PROPOSED OUTLINE COMMENTS

Facility: Fermi 2 First Exam Date: 06/19/2023

NOTE - Audit exam (written and op test) will be the administered 2021 NRC exam, which will not be made public until June, 16, 2023, after the audit exam is administered.

Written Exam Outline		
Comment		**Resolution**
1	NRC Generated. No issues with updated outline and rejected K/As.	N/A

Administrative JPM Outline		
Comment		**Resolution**
	JPM RO1 - "Determine Stay Time for work in Hot and/or Cold Environments" **Comment:** None *Source: New*	
1	**JPM RO2** – "Verify Offsite Electrical Lineup" **Comment:** 1) Consider grouping this JPM with a sim JPM on the same, stable IC (for administration efficiency), if possible. 2) Need to ensure this remains an admin JPM and not a sim JPM (the K/A is a closer match for a sim JPM). *Source: Bank (2004, 2018 exam)*	1) We have started developing scenario "sets" to make JPM implementation as efficient as possible. Our plan is to validate them, as sets, to make sure that the JPMs we have placed in sets work well together. We will then present the proposed sets during O/V week. 2) This truly is an Admin JPM. It requires verification of equipment / component / parameter status and does not require any component manipulation (would not satisfy the requirements to be a Sim JPM since it would not include the requisite "verifiable operator action(s)". NRC followup: 1) Agree. Comment resolved. 2) Agree. Comment resolved
2	**JPM RO3** – "Obtain and Interpret Electrical Drawings" **Comment:** 1) If this is from the 2020 exam, it should be marked as "P" on Form 3.2-1 instead of "D". *Source: Bank (2019 or 2020 exam)*	1) This is not the same JPM that was used in 2020. • The number for the JPM used in 2020 was JP-OP-802-4101-193. • The number of the JPM selected for this exam is JP-OP-802-192. They have been verified to be different JPMs so the "D" coding for this JPM is correct. NRC followup

		3) Agree. Comment resolved.
3	**JPM RO4** – "Notify hospital of Contaminated, Injured Worker" **Comment:** 1) Will any site maps be provided for cueing for this JPM? Phone numbers reachable from outside lines? *Consideration for withholding from public disclosure.* *Source: Bank (2018 exam)*	1) No site maps will be provided for this JPM. Not sure what is meant by the phone number comment, will have to discuss with CE. Nothing on our forms indicates "confidential" information, or otherwise. No indication of the need to withhold from public disclosure but can discuss. NRC followup: 1) Discussed further with licensee. No confidential or proprietary info to withhold.
4	**JPM SRO1** – "Determine Fire Brigade Minimum Manning & Compensatory Actions" **Comment:** 1) Verify this JPM is not the same as JPM 08-A-005 "Determine Shift Staffing Requirements" from the 2004 and 2008 Exams, which require applicant to address inadequate fire brigade staffing. If it is, change source to either bank or modified. *Source: New?*	1) This JPM was developed independently, and without referring to any bank JPM. A review was conducted and this JPM is, in fact, similar to the JPMs used in 2004 and 2008, although the author of this exam's JPM had no prior knowledge of those bank JPMs. Although this is not a written question, could it still be called "new" based on this statement from NUREG-1021 ES-4.2 (page 4 of 29) second bullet from the top: "Generally, if a question is created without referring to a bank question, it can be considered a "new" question"? Following this line of reasoning, could this JPM still be classified as "new"? NRC followup: 1) Discussed with licensee. JPM is to be classified as bank, or modified (if it is modified from the bank), due to the relatively small size of the JPM bank, compared to the large size of the written bank.
5	**JPM SRO2** – "Perform Plant-Wide Announcement for Imminent Aircraft Threat" **Comment:** 1) Is there any security-related, sensitive, or proprietary information in this JPM? Any materials that should be withheld from public disclosure? 2) Modification appears to be imminent threat vs probable	1) The information in this JPM, and the procedure from which it was developed, is not coded as "withhold from public disclosure" nor does it contain any type of security classification (confidential or otherwise). 2) Correct. NRC followup: 1) Discussed further with licensee. Licensee requests information in this JPM be withheld from public

