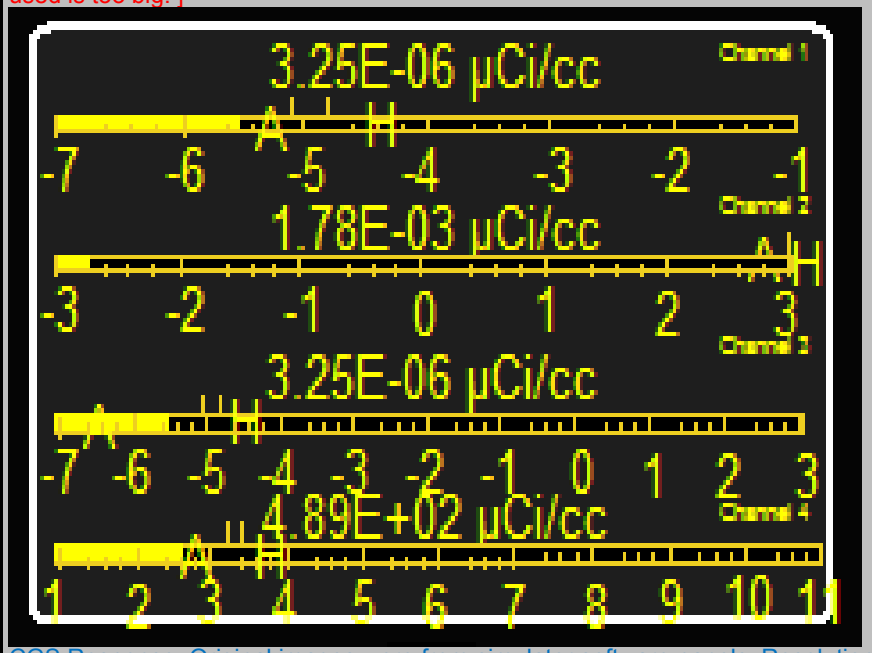
JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
RO (A1)	S	~~1~~ 2								~~U~~ S	• Do not include information about the SRO task standard in the front matter of this JPM, it is an RO JPM. Make specific to RO only. • Non-discriminatory, LOD =1. this would be more appropriate for the written exam in a modified format. Applicant needs only recognize the reactor is critical [definition of criticality given on provided reference 3.1.2], see that the highlighted minimum critical position on the provided pull sheet has not been reached, and write down the given required action from provided reference 3.1.2 step Q16. • A more appropriate JPM would be to actually calculate ECP, min and max. • This is functionally identical to the ECP JPM on 2015 exam. It should realistically be listed as (P), which puts admin JPMs in excess of the allowed <=1. [CGS Response: JPM Replaced with new JPM to perform an Alternate Heat Balance Determination. This new JPM was validated during NRC Validation Week and determined to be adequate. Minor adjustments were made following validation week based on feedback from NRC team. Changes included task standard adjustment, calculation band adjustment and validation time adjustment.] [NRC - The answer sheet that states "CTP validation **was / was not** (circle one) satisfactory" can just be included on the applicant's cue sheet, not a separate sheet. Applies to all similar JPMs.] [CGS: Revised cue sheet as specified.] [NRC OK]
RO (A2)	S	3	~~X~~							~~E~~ S	• Range of acceptable answer is far too large. For 15% accept 110F to 120F. For 85% accept 270F to 280F. • But, may be better to choose start and end powers that are easier to read on the graph. Start at 30% or 40%, end at 70%. • Task standard has to explicitly statgae the acceptable range. Would prefer if it stated the acceptable range for each portion of the interpolation to prevent applicant stumbling into correct answer range with multiple errors. [CGS Response: JPM adjusted such that load change is from 12% to 70% to better align with graph major axis lines. Starting at 30 or 40% would not have worked with provided graphs therefore used 12% instead. Task standard modified to state the exact range allowed for each step and for the final determination. JPM validated during NRC validation week and additional adjustments made based on feedback including a slight modification to the final acceptable range for the final time for load change.] [NRC - Specify that 1.05 to 1.20 hours = (63 to 72 minutes) in step 6 Page 5 of 7 in the JPM file is the key – delete this, and provide separately on a different color paper so the examiner doesn't inadvertently provide to applicant.]

