UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

March 18, 2021

Mr. Peter Dietrich
Senior VP and Chief Nuclear Officer
DTE Electric Company
Fermi 2 – 260 TAC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI POWER PLANT, UNIT 2—NRC INITIAL LICENSE EXAMINATION REPORT 05000341/2020302

Dear Mr. Dietrich:

On January 27, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Fermi Power Plant. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on January 19, 2021, with yourself, and other members of your staff. An exit meeting was conducted by telephone on February 5, 2021, with yourself, other members of your staff, and Mr. Randy Baker, Chief Operator Licensing Examiner, to review the final grading of the written examination for the license applicants. During the telephone conversation, NRC resolution of the plant's post-examination comments, received by the NRC on January 27, 2021, were discussed.

The NRC examiners administered an initial license examination operating test during the week of January 11, 2021. The written examination was administered by training department personnel on December 8, 2020. Five Senior Reactor Operator applicants and four Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on February 16, 2021. Eight applicants passed all sections of their respective examinations. Five applicants were issued senior operator licenses, two applicants were issued operator licenses, one applicant was issued a Preliminary Results Letter, and one applicant left the facility's employment and will not be issued a license.

The 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 January 27, 2023. However, since an applicant received a Preliminary Results Letter because of a written examination grade that is less than 80.0 percent, the applicant will be provided a copy 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,

Patricia J. Pelke
Digitally signed by Patricia J. Pelke
Date: 2021.03.18 21:04:34 -05'00'

Patricia J. Pelke, Chief
Operations Branch
Division of Reactor Safety

Docket No. 50–341
License No. NPF–43

Enclosures:
1. Examination Report 05000341/2020302
2. Post-Examination Comments, Evaluation, and Resolutions
3. Simulator Fidelity Report

cc: Distribution via LISTSERV®
A. Pullam, Training Director

Letter to Peter Dietrich from Patricia J. Pelke dated March 18, 2021.

SUBJECT: FERMI POWER PLANT, UNIT 2—NRC INITIAL LICENSE EXAMINATION REPORT 05000341/2020302

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REGION III

Docket No:	50–341
License No:	NPF–43
Report No:	05000341/2020302
Enterprise Identifier:	L-2020-OLL-0044
Licensee:	DTE Electric Company
Facility:	Fermi Power Plant, Unit 2
Location:	Newport, MI
Dates:	January 11, 2021, through January 27, 2021
Examiners:	R. Baker, Senior Operations Engineer, Chief Examiner D. Reeser, Operations Engineer, Examiner B. Tindell, Reactor Engineer, Examiner
Approved By:	P. Pelke, Chief Operations Branch Division of Reactor Safety

SUMMARY

Examination Report 05000341/2020302; 01/11/2021–01/27/2021; DTE Electric Company; Fermi Power Plant, Unit 2; Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional Nuclear Regulatory Commission examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11.

Examination Summary

Eight of nine applicants passed all sections of their respective examinations. Five applicants were issued senior operator licenses, two applicants were issued operator licenses, one applicant was issued a Preliminary Results Letter, and one applicant left the facility's employment and will not be issued a license. (Section 4OA5.1)

REPORT DETAILS

4OA5 Other Activities

.1 Initial Licensing Examinations

a. Examination Scope

The U.S. Nuclear Regulatory Commission (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 11, 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 prepared the operating test outlines and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of November 11, 2020, and again on January 9, 2021, with the assistance of members of the facility licensee's staff. Following the onsite validation week in November, the chief examiner audited four license applications for accuracy. The facility licensee administered the written examination on December 8, 2020. The NRC examiners, with the assistance of members of the facility licensee's staff, administered the operating test, consisting of job performance measures and dynamic simulator scenarios, during the period of January 11, 2021, through January 14, 2021.

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 NRC developed written examination, several questions were modified or replaced. All changes made to the written examination were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." Form ES-401-9, "Written Examination Review Worksheet," used primarily for the documentation of metrics on the NRC developed written examination, was updated with post-examination changes. The Form ES-401-9, the written examination outlines (ES-401-1 and ES-401-3), 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 January 27, 2023, (ADAMS Accession Numbers ML19128A199, ML19128A202, ML19128A204, and ML19128A206, respectively).

