption that CCW inventory was in jeopardy. Therefore, CCW cooling is maintained to the P-55B and P-55C charging pumps with no additional information put forth regarding CCW.

The stem of the question did specifically mention that the crew entered and was performing the actions of AOP-22, Pressurizer Level Control Malfunctions. Step 8, [V]erify charging flow lowering is the crux of the applicant's contention. With charging flow lowering as the running charging pump has tripped, the applicant is asked by the procedure if the charging pumps are in distress. In distress is defined in the procedure step as making rattling and banging noises indicative of pumping non-liquid fluids. If the applicant determines the charging pump(s) is/are in distress they would enter the response not obtained leg of the step which has them isolate the letdown orifices as the charging pumps need to be vented prior to starting one. Since venting the charging pumps is a time-consuming process, letdown is isolated in order to prevent adversely affecting Pressurizer level. The AOP Basis document for AOP-22 specifically

describes the actions associated with step 8 as addressing a rupture of a charging pump discharge damper which would gas bind the charging pumps (hence pumping non-liquid fluids). With nitrogen displacing the water in the charging lines, the charging pumps would need to be vented prior to restoring charging pump operation. The situation in the stem of the question says nothing regarding a failure of a charging pump discharge damper nor does it indicate that the fluid in the leg of piping associated with the charging system is filled with anything but water.

Lastly, when assessing how this question should be adjudicated, it is necessary to consult NUREG 1021. ES 4.4, C.3.e states in part, that a question cannot have two correct answers "if both answer choices contain conflicting information." In this instance Distractor C and Answer D differ by the fact that one answer says letdown is isolated versus is NOT isolated. This is based on the assessment that charging is in distress or is NOT in distress. The NUREG directs that a question which creates the circumstance where two answers which are diametrically opposed to one another can both be considered correct must be deleted from the examination. Therefore, even if the analysis indicated that both answers were correct, accepting both answers would not be a correct response to this applicant's contention.

NRC Resolution:

Region III evaluated this contention in accordance with NUREG-1021, ES-4.4, paragraph C.3.c. to determine if the following types of errors were adequately identified and justified for effecting an answer key change.

- **Did Question 5 lack necessary information upon which to answer or contain an unclear stem that confused the applicants?**

  Yes, the applicants' contention and the facility's assessment claimed that Question 5 lacked necessary information upon which to base an answer. One applicant asked a question requesting valve component IDs for letdown orifice stop valves during exam administration regarding Question 5.

  Region III concluded that Question 5 did not possess an unclear or confusing stem.

- **Did Question 5 test the wrong license level (RO versus SRO) or was it not linked to (SRO) job requirements?**

  Neither the applicants' contention nor facility's assessment claimed incorrect license level or lack of job link as a basis for their respective contentions.

  Region III concluded that Question 5 did not test the wrong license level and that the tested subject matter was linked to job requirements. Specifically, (K/A) 000022A AK2.07.

- **Did Question 5 contain unintended typographical errors?**

  Neither the applicants' contention nor facility's assessment claimed unintended typographical errors as a basis for their respective contentions.

  Region III concluded that there were no unintended typographical errors in Question 5.

- **Did either the applicant or facility contention introduce newly discovered technical information which supports an answer key change?**

  Neither the applicants' contention nor facility's assessment claimed newly discovered technical information which supports an answer key change.

NRC Recommendation:

In summary, Region III disagrees with the applicant's contention and in accordance with NUREG 1021, ES-4.4, paragraph C.3.c, the answer key for the written examination will remain unchanged with answer choice D as the ONLY correct answer.