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											[CGS: Revised guide to create a separate answer key. Revised to provide both hours and minutes for acceptable range "(accept a range of 1.05 to 1.20 hours/63 to 72 minutes)"] [NRC OK]
RO (A3)	S	2								S	• Need to administer this carefully so other applicants can't inadvertently see what each other are choosing. • Does applicant need to find correct print? [CGS Response: Adjusted based on feedback during validation week. Modified setup instructions to provide full copy of EWD instead of partial copy and to make fuse labels all the same general appearance. Added to Initiating Que that "All potential replacement fuses have come from the warehouse and have been validated for use in the plant." Modified setup instructions to provide magnifying glass and recommend containers to hold the fuses (i.e. as-found and potential replacements in separate containers).] [NRC OK]
RO (A4)	S	2	~~X~~	~~X~~						~~E~~ S	• I don't like the format of this JPM. It's in the same category as the "Review logs for errors" JPM type, which are poor for initial exams. Nobody is going to think that the JPM intends for them to determine that "I WILL be able to perform this task. There are no issues as planned." So it's partially cued. Modify it to something more appropriate, like choosing RWP, stay time, limitations, etc. [CGS Response: JPM revised based on feedback to select RWP based on Clearance. Additional minor modifications made following NRC validation week that included making the survey map larger and more readable.] [NRC OK]
SRO (A5)	S	2	~~X~~		~~X~~					~~E~~ S	• Task standard: "Determine that a reactor SCRAM is required due to operating in Region A of the Power to Flow map with the OPRM inoperable, per ABN-CORE step 3.2." STEP 4 is critical. Require applicant provide reason. • Applicant will have to retrieve ABN-CORE and ABN-RRC-LOSS himself, correct? • This strikes me as a better fit for the scenarios, or as a written exam question. [CGS Response: Task standard was modified as requested. Steps 3 and 4 are now critical. Per discussion during NRC validation week, candidates will be provided copies of the procedures and will not have to retrieve them. JPM modified to reflect this. Changed "Que" to "Evaluator's Que" in column heading.] [NRC OK]
SRO (A6)	S	2	X	X						E	• Task standard on cover sheet? • Provide copy of SLC placard, don't tell applicant what SLC concentration is.

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											• Initiating Cue: "Determine SLC operability." That's all you need to say, for an Admin JPM applicant should demonstrate he knows where to find the necessary information. • Provide entire copy of OSP-INST-H101 rather than just relevant excerpts. Borderline LOD=1 in its current format with references as given. • Just a 50/50 question as-written. Include reason why OPERABLE or INOPERABLE. • Provide a filled in key for examiners. [CGS Response: Task standard removed from cover sheet and added to JPM setup section. JPM modified to provide completed copy of CSP-SLC-M101 so that candidate has to find Boron concentration in the SLC tank in an operationally valid manner. Provided entire copy of OSP-INST-H101. Added space for student to provide justification for operability decision on answer sheet. Modified task standard such that it includes specifics on how operability should be determined.] [NRC - The "answer sheet" section can just be included on the cue sheet. Task Standard: "Determine that SLC is NOT operable per step #53 of OSP-INST-H101 by graphing SLC Temperature (64°F) vs. SLC Tank Concentration (14.3 % weight) in the "Unacceptable Operation" region on Attachment 9.6."] [CGS: Student answer section included on cue sheet. Revised task standard as specified.] [NRC OK]
SRO (A7)	S	2								S	• See A3 comments. [CGS Response: Modifications from A3 made to A7] [NRC OK]
SRO (A8)	S	2								~~S~~ E	• Provide applicant pictures of readings that he has to derive values from. • 2015 exam. [CGS Response: Pictures added for Offgas system parameter readings. Additional parameter readings for ARMs added following NRC validation week to make candidates determine if section 4.1 or 4.2 should be entered. Also corrected one picture based on feedback from NRC Validation week. Split out calculation making each portion a critical step. Made Task Statement more concise.] [NRC – if applicant needs to use RM-2300 readouts to determine if step 4.1 or 4.2 should be used, then that should be a separate JPM step in the examiner's guide. Also, the values on those 2 printouts are cluttered and difficult to read, I believe if you make them a larger full page printout they will be easier to read.] [CGS: Separate JPM step developed. RM-2300 readouts expanded to one instrument per page]