On January 27, 2021, the licensee submitted documentation noting several post-examination comments for consideration by the NRC examiners when grading the written examination. The post-examination comments, along with the NRC's comment resolutions, are documented in Enclosure 2 of this report.

The NRC examiners completed grading of the written examination on February 3, 2021, and conducted a review of each missed question to determine the accuracy and validity of the examination questions.

(2) Operating Test

The NRC examiners determined that the operating test, developed by the licensee from the NRC prepared outlines, was within the range of acceptability expected for a proposed examination.

Following the review and validation of the operating test, minor modifications were made to multiple job performance measures, and minor modifications were made to the dynamic simulator scenarios. All changes made to the operating test were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and were documented on Form ES-301-7, "Operating Test Review Worksheet." The Form ES-301-7, the operating test outlines (ES-301-1, ES-301-2, and ES-D-1s), and both the proposed and final operating tests, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS on January 27, 2023, (ADAMS Accession Numbers ML19128A199, ML19128A202, ML19128A204, and ML19128A206, respectively).

The NRC examiners completed grading of the operating test on February 16, 2021.

(3) Examination Results

Five applicants at the Senior Reactor Operator level and four applicants at the Reactor Operator level were administered written examinations and operating tests. Eight applicants passed all portions of their examinations and seven applicants were issued their respective operating licenses on February 16, 2021. One applicant failed the written portion of the administered examination and was issued a Preliminary Results Letter, while one other applicant, subsequent to examination completion, left the facility's employment and will not be issued a reactor operator license.

.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*, Part 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 Management Meetings

.1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on January 19, 2021, to Mr. Peter Dietrich, Senior Vice President and Chief Nuclear Officer, and other members of the Fermi Power Plant staff.

.2 Exit Meeting

The chief examiner conducted an exit meeting on February 5, 2021, with Mr. Peter Dietrich, Senior Vice President and Chief Nuclear Officer, and other members of the Fermi Power Plant staff, by telephone. The NRC's final disposition of the station's post-examination comments were disclosed and discussed during the telephone discussion. The chief examiner asked the licensee whether any of the 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

P. Dietrich, Chief Nuclear Officer
E. Olson, Site Vice President
R. Craven, Executive Director-Production (Plant Manager)
L. Bennett, Operations Director
D. Duncan, Maintenance Director
A. Pullam, Training Director
P. Offerle, Licensing Manager
M. Donigian, Operations Training Supervisor
W. Conroy, Operations Training Superintendent
S. Gatter, Licensing

U.S. Nuclear Regulatory Commission

T. Briley, Senior Resident Inspector
R. Baker, Senior Operations Engineer, Chief Examiner
D. Reeser, Operations Engineer, Examiner
B. Tindell, Reactor Engineer, Examiner

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
NRC	U.S. Nuclear Regulatory Commission

RO Question 8

Division 2 Non-Interruptible Air System (NIAS) has been lost.

What is the impact of this loss on the ability of the T2300-F450B, Torus to RB Vacuum Breaker, and the T2300-F410, Torus to RB Vacuum Breaker Iso Valve, to perform their design functions?

The vacuum relief function is _(1)_.

The containment isolation function is _(2)_.

A. (1) lost
   (2) lost
B. (1) maintained
   (2) lost
C. (1) lost
   (2) maintained
D. (1) maintained
   (2) maintained

Correct Answer: B

Answer Explanation:

Per 20.129.01, Loss of Station and/or Control Air AOP, Enclosure A (System Response on Loss of Div 2 NIAS) for the Torus Vacuum Breakers:

T2300-F450B, Torus to RB Vacuum Breaker, will be closed on loss of air because air is used to test the vacuum breaker in the open direction only. The vacuum breaker will still actuate to perform its design function to limit excessive primary containment negative pressure.

T2300-F410, Torus to RB Vacuum Breaker Iso Valve, fails open on a loss of air, allowing the design function to limit excessive primary containment negative pressure to be maintained.