Question #26

- The Unit is at 100% Power
- AOP-33 (FUEL CLADDING FAILURE) actions are in progress
- EK-1363 (CONTAINMENT HI RADIATION) is in alarm

___(1)___ in the PCS is an indication of a fuel defect.
Per AOP-33, Letdown is ___(2)___.

	(1)	(2)
A.	Cesium-137	maintained in service
B.	Cesium-137	isolated
C.	Argon-41	maintained in service
D.	Argon-41	isolated

Answer: B

A. Incorrect but plausible. Part 1 is correct. For Part 2, maintaining letdown in service would be correct if EK-1363 (CONTAINMENT HI RADIATION) was NOT in alarm.
B. **CORRECT**. Cs-137 is a fission product. Elevated Cs-137 is indicative of a fuel defect. AOP-33 directs the Crew to close the letdown orifice stop valves, isolating letdown
C. Incorrect but plausible. For Part 1, Ar-41 is not a fission product. It is plausible because it is a coolant activation product and is a radio-isotope present in the coolant. For Part 2, maintaining letdown in service would be correct if EK-1363 (CONTAINMENT HI RADIATION) was not in alarm.
D. Incorrect but plausible. For Part 1, Ar-41 is not a fission product. It is plausible because it is a coolant activation product and is a radio-isotope present in the coolant. Part 2 is correct.

Question Development:

During examination outline development, Question 26 was selected as Knowledge and Ability (K/A) 000076AK1.02, to be a Tier 1 question. Questions formulated from this tier are generally expected to test an applicant's knowledge of how to safely operate the plant during emergency and abnormal conditions.

Question 26 was developed by Palisades for use on the 2026 Palisades Initial License Written Examination. There were no technical or psychometric errors identified by the NRC examination review team or the Palisades Training Department staff regarding this question during examination review and facility validation.

Knowledge and Ability (K/A) Statement: Knowledge of the operational implications and/or cause and effect relationships of the following concepts as they apply to (APE 76) HIGH REACTOR COOLANT ACTIVITY (CFR: 41.8 / 41.10 / 45.3): Radiation source and/or transport pathway Rating 3.3

Question Administration:

NUREG-1021, ES-4.3, item B.2.i, identifies that for applicants taking the RO written examination, six hours is to be allotted.

- No applicants asked a question or requested clarification for Question 26 during administration of the written examination.
- Nine (of fifteen) applicants correctly answered this question. Five applicants selected choice A and one applicant selected choice C. (60.0% pass rate).
- The question was originally assessed as satisfactory by the NRC Chief Examiner during review of the proposed exam.
- A post-examination comment proposed an answer key change for Question 26. The facility/applicants contesting the question believe there are two correct answers for Question 26, answers A and B.

Applicant Comment:

EK-1363 Containment Hi Radiation alarm could be in with one rad monitor and no containment isolation. Letdown could still be maintained, same as auto action occurred. Per AOP-33 letdown isn't automatically maintained / isolated.

Question 26 has two technically correct answers. Palisades' position is that both answers A and B are correct.

Facility/Applicant Justification for Comment:

The question stem is ambiguous regarding whether Part 2 is asking for the expected plant response based on the conditions provided (i.e., an implied automatic action) or the crew's manual actions taken during the performance of AOP-33.

A candidate could reasonably interpret the question as asking whether isolation should have occurred based on the initial conditions in the stem and select the answer corresponding to the plant's response to the alarm given in the stem. Alarm EK-1363 can annunciate on 1 out of 4 logic for the Containment Area Monitors and is therefore not by itself an indication that letdown is isolated by the Containment Hi Radiation (CHR) automatic function. The AOP-33 basis document states, the "intent of the step is to direct performance of actions appropriate for a Containment Isolation due to a CHR signal." While the EK-1363 Containment Hi Radiation alarm is in, the stem of the question does not provide enough information to determine whether or not a valid CHR signal exists.

Alternatively, a candidate could interpret the question as asking for the actions directed by AOP-33 and select the answer corresponding to the crew's required procedural response. In this case, it is reasonable for a candidate to assume that with alarm EK-1363 in during a fuel cladding failure, a valid CHR signal would exist. However, this could have been ensured by writing the stem to explicitly state "*Per AOP-33, the crew will __(2)__*"

As written, the question does not clearly distinguish between automatic system response and manual operator actions. Therefore, both Answers A and B are supportable and should be accepted as correct.

Per NUREG 1021, ES 4.4, C.3.c, the question stem was not clear or did not contain all pertinent information to distinguish between two answer choices.