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											[NRC - What I mean is, is this what the readout of this display is supposed to look like, with letters overlayed on the channel readout, numbers overlayed on the white border, etc.? Were these typed on the image or is that just how the display looks? It seems like the font used is too big.]  CGS Response: Original images were from simulator software panels. Resolution issues caused them to not display correctly. Took new pictures directly from simulator and inserted into attachment. Clarity is improved. [NRC – please provide] [NRC – OK]
SRO (A9)	S	3								~~S~~ E	[CGS Response: Based on feedback from NRC Validation week, modified URI attachment to remove "Site Area Emergency" Red bar from handout and force them to use readings. Adjusted steps based on revised Classification Notification Form. Changed "Que" to "Evaluator's Que" in column heading.] [NRC - The task standard needs to be specific. "Applicant classifies event as a 5.1.S.2 SAE due Thyroid CDE dose at 1.2 miles of GT 55 mrem, within 15 minutes. Applicant correctly completes and submits Classification Notification Form within 15 minutes of classification." Blocks 2 through 10, 11, 12, 13 are critical.

CGS – 2017 – FEB	DRAFT OPERATING TEST COMMENTS									ADMIN JPMS
JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											Provide applicant a prognosis in initial conditions so he can answer block 14. Block 2 on examiner's answer key says 'X', not '1'. Remove all the information from "Initial Conditions" that is available to the applicant on the provided Dose Assessment handout, specifically, "Turbine Building exhaust flow is 355,000 cfm with activity reading of 1.30E-01 µCi/cc. Wind direction is from 300°, wind speed is 7 mph, and there is no precipitation. Stability class is A." [CGS: Revised task standard as prescribed. Made blocks 2-10, 11,12,13 critical steps. Prognosis information included in initial conditions: "release rate is stable." Revised initial conditions as prescribed. Examiner key (CNF Form) updated to reflect choice b. (stable) in Block 14.] [NRC - JPM step 1 needs to be critical as well, and standard for step 1 should say "within 15 minutes." Task Standard should actually say "GT 500 mrem" not "GT 55 mrem". JPM step 19 for block 14 standard should be "checks b."] CGS Response: Modified step 1 to be a critical step. Task standard modified as described above. JPM step 19 modified for "checks b." [NRC – please provide] [NRC – OK]

Instructions for Completing Matrix

This form is not contained in or required by NUREG-1021. Utilities are not required or encouraged to use it. The purpose of this form is to enhance regional consistency in reviewing operating tests. Additional information on these areas may be found in Examination Good Practices Appendix D. Check or mark any item(s) requiring comment and explain the issue in the space provided.

1. Determine whether the task is dynamic (D) or static (S). A dynamic task is one that involves continuous monitoring and response to varying parameters. A static task is basically a system reconfiguration or realignment.
2. Determine level of difficulty (LOD) using established 1-5 rating scale. Levels 1 and 5 represent inappropriate (low or high) discriminatory level for the license being tested.
3. Check the appropriate box when an attribute weakness is identified:
   - The initiating cue is not sufficiently clear to ensure the operator understands the task and how to begin.
   - The JPM does not contain sufficient cues that are objective (not leading).
   - All critical steps (elements) have not been properly identified.
   - Scope of the task is either too narrow (N) or too broad (B).
   - Excessive overlap with other part of operating test or written examination.

4. Check the appropriate box when a job content error is identified:
    - Topics not linked to job content (e.g., disguised task, not required in real job).
    - Task is trivial and without safety significance.
5. Based on the reviewer=s judgment, is the JPM as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
6. Provide a brief description of any U or E rating in the explanation column.
7. Save initial review comments as normal black text; indicate how comments were resolved using blue text so that each JPM used on the exam is reflected by a (S)atisfactory resolution on this form.