Distractor Explanation:

Distractors are incorrect and plausible because:

A. This combination of distractors is plausible if the candidate incorrectly recalls that NIAS is needed to (1) operate the T2300-F450B, Torus to RB Vacuum Breaker in the open direction to prevent excessive primary containment negative pressure and (2) to close the T2300-F410. Part (1) is incorrect because NIAS is not needed to actuate the vacuum breaker, however, this is plausible because NIAS is supplied to the vacuum breaker, but only to stroke the valve open for testing, not for it to perform its design function of relieving excessive negative containment pressure. Part (2) is correct because air is needed to close T2300-F410 and it fails open on loss of Div 2 NIAS.

C. This combination of distractors is plausible if the candidate incorrectly recalls that the T2300-F410,Torus to RB Vacuum Breaker Iso Valve fails closed on loss of Div 2 NIAS. If this were true, the containment function would be maintained, however, the ability of the Torus Vacuum Breakers to limit excessive primary containment negative pressure would be lost. This distractor is incorrect because the T2300-F410 fails open on loss of Div 2 NIAS.

D. This combination of distractors is plausible if the candidate incorrectly recalls that the air supply to theT2300-F410, Torus to RB Vacuum Breaker Iso Valve, was another air source, such as Div 1 NIAS, and therefore is unaffected by the loss of Div 2 NIAS. This is plausible because the majority of containment penetrations at Fermi 2 are supplied with 2 isolation valves powered (either electrically or via air) from opposite sources. The candidate could incorrectly recall that the T2300-F410, Torus to RB Vacuum Breaker Iso Valve is powered from Div 1 NIAS since the T2300-F450B, Torus to RB Vacuum Breaker is a Division 2 valve. This would allow both the containment isolation and vacuum relief functions to be maintained. This is incorrect because T2300-F410, Torus to RB Vacuum Breaker Iso Valve, fails open on loss of Div 2 NIAS and not Div 1 or any other air source.

Reference Information:

20.129.01, Loss of Station and/or Control Air AOP.

NUREG 1123 KA Catalog Rev. 2

295019	Partial or Complete Loss of Instrument Air
295019 AK2	Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR and the following:
295019 AK2.09	3.3/3.3 Containment

10CFR55 RO/SRO Written Exam Content

10 CFR 55.41(b) (7)	Design, components, and function of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features.

Fermi 2 NRC Exam Usage

ILT 2020 Exam

NRC Question Use (ILT 2020)

Closed Reference
Higher Cognitive Level
New
RO

Associated objective(s):

None

POST-EXAMINATION COMMENTS, EVALUATION, AND RESOLUTIONS

References provided to NRC:

- Technical Specification Bases Document for LCO 3.6.1.3, Primary Containment
- Technical Specification Bases Document for LCO 3.6.1.7, Reactor Building to Suppression Chamber Vacuum Breakers
- Updated Final Safety Analysis Report (UFSAR) Chapter 6, Section 6.2.4.2.3.1
- 20.129.01, Loss of Station and/or Control Air AOP, Enclosure A (System Response on Loss of Div 2 NIAS)

Applicants Comment:

The applicants propose changing the correct answer for this question from 'B' to 'D' based on the following reasons:

Both the Torus to RB Vacuum Breaker and the Torus to RB Vacuum Breaker Iso Valve are considered active components, configured in series in the same containment penetration flowpath. Since the Isolation Valve fails open on loss of air, the Vacuum Breaker will maintain its relief function. Also, with the Isolation Valve failed open, the Vacuum Breaker will be seated closed by a higher pressure on the Containment side of the valve seat, and maintain the containment isolation function for the penetration flowpath.

Facility Position on Applicant Comment:

The facility licensee recommends changing the exam answer key such that 'D' is the correct answer and B is incorrect.

STATION RECOMMENDATION: The Fermi 2 staff agrees with this proposed change as described below:

The question was written considering the failure mechanisms of the T2300-F450B, Torus to RB Vacuum Breaker, and the T2300-F410, Torus to RB Vacuum Breaker Iso Valve and their response to loss of air. As stated in the original answer explanation, Per 20.129.01, Loss of Station and/or Control Air AOP, Enclosure A (System Response on Loss of Div 2 NIAS) for the Torus Vacuum Breakers:

> T2300-F450B, Torus to RB Vacuum Breaker, will be closed on loss of air because air is used to test the vacuum breaker in the open direction only.
>
> T2300-F410, Torus to RB Vacuum Breaker Iso Valve, fails open on a loss of air, allowing the design function to limit excessive primary containment negative pressure to be maintained.