NRC Assessment:

The question stem explicitly states, "[P]er AOP-33" this indicates the question is asking what actions are required per the procedure. AOP-33, Fuel Cladding Failure, Step 6 Operator Actions, Step 2 asks if both EK-1126, "CIS INITIATED" and EK-1363, "CONTAINMENT HI RADIATION" alarms are clear. The answer to this would be NO as the stem indicates that EK-1363 is alarming. This would place the operator in the response not obtained column of step 2 which, in addition to other actions, has them close the Letdown Orifice Stop Valves.

Regarding the applicant's contention associated with the basis of the step being to, "direct performance of actions appropriate for a Containment Isolation due to a CHR signal", |the Annunciator Response Procedure (ARP) for alarm EK-1363 must be reviewed for expected operator actions in response to this alarming condition. The ARP corroborates the applicant's contention that only one of four channels indicating greater than 10 R/hr will result in annunciator EK-1363 alarming and that 2 of 4 channels must be greater than 10 R/hr to result in a containment isolation signal based on high radiation or a CHR. The ARP also instructs the crew to verify that a containment isolation signal has been generated if actual containment radiation is greater than 10 R/hr *on any single* {emphasis added} Containment Area Monitor and if it hasn't, manually actuate one by pushing the left or right High Radiation Initiate Pushbutton. The stem of the question provides no information that would indicate that a failed channel has occurred. The applicant would have to be making an assumption regarding the signal being invalid. In addition, there is no information as to whether it's one or possibly more channels which have exceeded the 10 R/hr setpoint. Again, the applicant would be making an assumption of the number of channels exceeding the alarm setpoint. If it is more than one channel, than the CHR would have occurred automatically and if it is only one channel than the ARP directs a manual actuation of CHR. Regardless of the number of alarming channels, AOP-33 directs manually isolating the Letdown Orifice Isolation Valves because EK-1363 is alarming.

Lastly, when assessing how this question should be adjudicated, it is necessary to consult NUREG 1021. ES 4.4, C.3.e states in part, that a question cannot have two correct answers "if both answer choices contain conflicting information." In this instance Distractor A and Answer B differ by the fact that one answer says letdown is isolated versus is NOT isolated. This is based on the assessment whether the applicant was confused as to whether they were being asked to consider an automatic CHR or a manual closing of the letdown isolation valves. In this situation, as was the case with question 5, the distractor and the answer differ by whether letdown is isolated or not. The NUREG directs that a question which creates the circumstance where two answers which are diametrically opposed to one another can both be considered correct must be deleted from the examination. Therefore, even if the analysis indicated that both answers were correct, accepting both answers would not be a correct response to this applicant's contention.

NRC Resolution:

Region III evaluated this contention in accordance with NUREG-1021, ES-4.4, paragraph C.3.c. Specifically, to determine if the following types of errors were adequately identified and justified for effecting an answer key change.

- **Did Question 26 lack necessary information upon which to answer or contain an unclear stem that confused the applicants?**

  Yes, the applicants' contention and the facility's assessment claimed that Question 26 lacked necessary information upon which to base an answer. Region III concluded that Question 26 did not possess an unclear or confusing stem.

- **Did Question 26 test the wrong license level (RO versus SRO) or was it not linked to (SRO) job requirements?**

  Neither the applicants' contention nor facility's assessment claimed incorrect license level or lack of job link as a basis for their respective contentions.

  Region III concluded that Question 26 did not test the wrong license level and that the tested subject matter was linked to job requirements. Specifically, (K/A) 000076AK1.02.

- **Did Question 26 contain unintended typographical errors?**

  Neither the applicants' contention nor facility's assessment claimed unintended typographical errors as a basis for their respective contentions.

  Region III concluded that there were no unintended typographical errors in Question 26.

- **Did either the applicant or facility contention introduce newly discovered technical information which supports an answer key change?**

  Neither the applicants' contention nor facility's assessment claimed newly discovered technical information which supports an answer key change.

NRC Recommendation:

In summary, Region III disagrees with the applicant's contention and in accordance with NUREG 1021, ES-4.4, paragraph C.3.c, the answer key for the written examination will remain unchanged with answer choice B as the ONLY correct answer.

Question #42

- The Unit is at 95% Power
- E-6A (High Pressure Feedwater Heater) was bypassed, but is now being returned to service per SOP-10 (EXTRACTION AND HEATER DRAIN SYSTEM).