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
S1	D	~~1~~ 2								~~U~~ S	• The draft outline comments file states that the original S-1 was replaced "with another Safety Function 1 JPM". However the new S-1 is actually SF 6. • Some JPMs have an "Examiner Cue" column and others just say "Cue". Make consistent. • Insufficiently discriminatory JPM – place synch switch in MAN and close the CB. Are there additional actions that can be added to the task? • For final submittal include a file for any handouts you intend to give to the applicant for each JPM [CGS Response: • DRAFT outline comments should have specified SF 6. Updated outline will reflect. • Replaced "Cue" with "Evaluator's Cue" as needed. • Changed JPM by adding Alternate Path step and additional electrical bus shift which was validated during NRC validation week. • JPM modified and Termination Criteria adjusted to accommodate JPM completion at JPM Step 21 (vice 29) as directed by NRC during NRC validation week. • Will include handout given to student with FINAL submittal. • Added to que that plant announcements will be handled by a separate RO (this JPM is being performed concurrently with JPM S-5). • Added Evaluator Note before JPM Step 19 highlighting a procedural editorial error which will be addressed after the exam.] [NRC OK.]
S2	D	2								~~E~~ S	• All JPMs – take out the title of the JPM (Respond to a loss of shutdown cooling) on the pages subsequent to the title page, and replace with the JPM designator (JPM S-2) • Include procedure step numbers for reference in the task element field as in other JPMs • JPM step 11 performance standard, is RHR-V-48B (RHR-HX-1B Shell Side Bypass) going to be open or not? • What is the basis for the 10 minute allowance to secure RHR-P-2B? Does station endorse the adequacy of the flow rate caution statement on page 48 to satisfy the procedurally-driven requirement of NUREG-1021? ***Procedurally Driven*** *For each JPM, a procedure should address the actions that are required (i.e., if the JPM requires an alternative method to complete the task, the procedure would have an exit step that directs the use of that alternative method). The examinee may be required to use some common practices endorsed by the facility that are addressed through generic administrative procedures or policies (e.g., shifting controls to manual).*

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											• Per the above, there has to be something that directs the applicant to secure the pump in its degraded flow condition. Generic conduct of ops, precaution and limitation, or other station guidance is acceptable. Has to be something defensible in order to justify grading it as a failure if the applicant fails to perform correctly – the caution statement does not explicitly state to secure the pump, what other guidance is there that directs operator to take action to prevent damage to important plant equipment? • Need to cite the caution statement and additional guidance in performance standard block of step 21. • Task standard: RHR pump B started in accordance with SOP-RHR-SDC steps 5.7.4 through 5.7.22, then secured upon failure to establish GT 800 GPM discharge per [caution statement and additional guidance]. [CGS Response: • Changed JPM S2 from Alternate Path to non-Alternate Path to alleviate need to secure RHR pump since no specific guidance required it. JPM S-1 was changed to Alternate Path to maintain same number of Alternate Path JPMs. • JPM titles removed from all pages (except first) and JPM codes added to lower-left of each page. • Procedure step numbers added in Task Element field for each JPM step. • JPM Step 7 - Changed Performance Standard to "Verified RRC-V-67B Red Light is OFF and Green Light is ON" to reflect actual valve status (NRC validation week comment). • JPM Step 11 - Changed Performance Standard to "Verified RHR-V-48B Red Light is OFF and Green Light is ON." to reflect actual valve status (NRC validation week comment). • JPM Step 20 – Made critical step since action needed to fully restore shutdown cooling flow (was not Critical Step earlier since flow could not be established with previous version of JPM as Alternate Path). • Added option (under JPM Instructions) to allow student to review JPM initial conditions and que before entering simulator (NRC validation week comment). • Task Standard changed to "RHR pump B started and shutdown cooling flow re-established between 5400 gpm and 8000 gpm in accordance with SOP-RHR-SDC steps 5.7.4 through 5.7.23." to reflect JPM modification. • Changed Termination Criteria to read "Steps 5.7.4 through 5.7.23 complete." • Changed JPM Step 13 Performance Standard and Evaluator's Que to reflect inquiry into cooldown log surveillance. Deleted reference to cooldown log being secured in the que since would not be secured. (Facility Rep comment). • Added to que that plant announcements will be handled by a separate RO (this JPM is being performed concurrently with JPM S-4).] [NRC OK.]
S3	D	2								S	• What is the basis for the 2 minute time limit to shut HPCS-V-12?