With the above failures given, the question writer determined that (1) the vacuum relief function is maintained since the containment isolation valve (T2300-F410) failed open, thus not preventing the vacuum breaker from performing its design function, which is true. The question writer also determined that (2) the containment isolation function is lost since the containment isolation valve (T2300-F410) failed open, thus preventing the containment penetration from being isolated. Upon further investigation, part (2) was determined NOT to be true.

The containment design function only requires one valve, in each penetration, to close to satisfy design requirements. In the case of this question, since the T2300-F450B, Torus to RB Vacuum Breaker is closed, the containment isolation function is maintained. The following excerpt from Tech Spec Bases for LCO 3.6.1.3, Primary Containment Isolation Valves firmly supports this conclusion:

> "The OPERABILITY requirements for PCIVs help ensure that an adequate primary containment boundary is maintained during and after an accident by minimizing potential paths to the environment. Therefore, the OPERABILITY requirements provide assurance that primary containment function assumed in the safety analyses will be maintained. These isolation devices are either passive or active (automatic). Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges, and closed systems are considered passive devices. Check valves, or other automatic valves designed to close without operator action following an accident, are considered active devices. ***Two barriers in series are provided for each penetration so that no single credible failure or malfunction of an active component can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses***."

The vacuum breaker in the stem of the question, T2300-F450B, Torus to RB Vacuum Breaker, is a check valve that is designed to close without operator actions following an accident (i.e., if the containment was pressurized following a LOCA). This active device is capable of isolating the penetration and thus maintaining the containment isolation function.

Loss of the ability of the T2300-F410, Torus to RB Vacuum Breaker Iso Valve, to close due to the loss of air given in the stem does not result in a loss of containment isolation function but only loss of the redundant component.

In summary, the candidates and the Fermi 2 training staff agree that the above evidence supports a change in the answer key such that D is the correct answer for this question. This is consistent with ES-403, Paragraph D.1.b 3rd bullet because this provides "newly discovered technical information that supports a change in the answer key."

***NRC Evaluation/Resolution*: Recommendation accepted.**

The stem question specifically asks the applicant "What is the impact of this loss [Div 2 NIAS] on the ability of the . . . Torus to RB Vacuum Breaker, and the . . . Torus to RB Vacuum Breaker Iso Valve, to perform their design functions?" Specifically, the applicant is required to evaluate whether (1) the vacuum relief function and (2) the containment isolation function have been "lost" or are "maintained" for the penetration flow path from containment. As stated by the facility, the examination writer's answer justification considered the individual valve design functions and did not consider the "vacuum relief function" and "containment isolation function" associated with the penetration flowpath in its entirety.

Newly identified technical information clearly illustrates that both the vacuum relief and containment isolation functions associated with the penetration flowpath are maintained by the individual design operational characteristics of the two valves aligned in series in the penetration flowpath. With T2300-F410, Torus to RB Vacuum Breaker Iso Valve, designed to fail open on loss of its pneumatic air supply, the vacuum relief function for containment is maintained. Additionally, with check valve T2300-F450B, Torus to RB Vacuum Breaker, in its normally closed condition on loss of air, the containment isolation function is maintained.

POST-EXAMINATION COMMENTS, EVALUATION, AND RESOLUTIONS

NUREG-1021, Rev. 11, Section ES-403, D.1.b, states, in part, “The following types of errors, if identified and adequately justified by the facility licensee or an applicant, are most likely to result in post-examination changes agreeable to the NRC:

- newly discovered technical information that supports a change in the answer key.”

Therefore, the NRC has concluded that the facility recommendation that Choice B is incorrect, and the only correct answer to the question as stated is Choice D. The Examination answer key has been corrected accordingly for this exam question.

POST-EXAMINATION COMMENTS, EVALUATION, AND RESOLUTIONS

RO Question 37

A loss of RCIC Logic Bus A will result in a loss of...