	threat (2019 exam). Is this correct? *Source: Modified (2019 exam)*	disclosure. NRC will ensure the materials of this JPM are redacted in the public release of the examination, beyond the outline. 2) Agree. comment resolved.
6	**JPM SRO3** – "Determine RCIC Operability & Apply Tech Specs" **Comment:** 1) A common scenario failure. While there is no overlap with scenarios in this exam, we will not be able to use this event for a scenario event (TS credit), if we need to modify a scenario. *Source: Modified*	1) While the application of RCIC Technical Specifications is a common scenario failure, the way that this JPM gets there is significantly different. The cueing includes information about where the RCIC suction is aligned, which requires some analysis to determine that RCIC is INOPERABLE. Even so, we will monitor for changes in the scenario outlines that might impact this JPM's usability on this exam. NRC followup: 1) Agree. Comment resolved.
7	**JPM SRO4** - "Notify hospital of Contaminated, Injured Worker" **Comment:** 1) See JPM RO4 comment. *Source: Bank*	
8	**JPM SRO5** – "Event Classification IAW EP-101" **Comment:** 1) What is the source of the JPM that is being modified (common JPM topic used on exams)? *Source: Modified (exam?)*	1) This JPM was called "modified" because there are a large number of JPMs in the bank that require event classification. This one is significantly different from the rest because it requires use of the EAL Classification Matrix for Cold Conditions (i.e., RCS Temperature ≤200°F) which is a relatively new chart. However, it could not be said that this JPM was created "without referring to a bank JPM" (see response to SRO1 above) so it was coded as "modified." NRC followup: 1) Agree. Comment resolved.
	General comment None	

Control Room / In-Plant System JPM Outline		
Comment		**Resolution**
1	**JPM S.a** – "Shift running RRMG lube oil pumps – noisy pump (Alt path)" **Comment:**	1) Ammeter oscillations are built into the simulator response when the standby pump is started. There is a verbal cue that the examiner can give to the

	1) Is there any indication we can cause to fluctuate (amps, flow, pressure, etc) to require the applicant to identify the abnormality and make the decision? While we can provide the field cue that the pump is behaving erratically, it's preferred to avoid that if possible, such that we can better evaluate the applicant's ability to monitor and diagnose abnormal conditions. 2) Appears to be the same as 2021 scenario #3, Event 2. Since this scenario will be run for the audit exam, this JPM cannot be duplicated on this exam. *Source: Bank (2019 exam)*	examinee, and it can be withheld, at the discretion of the examiner, until the examiner is certain the examinee has not picked up on the abnormal ammeter indications. If the cue is given, a comment could be made regarding the examinee's less than optimum monitoring abilities. 2) The Fermi Exam team selected this JPM after referring to ES-3.1 Paragraph B.4., which states "Simulator events and JPMs that are related to those tested on the audit examination are permitted, provided that the actions required to mitigate the transient or complete the task (e.g., using an alternative path) are significantly different from those required during the audit examination." This JPM is significantly different from the scenario event in that: a. It is cued differently. For the JPM, it is cued as a "normal" evolution to swap Lube Oil pumps. For the scenario, it was cued as an abnormal condition (receipt of alarms and failure of the standby pump to start on low lube oil pressure, requiring manual start). b. The JPM contains Alternate Path actions. When the pump swap occurs (following guidance in the cue) the examinee is provided with indications that the newly started pump is behaving erratically, requiring actions to swap back to the originally running pump. This will different monitoring and decision making, as well as require switch manipulations, that are significantly different than the ones required during the 2021 scenario 3, event 2. NRC followup: 1) Discussed further with licensee. Recommended that an examiner cue not be provided, as the applicant is