Per SOP-10, MV-MS124 (T-4A Level Control to E-6A CV-0538 Inlet) is throttled open slowly to prevent _____.

A. water hammer in the drain line
B. cavitation of the heater drain pump
C. thermal shock of the downsteam piping
D. level oscillations in the feedwater heater

Answer: A

A. **CORRECT**. SOP-10 directs slowly opening MV-MS124 to prevent water hammer in the drain line.
B. Incorrect but plausible. The applicant could (incorrectly) think that the close to saturated fluid would travel to the HDP and cause cavitation of the pump.
C. Incorrect but plausible. Putting hot fluid into a cold system could cause thermal shock of the system.
D. Incorrect but plausible. Putting a level control valve in service incorrectly could cause level oscillations.

Question Development:

During examination outline development, Question 42 was selected as Knowledge and Ability (K/A) 039K5.01, to be a Tier 2 question. Questions formulated from this tier are generally expected to test an applicant's knowledge of plant systems.

Question 42 was developed by Palisades for use on the 2026 Palisades Initial License Written Examination. There were no technical or psychometric errors identified by the NRC examination review team or the Palisades Training Department staff regarding this question during examination review and facility validation.

Knowledge and Ability (K/A) Statement: Knowledge of the operational implications or cause and effect relationships of the following concepts as they apply to the (SF4S MSS) MAIN AND REHEAT STEAM SYSTEM (CFR: 41.5 / 45.7): Water hammer. Rating 3.5

Question Administration:

NUREG-1021, ES-4.3, item B.2.i, identifies that for applicants taking the RO written examination, six hours is to be allotted.

- One applicant asked a question or requested clarification for Question 42 during administration of the written examination.
- Thirteen (of fifteen) applicants correctly answered this question. Two applicants selected choice C. (86.6% pass rate)

- The question was originally assessed as satisfactory by the NRC Chief Examiner during review of the proposed exam.

A post-examination comment proposed an answer key change for Question 42. The facility/applicants contesting the question believe there are two correct answers for Question 42, answers A and C.

Applicant Comment:

I believe thermal shock also occurs. Specifically, condensation induced water hammer is caused by thermal shock.

Question 42 has two technically correct answers. Palisades' position is that both answers A and C are correct.

Facility/Applicant Justification for Comment:

Per NUREG 1021, ES 4.4, C.3.c, new technical information is available which would corroborate a second correct answer

The basis for both answers is that the concerns of thermal shock and water hammer are intrinsically linked under the conditions presented. Slowly opening the valve minimizes rapid temperature changes, reducing the potential for thermal shock. Additionally, slowly admitting steam helps prevent steam collapse and condensate acceleration, which are precursors to water hammer.

SOP-10 requires slow and controlled system heating and restoration for both thermal shock (page 10/11) and water hammer (page 61). On page 10, Heater Drain Pump warming is performed to prevent rapid temperature changes creating thermal stresses and pump damage. Similarly, page 61 requires slow and controlled system restoration when opening the T-4A, Reheater Drain Tank, normal drain lines to E-6A, High Pressure Feedwater Heater, specifically calling out water hammer damage to MSRs, control valves or drain tank piping.

The same operator action (slow and controlled system heating and restoration) addresses both thermal shock and water hammer concerns. A candidate could reasonably select either answer. The question does not establish a clear distinction that would make one consequence more correct than the other. Therefore, both Answers A and C are technically supportable and should be accepted as correct.

NRC Assessment:

Answer choice A is clearly a correct answer and is specifically mentioned as a reason for controlled operation when introducing steam into feedwater heater piping when performing SOP-10, Extraction and Heater Drain System. Thermal shock can also be a challenge to piping when a significant differential temperature exists across the wall of a pipe. A differential temperature of 100°C between the inner and outer wall of a carbon steel pipe would generate approximately 36 kpsi of thermal stress on the piping (Callen, Thermal Shock in Carbon Steel Pipe: Temperature Differential Limits, April 5, 2026). In addition, repeated rapid introduction of steam or high temperature fluid into cold piping can create small flaws which through fatigue growth over numerous iterations could result in failure of the impacted carbon steel piping.