A. automatic RCIC initiation capability.

B. automatic RCIC turbine trip capability.

C. isolation capability for E5150-F007, RCIC Stm Line Inbd Iso Valve ONLY.

D. isolation capability for E5150-F007, RCIC Stm Line Inbd Iso Valve AND E5150-F008, RCIC Stm Line Otbd Iso Valve.

Correct Answer: A

Answer Explanation:

Note: This question has been significantly modified from the 2019 NRC Retake version, Q39 on that exam, by modifying conditions in the stem of the question therefore resulting in a different correct response. This version of the question asks for the impact of a loss of Logic Bus A while the previous version asked for the impact of a loss of power to the RCIC Inverter ONLY. The RCIC Inverter is powered by 2PA2-5, Pos 9. Loss of power to the RCIC Inverter is limited and only impacts indications for pump suction/discharge pressure and turbine supply/exhaust pressure. Also, the inverter supplies power to E51-K615, RCIC Moore Controller, which would disable the ability to automatically control RCIC flow (previous correct answer). This version asks for the impact of loss of Logic Bus A, which is much more substantial and would prevent automatic system initiation capability (current correct answer).

Per ARP 1D56, RCIC LOGIC BUS POWER FAILURE: Loss of A Bus:

-**RCIC will not auto start.**

-E5150-F008, RCIC Stm Line Otbd Iso Vlv, will not auto isolate.
-E5150-F062, RCIC Exh Vac Bkr Otbd Iso Vlv, will not auto isolate.
-RCIC will not isolate with RCIC Logic A Manual Isolation Pushbutton.
-RCIC Suction will not shift to Torus on Low CST Level.
-E5150-F010, RCIC Pump CST Suction Iso Valve, will not auto open or auto close.
-E5150-F045, RCIC Turb Steam Inlet Vlv, closes, if open.
-E5150-F013, RCIC Disch To Fw Inbd Iso Valve, closes, if open.
-E5150-F095, RCIC Turb Stm Inlet Byp Vlv, closes, if open.

Loss of B Bus:

-E5150-F007, RCIC Stm Line Inbd Iso Vlv, will not auto isolate.
-E5150-F084, RCIC Exh Vac Bkr Inbd Iso Vlv, will not auto isolate.
-RCIC L-8 and Isolation Logic B trip will not function.

Distractor Explanation:

Distractors are incorrect and plausible because:

B. is incorrect since this results from a loss of logic power B, and will be unaffected by loss of logic bus A. Plausible if applicants incorrectly recall RCIC power supplies.

C. is incorrect since this results from a loss of logic power B, and will be unaffected by loss of logic bus A. Plausible if applicants incorrectly recall RCIC power supplies.

D. is incorrect since this results from a loss of logic power B, and will be unaffected by loss of logic bus A. Plausible if applicants incorrectly recall RCIC power supplies.

Reference Information:

1D56, RCIC Logic Bus Power Failure.
I-2235-01, RCIC power supply schematic

NUREG 1123 KA Catalog Rev. 2

217000 RCIC System
217000 K2
217000 K2.02 2.8*/2.9* RCIC initiation signals (logic)
217000 RCIC System
217000 K2 Knowledge of electrical power supplies to the following:
217000 K2.02 2.8*/2.9* RCIC initiation signals (logic)

10 CFR 55 RO/SRO Written Exam Content

10 CFR 55.41(b) (7) Design, components, and function of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features.

Fermi 2 NRC Exam Usage

ILT 2020 Exam

NRC Question Use (ILT 2020)

Closed Reference
Fundamental
Modified
RO

Associated objective(s):

Reactor Core Isolation Cooling

Cognitive Terminal
In accordance with approved plant procedures, given the condition of the system:
Describe the normal and alternate power supplies to RCIC Systems components.

References provided to NRC:

- DB-OP-02000, "RPS, SFAS, SFRCS TRIP, OR STEAM GENERATOR TUBE RUPTURE"
- Updated Final Safety Analysis Report (UFSAR) Chapter 15, Accident Analysis
- DWG 61721-2235-01, RCIC Logic Notes, Relay Tabulation and Power Dist.
- DWG 61721-2235-02, RCIC Sys Logic Ckt Part 1
- DWG 61721-2235-03, RCIC Sys Logic Ckt Part 2
- DWG 61721-2235-04, RCIC Turb Gov Tr Thr Vlv and Remote Trip Ckt
- ARP 1D56, Rev 12

Applicant Comment:

The applicants propose changing the answer key for this question to include 'B' as an additional correct answer based on the following reasons:

A loss of Logic Bus 'A' will not result in the conditions provided in choices 'C' or 'D' for several reasons. Choice 'A' is a direct result of the loss of Logic Bus 'A' due to the loss of control power to the starting circuit.