		being tested on board monitoring and diagnosis. 2) Agree with the licensee comments. Additionally, this JPM was included in the SPARE scenario, which is not included in the ADAMS public release and was not administered during the 2021 exam.
2	**JPM S.b** – "Start up SBFW after loss of HP feed (Alt path)" **Comment:** 1) If this is from the 2020 exam, it should be marked as "P" on Form 3.2-1 instead of "D". However, I recommend replacing this JPM due to recent oversampling (this would make 4 of the last 7 exams). *Source: Bank (2015, 2018, 2020 exams)*	1) This is not the same JPM that was used on those exams. The JPM number previously used was JP-OP-315-0118-005. The conditions for those JPMs occurred following a reactor feedwater pump (RFP) trip at power, after entering and while performing subsequent actions of the Loss of Feedwater/Feedwater Control AOP. This exam's JPM (number JP-OP-315-0118-002) occurs after a scram, due to loss of HP feed, while in the EOPs. The conditions and cue are significantly different, which explains how it was selected for this exam. However, review of the 2020 JPM indicates that the steps are not significantly different. A new JPM has been developed and the Outline revised. NRC followup: 1) New JPM developed – final outline will be updated. Comment resolved.
3	**JPM S.c** – Manually initiate low-low set (Alt path)" **Comment:** 1) If this is from the 2020 exam, it should be marked as "P" on Form 3.2-1 instead of "D". Also appears on the 2019 exam (alt path on both exams). Due to the recent use on 2 of the previous 3 exams, I would recommend replacing this JPM. *Source: Bank (2019, 2020 exams)*	1) This is not the same JPM as the 2020 exam. The 2020 JPM was number JP-OP-315-0043-406. This JPM is number JP-OP-315-0143-181. This year's JPM involves a failure of Low-Low Set (LLS) Logic, whereby manual action is necessary to prevent high reactor pressure. The 2020 JPM involved failure of an SRV itself, whereby the SRV failed to close (Stuck Open SRV) and actions were taken to close the SRV prior to exceeding the allowable cooldown rate limit. From the titles of the JPMs it can be seen how they appear the same. We could change the title of this year's JPM to something like "Manually Initiate Low-Low Set and take action for a Stuck Open SRV (Alt

		Path)" if that is needed to provide some clarification. NRC followup: 1) Agree. Comment resolved.
	JPM S.d – "Shut down TWMS from the cleanup mode" **Comment:** None *Source: New*	
4	**JPM S.e –** Start an EDG and respond to low DGSW flow (Alt path)" **Comment:** 1) Appears that K/A 264000 A.306 may be a more appropriate K/A match *Source: Modified*	1) Outline, and JPM, have been changed to reflect K/A 3.06. NRC followup 1) Agree. Final outline updated to reflect change. Comment resolved.
5	**JPM S.f** – "Reset Reactor Scram" **Comment:** 1) Are applicants still required to reset the mode on the overhead display as part of this evolution? If so, I recommend terminating the JPM prior to this point, if possible (provided no critical steps exist in the procedure after that point). 2) Overlap with scenarios? Could not determine that this will be required to be performed in the scenarios *Source: Bank (2019 exam)*	1) The JPM has been revised to stop the JPM prior to the step requiring changing the IPCS display. 2) There are no scenarios that progress to the point where resetting the reactor scram will be required. We will continue to monitor for this while scenario development is in progress. NRC followup: 1) Agree. Comment resolved 2) Agree. Comment resolved.
	JPM S.g – Shut down a circ water pump" **Comment:** None *Source: New*	
	JPM S.h – "Respond to CCHVAC shift to recirc mode (alt path)" *RO Only* **Comment:** 1) None *Source: New*	
6	**JPM P.i** – "Fire Zone 9 – Subsequent Action AB, Impact 1 / Strategy 3" **Comment:** 1) How does this meet the RCIC system K/A for predicting the impacts of and using procedures to mitigate the consequences of 'valve closures due to malfunctions' within the RCIC system? JPM appears to be a	1) The actions in the Fire AOP were added due to deficiencies with routing of cables, for safety related systems, in cable trays. The deficiencies are more 'system related' and not related to any Fire Protection systems. In other words, if the RCIC system cabling were routed differently, this deficiency would not exist and the