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											• Add to task standard "HPCS-P-1 is running, …" • Add to task standard "… without causing a Level 8 trip." • Identify alt path to left as with other JPMs. • Single step alt path. [CGS: • Modified JPM such that 2-minute criteria no longer used. • Updated Task Standard to "HPCS-P-1 is running. HPCS Min Flow valve (HPCS-V-12) has been manually closed. RPV level is in the band of +13" to +54" with HPCS-V-4 closed without causing a Level 8 trip." • Alt Path placed to the left.] [NRC – I have in my validation week notes that step 5 should be "Recognize HPCS-V-12 failed to close with RPV injection flow above 200 gpm," not 1330 gpm (it might say 700 gpm, sloppy handwriting). Is this correct? Also the evaluator note above step 5 says 1300 gpm. [CGS: Step 5 has been updated to read "Recognize HPCS-V-12 failed to close with RPV injection flow above 1300 gpm" 1300gpm is in accordance to system texts and station procedures.] [NRC – please provide] [NRC OK]
S4	D	2								S	• Step 5.12.4.b – does applicant have ability to verify locked open status without cueing via lock valve checklist in control room? • Step 5.12.4.e standard is to direct field operator remove fuse and confirm removal. • Single step alt path. [CGS Response: • Step 5.12.4.b – Not directly (requires field operator support). Option left in JPM for applicant to confirm verification via lock valve checklist or by direct field observation. Applicant should say by what method they are performing the verification (the "If asked …" part of the Evaluator's Cue). • JPM Step 6: Changed Performance Standard to read "Directs field operator to remove fuse 3 in HVAC Panel COHV-2 and waits for report from field that fuse removal is complete." To enhance clarity. • JPM Step 10 (procedure step 5.12.4g.3) Added second alternate path step which is also a critical step. Specifically, WEA-FN-51 (Toilet/Kitchen Exhaust Fan) will fail to automatically de-energize requiring it to be de-energized manually (NRC validation week comment). JPM revalidated during NRC validation week. • Added to Initiating Cue that all precautions and limitations have been reviewed (NRC validation week comment). • Updated simulator schedule file to actuate (turn on) BISI for "WMA-AD-51B1 Pwr Loss" on fuse removal (operator feedback).

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											] [NRC OK]
S5	D	2								S	• Is it an RO responsibility to identify when a component meets operability requirements? (cue) • What is the concern with student making plant announcement? [CGS Response: • It is not an RO responsibility to identify when a component meets operability requirements. In this case, however, step 2.10 of SOP-HVAC/RB-RESTART-QC (quick card) directs the RO to "NOTIFY the CRS that Secondary Containment may be declared operable." This is the last JPM step performed. • This JPM is designed to be run concurrently with JPM S-1. Other applicant in simulator who has not necessarily performed the JPM yet would be in an earshot of the announcement. • Corrected misspelling of "CRS" in que (NRC validation week comment).] [NRC OK. Put a note in initial conditions / cue to applicant to simulate plant announcements.]
S6	D	3			~~X~~					~~E~~ S	• Evaluator comment before JPM step 12 states that the applicant should be directed NOT to use the steps from SOP-DEH-OPS to operate bypass valves, but steps 28 through 45 include the steps from SOP-DEH-OPS anyway. Either include the steps from the Quick Card or from SOP-DEH-OPS, but not both. • Step 11 evaluator cue: "What available action do you recommend to lower RPV pressure …" • Can this procedure be started maybe 100 psig above 550 psig so that applicant can determine for himself when to close bypass valves, or is that not realistic for this condition? • Task standard: Applicant lowered RPV pressure to <= 550 psig at LE 50 psig/min in BPV MANUAL mode. • JPM steps 1 through 11 are not critical because they have no effect. [CGS Response: • Removed steps from SOP-DEH-OPS • Evaluator's Que changed to read "What available action do you recommend to lower RPV pressure?" • Set initial pressure to 605 psig based on NRC validation week comment. Student will lower pressure until 550 psig reached and then close Bypass Valves (without direction). • Task Standard was updated as described. • JPM Steps 1 through 11 no longer marked critical steps.] [NRC - Task standard – "…lowered at a rate LE 50 psig per minute to LE 550 psig in a controlled …"]