NRC Resolution:

Region III evaluated this contention in accordance with NUREG-1021, ES-4.4, paragraph C.3.c. Specifically, to determine if the following types of errors were adequately identified and justified for effecting an answer key change.

- **Did Question 42 lack necessary information upon which to answer or contain an unclear stem that confused the applicants?**

  No, the applicants' contention and the facility's assessment did not claim that Question 42 lacked necessary information upon which to base an answer.

- **Did Question 42 test the wrong license level (RO versus SRO) or was it not linked to (SRO) job requirements?**

  Neither the applicants' contention nor facility's assessment claimed incorrect license level or lack of job link as a basis for their respective contentions.

  Region III concluded that Question 42 did not test the wrong license level and that the tested subject matter was linked to job requirements. Specifically, (K/A) 039K5.01.

- **Did Question 42 contain unintended typographical errors?**

  Neither the applicants' contention nor facility's assessment claimed unintended typographical errors as a basis for their respective contentions.

  Region III concluded that there were no unintended typographical errors in Question 42.

- **Did either the applicant or facility contention introduce newly discovered technical information which supports an answer key change?**

  The applicants' contention and the facility's assessment claimed newly discovered technical information which supports an answer key change.

NRC Recommendation:

In summary, Region III agrees with the applicant's contention and in accordance with NUREG 1021, ES-4.4, paragraph C.3.c has determined that new technical information has been made available; therefore, the answer key for the written examination will be changed to accept answer choices A and C as correct answers.

Question # 82

- The Unit is at 100% Power.

Subsequently

- EK-0911 (ROD POSITION 4 INCHES DEVIATION) just came in alarm
- EK-0912 (ROD POSITION 8 INCHES DEVIATION) just came in alarm

Per LCO 3.1.4 (Control Rod Alignment) the Crew is required to reduce THERMAL POWER to < 75% within a **MAXIMUM** of __(1)__ hours to ensure __(2)__.

A. (1) FOUR
(2) linear heat rate remains within limits

B. (1) FOUR
(2) acceptable power distribution is maintained from the effects of Xenon

C. (1) TWO
(2) linear heat rate remains within limits

D. (1) TWO
(2) acceptable power distribution is maintained from the effects of Xenon

Answer: D

A. Incorrect but plausible. For Part 1, there are multiple four hour REQUIRED ACTIONS in Technical Specifications. For Part 2, Linear Heat Rate is a concern in Technical Specifications.
B. Incorrect but plausible. For Part 1, there are multiple four hour REQUIRED ACTIONS in Technical Specifications. Part 2 is correct.
C. Incorrect but plausible. Part 1 is correct. For Part 2, Linear Heat Rate is a concern in Technical Specifications.
D. CORRECT. Per LCO 3.1.4 REQUIRED ACTION C.2, the Crew is required to reduce thermal power to < 75% within a MAXIMUM of 2 hours to ensure acceptable power distribution is maintained from the effects of Xenon.

Question Development:

During examination outline development, Question 82 was selected as Knowledge and Ability (K/A) 000003 APE (G2.2.45), to be a Tier 1 question. Questions formulated from this tier are generally expected to test an applicant's knowledge of how to safely operate the plant during emergency and abnormal conditions.

Question 82 was developed by Palisades for use on the 2026 Palisades Initial License Written Examination. There were no technical or psychometric errors identified by the NRC examination review team or the Palisades Training Department staff regarding this question during examination review and facility validation.

Knowledge and Ability (K/A) Statement: EQUIPMENT CONTROL: Ability to determine and/or interpret TS with action statements of greater than 1 hour (SRO Only) (CFR: 43.2 / 43.5 / 45.3). Rating 4.7

Question Administration:

NUREG-1021, ES-4.3, item B.2.i, identifies that for applicants taking the SRO/RO written examination, nine hours is to be allotted.

- Five applicants asked a question during the examination regarding whether a reference should be provided since all Technical Specification Required Actions were greater than 1 hour. The applicants were informed that they possessed enough information to answer the question and no reference was provided.
- 0 of 9 applicants correctly answered this question. All applicants who responded incorrectly selected choice C. (0.0% pass rate).
- The question was originally assessed as satisfactory by the NRC Chief Examiner during review of the proposed exam.