	SF8 JPM under the Fire Protection System (286000) – K/A 2.09 possibly? The JPM is addressing the FP system, using FP procedures – not RCIC (safety function & system mismatch) *Source: Bank (2019 exam)*	need to "protect" RCIC would not exist. The actions taken in the Fire AOP have more to do with preserving and protecting the Safe Shutdown strategy (protecting the applicable High Pressure Injection System) than they have to do with the actual fire. That's why this was selected as an SF4 JPM, since RCIC (System 217000) is being protected to maintain its Core Heat Removal function. Perhaps this is another instance where the title of the JPM could be changed to make clearer what task is being evaluated. Propose changing the title to "Restore/Protect RCIC as the Preferred HP Feed Source Due to a Fire in Zone 9" NRC followup: 1) Agree. Comment resolved.
7	**JPM P.j** – "Transfer of UPS from the Voltage Regulator to the Rectifier Charger / Inverter" **Comment:** 1) Has this been used on an NRC exam? Appears to be a normal path version of the 2017 in-plant JPM k. *Source: Bank*	1) No evidence of previous NRC Exam usage could be found for this JPM. There are several UPS related JPMs in our Bank, which is how this one was selected. It would be the "normal" version of the 2017 JPM. If it hadn't already existed in our JPM bank, we would have classified it as "Modified." NRC followup: 1) Agree. Comment resolved.
8	**JPM P.k** – Startup Fuel Pool Vent Exhaust Rad Monitor D11-K609A" **Comment:** 1) K/A A1.01 has to deal with "lights and alarms". Since the JPM is a normal path, how is the K/A matcfhed? Is K/A A4.05 a better match? *Source: Bank (2013, 2018 exams)*	1) Agree that A4.05 is a better match. The outline, and JPM, have both been revised to reflect this change. NRC followup: 1) Agree. Final outline updated to reflect change. Comment resolved.
9	**General comment** 1) If Comments 2 and 3 are valid for JPMs B and C, quantitative assessment per the type code table of Form 3.2-2 would remain SAT. However, it is recommended to modify or replace those JPMs due to recent oversampling.	1) A new JPM was created to replace JPM B (Comment 2). JPM C (Comment 3) is significantly different than the JPM mentioned in the comment, therefore we do not agree that oversampling of this JPM has occurred. A recommended change to the JPM title was given in our response to Comment 2 to

		potentially differentiate better between the two tasks (JPMs). NRC followup: 1) Agree. Final outline updated to reflect changes. Comment resolved.

Simulator Scenario Outline Comments		
	Comment	**Resolution**
1	**Scenario 1, Event 1** 1) With the STA to perform Rx management SRO – will a booth instructor be on the floor acting in that role (similar question with the 3rd LNO as the rod movement verifier)? How do they practice this in a 3 person crew in ILT?	1) In the past, we have done it several different ways. Sometimes, the NRC examiner plays STA, sometimes a surrogate instructor. It is up to your preference. The STA will ONLY concur with any decision the RO makes, so it shouldn't matter much. If you have a preference, we are happy to try and make it work! NRC followup: 1) Discussed with licensee to determine how the class currently performs this action. Would prefer examiners NOT provide any scripted cueing or concurrences during scenarios.
2	**Scenario 1, Event 2** 1) Scenario summary should include TS/TRM (currently states "CRS will evaluate Tech Specs")	1) This scenario does not address anything in the TRM, therefore it was left out for clarity and brevity. We did put more detail in to the TS part, though. NRC followup: 1) Agreed. Comment resolved.