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											[CGS: Task standard updated to read "RPV pressure lowered to LE 550 psig at a rate of LE 50 psig/min using BPV MANUAL mode."] [NRC – please provide] [NRC – OK]
S7	D	2								S	• Alternate path field blank. • Task standard: "RWCU-V-104 throttled open, RPS-A powered from Alternate Power Supply without a Reactor SCRAM, RPS restoration completed per steps 4.7.1 and 4.8." • Steps 12 13 14 15 should be "step 4.7.1.x …" • Step 4.7.2 element? • Step 4.8, "If"? [CGS Response: • Alternate path field labeled "No" • Changed Task Standard to "RPS-A shifted to the Alternate Power Supply without causing a Reactor SCRAM. RPS half scram reset. RPS restoration completed per steps 4.6 through 4.8." Note that JPM steps were removed (based on NRC validation week) which altered the Task Standard. • Properly labeled steps 12 through 15. • Added Step 4.7.2 element. • Removed conditional.] [NRC OK]
S8	~~S~~ D	~~1~~ 2				~~X~~				~~U~~ S	• This JPM is not appropriate for the systems walkthrough portion of the exam. I understand that the fire protection system is listed under safety function 8 and the ability to operate and monitor system alarms in the control room is a K/A statement in the catalog, but I don't consider the operation of communication equipment to meet the intent of the systems walkthrough. Operation of fire suppression equipment or fire pumps from the control room would be more appropriate for this portion of the exam. • I do not believe any of the actions in the JPM meet the definition of a "verifiable action" from the ES-301 attachments, which states: ○ *"the applicant must **perform** some action and not just make a phone call to an operator to take some action in the field. In the instance where the applicant is on the phone directing an operator to take some action in the field while the applicant is observing control room indications is **NOT** performing a verifiable action, this is directing. Although it may provide insight as to whether the applicant understands the system, it does not provide insight for the examiner to be able to determine if the applicant is capable of actually operating the equipment/equipment controls and controlling the system response."* [CGS Response:

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											• New JPM Developed - "Swap RCC Heat Exchangers" • Corrected EPNs [NRC validation week comment] • Removed listing for valves not applicable to each step as stated in procedure. • Key words were bolded.] [JPM step 7 only PDIS Signal Tag F124 is applicable] [CGS: Step 7 updated, removed F122 and F123.] [NRC – please provide] [NRC OK]
P1	D	2								S	• Step 5.1.2.c and.e: how long does operator have to hold pushbutton in? What happens if operator presses and releases pushbutton in one stroke – will motor come up to speed? Is there a speed indicator on motor – what should it say? • Step 5.1.2.e Evaluator's Cue: Just say "MG motor is spinning at a constant speed and noise." If component is already in service the examiners will know to say "as you see it." Applies to all in-plant JPMs for simplicity. • Alt Path: Just to confirm, 0 voltage is an unexpected condition for this set of initial conditions correct? If it is an expected condition for the initiating cues, then it is not alt path. • Delete JPM step 9 as a separate step and roll performance standard and cue into step 8. • Step 5.1.2h Cue: "Indicate that the lever is pointed up (to ON)" • Step 5.3.5d alt path: the UF light illuminated is not an expected condition for given initial conditions, correct? Otherwise not alt path. • Roll JPM step 30 into step 29. • Task standard: specify the precise breakers that must be closed. Breakers cannot be closed without resetting overvoltage trip or Under-frequency trip correct? If they can be, then the resets are also part of task standard. • 2 separate single step alt paths. [CGS Response: • Step 5.1.2.c and.e: RPS-RMS-MG1/START button should be pressed a minimum of 3 seconds (approximate time it takes for MG to come up to speed). Pressing button for shorter amount of time will still allow MG to come up to speed. There is no speed indicator for the MG. • Examiner cue for step 5.1.2.e has been changed as requested to read "MG motor is spinning at a constant speed and noise." • Zero volts is an unexpected condition for conditions given. • Step 9 has been deleted; the performance standard and cue have been rolled into step 8. • Step 5.1.2h Cue has been updated. • Step 5.3.5d, Correct, an illuminated UF light is an unexpected condition for conditions given.