A post-examination comment proposed an answer key change for Question 82. The facility/applicants contesting the question believe there are two correct answers for Question 82, answers C and D.

Applicant Comment:

For Part 2, both answers are correct given Technical Specification (TS) LCO 3.1.4 bases. Reducing power will ensure that linear heat rate remains within limits and that acceptable power distribution is maintained as a result of xenon buildup that begins immediately following the rod misalignment. TS LCO 3.1.4 Conditions C.1 and C.2 and associated bases states that reducing THERMAL POWER to ≤ 75% RTP ensures acceptable power distributions are maintained. Reducing power supports maintaining linear heat rate within established limits following the rod misalignment. Per TS LCO 3.1.4 bases, “Increased peaking during the power increase may result in excessive local Linear Heat Rates (LHRs).” As a result, TS LCO 3.1.4 Condition C.2 requires power be reduced < 75%. Additionally, Xenon redistribution in the core starts to occur as soon as a rod becomes misaligned and reducing power to < 75% ensures acceptable power distributions are maintained.

As written, the question supports both responses, as each addresses valid operational concerns associated with the condition presented. Therefore, a candidate could reasonably select the answer directing a reduction in power based on the TS requirement and its associated basis.

Based on the requirements of TS LCO 3.1.4 Conditions C.1 and C.2 and the associated basis, both answers C and D are technically correct and should be accepted.

Facility / Applicant Justification for Comment:

Per NUREG 1021, ES 4.4, C.3.c, new technical information is available which would corroborate a second correct answer.

NRC Assessment:

Five applicants requested a reference to answer this question based on a greater than 1 hour required action time being assessed. No reference was provided to the applicants during the examination. Per NUREG 1021, a 1 hour required action time is the distinguishing feature between RO and SRO level of knowledge. RO's are expected to recall TS action statements and safety limits which must be addressed in ≤1 hour. SRO's are expected to recall TS action statements and safety limits which are > 1 hour. Since this question appeared on the SRO-ONLY portion of the written examination it did not require the applicants to recall from memory information that would be beyond what they were expected to know, it was appropriate that no reference was provided. In this instance, not providing a reference had no adverse impact on the applicants' ability to answer the question as all applicants selected Distractor C which correctly answered how long the crew had to lower power < 75% to address the misaligned control rods.

The applicant's contention is associated with part 2 of the question. Specifically, the implications for operating with misaligned control rods if mitigating action steps are not taken in a timely manner. The question stem indicates that the reactor is operating at 100% power. The stem makes no mention of any planned rod movements or power changes. The stem then indicates that rod position deviation alarms have come in. Without making any assumptions, this would indicate and a reasonable diagnosis can be made that at least one control rod has partially or fully dropped into the core as no operator action had taken place to move control rods. The TS 3.1.4, Control Rod Alignment basis document specifically discusses the implications of a rod misalignment caused by a dropped control rod:

> *The third type of mis-operation occurs when one rod drops partially or fully into the reactor core. This event causes an initial power reduction followed by a return towards the original power, due to positive reactivity feedback from the negative moderator temperature coefficient. Increased peaking during the power increase may result in excessive local Linear Heat Rates (LHRs)* {emphasis added}.

The TS actions are designed to ensure the assumptions in the safety analysis remain valid. In this case, lowering power will move the reactor away from thermal limits. Correct Answer D is also justified by the TS 3.1.4 basis document where it states:

> *If one control rod is misaligned by > 8 inches continued operation in MODES 1 and 2 may continue, provided, within 2 hours, the TOTAL RADIAL PEAKING FACTOR has been verified acceptable in accordance with SR 3.2.2.1, or the power is reduced to ≤ 75% RTP.*
>
> *Xenon redistribution in the core starts to occur as soon as a rod becomes misaligned* {emphasis added}. *Reducing THERMAL POWER to ≤ 75% RTP ensures acceptable power distributions are maintained.*

NRC Resolution:

Region III evaluated this contention in accordance with NUREG-1021, ES-4.4, paragraph C.3.c. Specifically, to determine if the following types of errors were adequately identified and justified for effecting an answer key change.