3	**Scenario 1, Event 3** 1) Similar comment to #2 in regards to TS on scenario summary.	1) Please see response comment #2 NRC followup: 1) Agreed. Comment resolved.
	Scenario 1, Event 4 None	
5	**Scenario 1, Event 5** 1) Form 3.3-1 states "auto swap to backup". The scenario summary states that the crew will take actions to [manual] swap to the backup regulator. Clarify/delete the auto swap verbiage on Form 3.3-1.	1) When the regulator auto swaps to the backup, the crew must also take follow up actions per the procedure to place the regulator system in a backup condition. The system does not complete the full process on its own. Therefore, there is mention of both Auto and Manual actions. NRC followup: 1) Agreed. Comment resolved.
6	**Scenario 1, Event 6** 1) Scenario summary event title is missing "H" in HPCI ("PCI Steam Leak to MSO")	1) Typographical error fixed NRC followup: 1) Agreed. Comment resolved.
7	**Scenario 1, Event 7** 1) Scenario summary does not address the mode switch failing and scramming via manual P/B actuation. CT-1 references taking mode switch to S/D, however, with it failing, shouldn't the CT be tied to that what works?	1) We removed the push button to make the CT-1 references the same. The action to manually scram means to try mode switch, then immediately try push buttons if the mode switch fails. Saying "manually scram" should be sufficient for the critical task. NRC followup: 1) Agreed. Comment resolved.
8	**Scenario 1, Event 8** 1) Scenario summary does not address SRV H failing on the ED.	1) The SRV H failure was removed and replaced with Bypass Valves failing following scram. References to SRV H have all been removed. NRC followup: 1) Agreed. Comment resolved.
9	**Scenario 2, Event 1** 1) Inconsistency between turnover on Form 3.3-1 and scenario summary: initial conditions on Form 3.3-1 state power is 100% and to maintain power at 100% for the shift, whereas the scenario summary states that power restoration to 100% is i/p and power is currently held at 94% pending evaluation of final rod pattern.	1) Fixed initial conditions to match on both forms. NRC followup: 1) Agreed. Comment resolved.

10	**Scenario 2, Event 2** 1) Scenario summary states "evaluation of the TRM for impact". What is the result? What TRM is applicable? 2) What actions is the BOP taking to receive component credit for this event?	1) TRM impact information details added. 2) The credit for BOP action has been removed. There were already enough component failures to satisfy the requirements, so it was not necessary. NRC followup: 1) Agreed. Comment resolved. 2) Agreed. Comment resolved.
11	**Scenario 2, Event 3** 1) No TS? Are only 3 needed for operability?	1) Correct. APRM upscale TS is applicable to mode 2 only. NRC followup: 1) Agreed. Comment resolved.
	Scenario 2, Event 4 None *Previous 2 exams. 2020 ILE, scenario 2, event 6.*	
12	**Scenario 2, Event 5** 1) Scenario summary information states "94% is required to prevent other condensate pumps from tripping". What is the concern and where is this applicable in the scenario?	1) There is an ongoing investigation in the plant regarding a trip of one condensate pump causing trip of all condensate pumps and subsequent loss of feed. NRC followup: 1) Agreed. Comment resolved.
	Scenario 2, Event 6 None	
13	**Scenario 2, Event 7** 1) CT 1, 2, & 3 details not included in the scenario summary (boundary criteria). Need to validate CT criteria. 2) How is CT3 plausible? Are high level trips bypassed at this point? If not, HP FW will isolate at L8.	1) More detailed CT writeups have been included in our local forms, after the summary tables. 2) Since we failed HPCI early on and it required manual start, it will not auto trip at L8, so the RO must trip it manually. NRC followup: 1) Agreed. Comment resolved. 2) Agreed. Comment resolved.
	Scenario 3, Event 1 None	
14	**Scenario 3, Event 2** 1) TS not detailed in scenario summary. See comment 2.	1) More detail added to TS call. NRC followup: 1) Agreed. Comment resolved.
	Scenario 3, Event 3 None	
	Scenario 3, Event 4 None	

15	**Scenario 3, Event 5** 1) It appears that the BOP can be credited with MC credit for having to take manual action to trip the pump that failed to auto trip.	1) ARP 5D28 requires trip if > 8mils for more than 15 seconds. The idea behind the event is that the operators will anticipate it tripping and take manual action to trip before it automatically trips. Added some amplifying information for clarity. NRC followup: 1) Agreed. Comment resolved.
	Scenario 3, Event 6 None	
	Scenario 3, Event 7 None	
	Scenario 3, Event 8 None	
16	**Scenario 3, Event 9** 1) SLC failing to start – is this on the actuation p/b, such that the applicant will need to start and inject manually? 2) Include HCL curve in scenario guide.	1) It is a keylock switch. When the RO positions it to the first pump, it will trip. Then, they will position it to the other pump and SLC will start normally. 2) HCL curve is included after the critical task write up. NRC followup: 1) Agreed. Comment resolved. 2) Agreed. Comment resolved.
17	**Scenario 4, Event 1** 1) Recommend swapping events 1 and 2, otherwise, we will need to wait until they reach 100% power and the plant stabilizes. By swapping, once we've seen the necessary reactivity event, we can insert event 3.	1) Events have been switched. Initial conditions and turnover adjusted to reflect changes. NRC followup: 1) Agreed. Comment resolved.
18	**Scenario 4, Event 2** 1) Scenario summary states that #2 GSW pump is OOS and maintenance was just completed, however, this is the pump they're starting in Event 1 (pump can't be OOS if they're going to be starting it). Rephrase – pump was OOS for maintenance.	1) Initial conditions/summary have been rephrased to clarify the condition of GSW. NRC followup: 1) Agreed. Comment resolved.
15	**Scenario 4, Event 3** None	
16	**Scenario 4, Event 4** None	
17	**Scenario 4, Event 5** 1) No discussion of TS in scenario summary.	1) Clarification added NRC followup: 1) Agreed. Comment resolved.