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											• Step 30 and step 29 have been combined. Task standard updated to read: RPS-MG-1 is running with RPS-CB-MG1 (generator output breaker) closed, and RPS-EPA-3A and RPS-EPA-3C (EPA breakers) reset and closed.] [NRC – please provide applicant handouts [Rather than state that precaution and limitation review has been completed, I'd prefer to cue applicant that "precautions and limitations are satisfied." If this is not appropriate let me know] [CGS: • Changed to "Precautions and Limitations have been reviewed and are satisfied." Since operators used to reviewing P&Ls before normal evolution. • Changed JPM Step 8 Evaluator Que formatting to be more clear.] [NRC OK]
P2	D	2								S	• Can JPMs be printed in portait page layout? You can delete "Time" column if necessary. OK as is if formatting will not allow. • For all open or close a valve cues, make it "handwheel rotates in clockwise/counter. Direction until it stops moving. If observed, VPI points to shut/open" or something like that. • Step 3 cue: drain plug removed and in hand. • The title of this JPM on form ES-301-2 outline doesn't align with the actual JPM. Outline says "CHOOSE METHOD … based on initial conditions provided, recognize that manually venting the scram air header is the next action …" The applicant doesn't have to choose or determine that venting scram air header is necessary, he is being directly cued to vent the scram air header. Fix outline. • Task standard: "The SCRAM air header has been vented and components restored to initial configuration upon completion of 5.5.11 Tab D." [CGS Response: • In-Plant JPMs have been converted to portrait page layout. • All open or close valve cues have been updated to read "Handwheel rotates in the clockwise/counter-clockwise direction until it stops moving. If observed, VPI points to closed/open." • Step 3 updated to read; "Drain plug removed and in hand" • • Task standard has been updated to read "The SCRAM air header has been vented and components restored to initial configuration upon completion of PPM 5.5.11 Tab D.] [NRC – please provide applicant handouts] [CGS Response – Files provided]

JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
											[NRC OK]
P3	S	2								S	• Task Standard: specify the time requirement. How long ago did the reactor scram? The time from scram to RSD activation is 10 min, so applicant needs to know. Also, applicants need to start from same location. Best to start from outside control room door and make the time limit an even 10 minutes. Or start from RSD room door and subtract a reasonable transit time. • Step 7.2.2 Standard – delete "if ON" from each line. Add to cue that each breaker is found in the ON position. • Step 7.2.3 cue: specify that each switch is found in the _____ position • Step 7.2.4 cue: same as above. • Step 7.2.5 cue: same as above. • Step 7.2.6 cue: same as above. Put an explicit TIME START and TIME STOP line at the beginning and end of TC jpms. [CGS Response: • Initial conditions have been updated to be consistent with ABN-CR-EVAC: "The SM has just directed a reactor scram due to a control room fire. Operators are completing the immediate actions of ABN-CR-EVAC". An evaluator comment has been added in the JPM to designate the starting location and the beginning of the 10 minute clock (Time 0). • Note added to JPM to indicate where the JPM will start from and when Time 0 starts. • Step 7.2.2 Standard has been updated to delete the "if ON" and added in the cue that "Each breaker is found in the ON position" • Step 7.2.3 cue has been updated to include "Each switch is found with the arrow pointing to NORMAL" • Step 7.2.4 cue has been updated to include "Each switch is found with the arrow pointing to NORMAL" • Step 7.2.5 cue has been updated to include "Each switch is found with the arrow pointing to NORMAL" • Step 7.2.6 cue has been updated to include "Each switch is found with the arrow pointing to NORMAL" • TIME START and TIME STOP lines have been added to the beginning and end of the JPM.] [NRC – please provide applicant handouts] [Include on the applicant's cue sheet where to start the JPM] [CGS Response: Update applicant's Que sheet on JPM start location. Files provided] [NRC OK]