- **Did Question 82 lack necessary information upon which to answer or contain an unclear stem that confused the applicants?**

  No, the applicants' contention and the facility's assessment did not claim that Question 82 lacked necessary information upon which to base an answer.

- **Did Question 82 test the wrong license level (RO versus SRO) or was it not linked to (SRO) job requirements?**

  Neither the applicants' contention nor facility's assessment claimed incorrect license level or lack of job link as a basis for their respective contentions.

  Region III concluded that Question 82 did not test the wrong license level and that the tested subject matter was linked to job requirements. Specifically, (K/A) 039K5.01.

- **Did Question 82 contain unintended typographical errors?**

  Neither the applicants' contention nor facility's assessment claimed unintended typographical errors as a basis for their respective contentions.

  Region III concluded that there were no unintended typographical errors in Question 82.

- **Did either the applicant or facility contention introduce newly discovered technical information which supports an answer key change?**

  The applicants' contention and the facility's assessment claimed newly discovered technical information which supports an answer key change.

NRC Recommendation:

In summary, Region III agrees with the applicant's contention and in accordance with NUREG 1021, ES-4.4, paragraph C.3.c has determined that new technical information has been made available; therefore, the answer key for the written examination will be changed to accept answer choices C and D as correct answers.

Question 89

- The Unit is 100% Power
- Supplemental D/G 1-3 is unavailable

At 15:00
- A Loss of Offsite Power occurs
- **BOTH** D/Gs trip on overspeed

At 15:25
- EOP-3.0 (STATION BLACKOUT RECOVERY) is in progress
- D/G 1-1 has been reset and is now available
- Preliminary Actions of EOP Supplement 24 (SW and CCW Hydraulic Shock Prevention) have been completed

EOP-3.0 directs starting D/G 1-1 per guidance contained in __(1)__.Once started, D/G 1-1 **2-Hour Loading Limit** is up to a **MAXIMUM** of __(2)__ kW.

A. (1) EOP-3.0
(2) 2500

B. (1) EOP-3.0
(2) 2750

C. (1) AOP-20 (EDG 1-1 MALFUNCTIONS)
(2) 2500

D. (1) AOP-20 (EDG 1-1 MALFUNCTIONS
(2) 2750

Answer: B

A. Incorrect but plausible. Part 1 is correct. For Part 2, 2500 kW is the continuous loading limit.
B. CORRECT. EOP-3.0 directs starting D/G 1-1 per guidance contained in EOP-3.0. Once started, D/G 1-1 2-Hour Loading Limit is up to a MAXIMUM of 2750 kW.
C. Incorrect but plausible. Going to AOP-20 would be correct if the D/G doesn't start in EOP-3.0. For Part 2, 2500 kW is the continuous loading limit.
D. Incorrect but plausible. Going to AOP-20 would be correct if the D/G doesn't start in EOP-3.0. Part 2 is correct.

Question Development:

During examination outline development, Question 89 was selected as Knowledge and Ability (K/A) (064) (SF6 EDG) EMERGENCY DIESEL GENERATOR SYSTEM (G2.4.20) to be a Tier 1 question. Questions formulated from this tier are generally expected to test an applicant's knowledge of how to safely operate the plant during emergency and abnormal conditions.

Question 89 was developed by Palisades for use on the 2026 Palisades Initial License Written Examination. There were no technical or psychometric errors identified by the NRC examination review team or the Palisades Training Department staff regarding this question during examination review and facility validation.

Knowledge and Ability (K/A) Statement: EMERGENCY PROCEDURES/PLAN: Knowledge of the operational implications of emergency and abnormal operating procedures warnings, cautions, and notes (CFR: 41.10 / 43.5 / 45.13) Rating 4.3

Question Administration:

NUREG-1021, ES-4.3, item B.2.i, identifies that for applicants taking the SRO/RO written examination, nine hours is to be allotted.

- No applicants asked a question or requested clarification during the examination regarding this question.
- 3 of 9 applicants correctly answered this question. All applicants who responded incorrectly selected choice D. (33.3% pass rate).
- The question was originally assessed as satisfactory by the NRC Chief Examiner during review of the proposed exam.
- A post-examination comment proposed an answer key change for Question 89. The facility/applicants contesting the question believe there are two correct answers for Question 89, answers B and D.