However, the Relay K8 in the Logic Bus 'B' control power circuit receives power from Logic Bus 'A' and will not be able to energize on any automatic trip signal and subsequently cause an automatic trip capability for the RCIC system. Therefore, choice 'B' is also a correct answer to the condition stated in the question stem.

Facility Position on Applicant Comment:

The facility licensee recommends changing the exam answer key such that both 'A' and 'B' are accepted as correct answers for this question.

STATION RECOMMENDATION: The Fermi 2 staff agrees with this proposed change as described below:

The ARP, and therefore the question, contained an incomplete list for the impact of loss of Logic A Bus.

Referring to Schematic 1-2235-02, starting at Grid G-8, shows RCIC Logic Bus A:

- At the far left, Logic Bus A power is shown.
- Review of the logic string will reveal how the impact list (above) contained in the ARP was developed.
  - However, the ARP does not consider the impact of the loss of Logic A Bus power on Relay K8
    (Grid E-4). Relay K8:
    - Is normally de-energized.
  - Is energized upon any RCIC Trip, such as the manual pushbutton (S17 on H11P601), High Turbine Exhaust Pressure (relay K6, contact 1-7), Low Pump Suction Pressure (relay K7, contacts M1 -T1), etc.

Referring to Schematic 1-2235-04 shows the impact when relay K8 is energized for a RCIC Trip, starting at grid C-5:

- The RCIC Turbine Remote Trip Circuit is also powered by 130Vdc Bus A.
- When relay K8 is energized, contacts 1-7 close at grid D-4.
- This energizes the RCIC Trip Contactor that then closes a contact to energize the solenoid located on the E5150-F059, RCIC Trip Throttle Valve.

In summary, the solenoid on the E5150-F059, RCIC Trip Throttle Valve cannot be energized without power to RCIC Logic A Bus. Loss of Logic A Bus disables all RCIC automatic trips. Therefore, the key for Question R37 should be revised to accept Answers A and B as correct responses.

***NRC Evaluation/Resolution*: Recommendation accepted.**

The stem states "A loss of RCIC Logic Bus 'A' will result in a loss of ..." Specifically, the applicant is required to evaluate which of the listed choices depict a consequence of the provided condition.

The stem question specifically asks the applicant to evaluate which of the listed consequences will be the result of a loss of RCIC Logic Bus 'A'. Since the automatic initiation logic is powered directly from RCIC Logic Bus 'A' this capability is lost, and Choice A is a correct answer.

Newly identified technical information clearly illustrates that Choice B will also be a direct consequence of a loss of power to RCIC Logic Bus 'A' due to the inability to energize Relay K8, which would close a necessary contact in the RCIC Remote Trip Circuit and provide automatic RCIC turbine trip capability.

NUREG-1021, Rev. 11, Section ES-403, D.1.b, states, in part, "The following types of errors, if identified and adequately justified by the facility licensee or an applicant, are most likely to result in post-examination changes agreeable to the NRC:

- newly discovered technical information that supports a change in the answer key."

Additionally, Section ES-403, D.1.c, states, in part, "If a question is determined to have two correct answers, both answers will be accepted as correct." If, however, both answers contain conflicting information, the question will likely be deleted.

Because the loss of RCIC Logic Bus A results in a loss of the capability to automatically trip the RCIC turbine, Choice B is also a correct answer. As this additional correct choice is not in conflict with and does not invalidate Choice A, both choices are considered correct.

Therefore, the NRC has concluded that Answer B is also a correct answer to the question as stated. The Examination answer key has been corrected accordingly for this exam question.

SIMULATOR FIDELITY REPORT

Facility Licensee: Fermi Power Plant

Facility Docket No: 50-341

Operating Tests Administered: January 11, 2021, through January 14, 2021

The following documents observations made by the U.S. Nuclear Regulatory Commission 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 Title 10 of the *Code of Federal Regulations*, Part 55.45(b). These observations do not affect U.S. Nuclear Regulatory Commission 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.	