	Scenario 4, Event 6 None	
	Scenario 4, Event 7 None	
	Scenario 4, Event 8 *Previous 2 exams. 2020 ILE, scenario 1, event 9*	
18	**General Comments** 1) CRS receives credit for C, I, R, and N events. This is depicted on the Form 3.4-1, but not on the scenario outlines, Form 3.3-1.	**1)** The purpose behind this was to try and reduce clutter on the form 3.3-1. However, all the CRS entries have been updated on the 3.3-1 to match the 3.4-1 NRC followup: 1) Agreed. Comment resolved.
19	2) Last 'low power' scenario was on 2020 exam. NUREG 1021 states to "periodically" use startup and low power scenarios. Consider using a startup or low power scenario for 2024 exam.	
20	3) Some event descriptions on 3.3-1 forms are very detailed (scenario 3, event 3), while others are generic (scenario 2, event 2)	1) The purpose behind this was to try and reduce clutter on the form 3.3-1. The supplemental form we provided contains all the detailed summary and setup information. Trying to streamline things a bit. The longer summaries have been added. NRC followup: 1) Discussed further with licensee. Continue to work with licensee to ensure Form 3.3-1 details are minimal, yet sufficient to determine how the event impacts the scenario.
21	4) Scenario summaries can be improved upon. For example, scenario 1, events 1,2, 4, 6 are of adequate quality, however, event 3 is of extremely minimal detail.	1) Scenario summaries reworked with more detail. NRC followup: 1) Upon licensee providing scenario summaries, some included uncessary detail and some still lacked necessary detail. Discussed further with licensee. Continue to work with licensee to ensure Form 3.3-1 narrative summary details are adequate to provide a detailed high level summary of the scenario.

22	5) Scenarios (all) do not state where they are in terms of core life (BOL, MOL, or EOL).	1) Not sure value added or where this info would go. The crew does not brief this every time they take the shift in the MCR. NRC followup: 1) Agreed. Comment resolved.
23	6) Consider adding additional information to turnover information, such as a high wind warning, severe weather predicted for the shift, geomagnetic disturbance alert, etc. This simply allows some variation, such that applicants can't pinpoint where the scenario is going by the turnover info.	1) Some of these considerations could potentially land the crew in an extra procedure, requiring additional actions. If we add extra information to initial conditions, it could delay scenario start due to confusion. The crews may think that they are required to take more action based on the initial conditions. NRC followup: 1) Will further discuss with the licensee prior to and after the draft submittal.
24	7) For outline submittals, please include the target quantitative attributes for each scenario (ES 3.3.B.2 and Table 3.4-1) to help ensure attributes are met for each scenario.	1) Not sure what is expected. Need more info. NRC followup: 1) Discussed with licensee to enhance their outline template.
25	8) For outline submittals, in the future, please include a scenario summary, including event descriptions, scenario termination, and CT details. While this is not necessarily required for the outline submittal, this helps to identify potential gaps, repetition, or issues prior to the 75-day exam submittal, after spending the time to create and validate the exam material. Additionally, summaries are used to brief the exam team prior to scenario administration, so event transitions, AOPs & EOPs, and scenario termination criteria are helpful.	1) Understood. Our template has been adjusted to ensure more detail is added for future submittals. NRC followup: 1) Comment resolved.