Facility/Applicant Comment:

Question 89 has two correct answers. Palisades' position is that both answers B and D are correct.

For Part 1 of the question, either answer choices B and D can be justified based on the way the stem condition at time 15:25 is written. It does not specify in what manner DG 1-1 was reset and made available. If it means that the overspeed mechanism was reset and all trip conditions are cleared, but the local alarm panel has NOT been reset, then AOP-20 step 21 must be used to start DG 1-1. If the stem condition means that the overspeed mechanism was reset and the local alarm panel was reset, the EOP-3.0 step 14 is the correct step.

This could have been ensured by writing the stem to explicitly state "*DG 1-1 overspeed trip and local alarm panel have been reset and DG1-1 is now available.*"

As written, the question does not give the necessary level of detail to choose the correct procedure. Therefore, both Answers B and D are supportable and should be accepted as correct.

Facility/Applicant Justification for Comment:

The stem of the question states the diesels tripped on overspeed. EOP-3.0, step 14, directs you to AOP-20 since the DG is not running. The only procedure that has guidance on resetting the overspeed trip is in AOP-20. Therefore, I believe AOP-20 should be considered a correct answer.

Per NUREG 1021, ES 4.4, C.3.c, the question stem was not clear or did not contain all pertinent information to distinguish between two answer choices.

NRC Assessment:

The stem of the question uses the wording, "D/G 1-1 has been reset and is now available" {emphasis added}. EOP-3.0, states the following:

14. IF EDG 1-1 is available, THEN **PERFORM** the following: ….. f. **START** EDG 1-1 using the engine control handswitch.	14.1 **REFER TO** AOP-20, "EDG 1-1 Malfunctions."

Based on two column format philosophy, the applicants were asked in step 14 if EDG 1-1 is available. The stem of the question has told us it is available. Making the assessment that more actions are required is an assumption. Assumptions are not permitted when they are not procedurally or technically driven. In this case the exact term for the EDG has been used regarding its readiness, therefore the applicant would have been expected to answer "YES" to step 14 and proceed with the sub steps until step 14.f is performed to start EDG 1-1 per EOP-3.0. If the applicant was given information in the stem other than that EDG 1-1 was available, they would have been expected to answer step 14 "NO" and would have performed response not obtained step 14.1 to refer to AOP-20, EDG 1-1 Malfunctions.

NRC Resolution:

Region III evaluated this contention in accordance with NUREG-1021, ES-4.4, paragraph C.3.c. Specifically, to determine if the following types of errors were adequately identified and justified for effecting an answer key change.

- **Did Question 89 lack necessary information upon which to answer or contain an unclear stem that confused the applicants?**

  Yes, the applicants' contention and the facility's assessment did claim that Question 89 lacked necessary information upon which to base an answer.

- **Did Question 89 test the wrong license level (RO versus SRO) or was it not linked to (SRO) job requirements?**

  Neither the applicants' contention nor facility's assessment claimed incorrect license level or lack of job link as a basis for their respective contentions.

  Region III concluded that Question 89 did not test the wrong license level and that the tested subject matter was linked to job requirements. Specifically, (K/A) 039K5.01.

- **Did Question 89 contain unintended typographical errors?**

  Neither the applicants' contention nor facility's assessment claimed unintended typographical errors as a basis for their respective contentions.

  Region III concluded that there were no unintended typographical errors in Question 89.

- **Did either the applicant or facility contention introduce newly discovered technical information which supports an answer key change?**

  No, the applicants' contention and the facility's assessment did not claim newly discovered technical information supporting an answer key change.

NRC Recommendation:

In summary, Region III disagrees with the applicant's contention and in accordance with NUREG 1021, ES-4.4, paragraph C.3.c, the answer key for the written examination will remain unchanged with answer choice B as the ONLY correct answer.

SIMULATION FACILITY FIDELITY REPORT

Facility Licensee: Palisades Nuclear Plant

Facility Docket No: 50-255

Operating Tests Administered: July 27, 2026 to July 31, 2026

The following documents observations made by the NRC examination team during the initial operator license examination. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

ITEM	DESCRIPTION
None.	