CGS – 2017 – FEB			DRAFT OPERATING TEST COMMENTS							CONTROL ROOM/IN-PLANT SYSTEMS JPMS
JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		

Instructions for Completing Matrix

This form is not contained in or required by NUREG-1021. Utilities are not required or encouraged to use it. The purpose of this form is to enhance regional consistency in reviewing operating tests. Additional information on these areas may be found in Examination Good Practices Appendix D. Check or mark any item(s) requiring comment and explain the issue in the space provided.

1. Determine whether the task is dynamic (D) or static (S). A dynamic task is one that involves continuous monitoring and response to varying parameters. A static task is basically a system reconfiguration or realignment.
2. Determine level of difficulty (LOD) using established 1-5 rating scale. Levels 1 and 5 represent inappropriate (low or high) discriminatory level for the license being tested.
3. Check the appropriate box when an attribute weakness is identified:
   - $ The initiating cue is not sufficiently clear to ensure the operator understands the task and how to begin.
   - $ The JPM does not contain sufficient cues that are objective (not leading).
   - $ All critical steps (elements) have not been properly identified.
   - $ Scope of the task is either too narrow (N) or too broad (B).
   - $ Excessive overlap with other part of operating test or written examination.
4. Check the appropriate box when a job content error is identified:
   - Topics not linked to job content (e.g., disguised task, not required in real job).
   - Task is trivial and without safety significance.
5. Based on the reviewer=s judgment, is the JPM as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
6. Provide a brief description of any U or E rating in the explanation column.
7. Save initial review comments as normal black text; indicate how comments were resolved using blue text so that each JPM used on the exam is reflected by a (S)atisfactory resolution on this form.

Scenario Set	1. ES	2. TS	3. Crit	4. IC	5. Pred	6. TL	7. L/C	8. Eff	9. U/E/S	10. Explanation (See below for instructions)
1									S	All scenarios: Add a standard statement to each D-1 which states: "An unintentional or unnecessary RPS or ESF actuation may result in the creation of a post-scenario Critical Task, if that actuation results in a significant plant degradation or significantly alters a mitigation strategy." All scenarios: I don't want a comment line after every step – it breaks up the flow of the guide and makes it longer. Just add space for a couple lines of comments at end of each event. CT-1: If applicant initiates drywell sprays without "verifying Drywell parameters are within DSIL and RHR is NOT required for adequate core cooling", does he fail the CT? May be a good note for examiners to check when spray is initiated, but not failure criteria for not checking if it is in fact met. CT-2: "ADS preferred" – if applicant opens SRVs that are not ADS, does he fail the CT? CT-2: What is basis for 10 minutes? Is there a parameter-based bounding criteria that could be used? CT-3: What is basis for 10 minutes? Is there a parameter-based bounding criteria that could be used? There are 5 abnormal events before major, not 3. Every I/C that has verifiable actions (not just TS) counts. Event 1: include english name descriptor of RFW-DPT-4A. All scenarios: Be more specific with some of the paraphrasing in line with the procedural direction, e.g., step 4.3 of ABN-INSTRUMENTATION should be "4.3: Verify excess flow check valves are OPEN (H13-P851) (Board S)," not just "check valve status indication." Also, I don't generally want a separate line item for CRS directing the BOP to perform the action and then for the BOP performing the action, unless there's some separation of steps in the guide that would make that desirable. Step 4.5 of ABN-INST: REFER to Attachment **Error! Reference source not found.** [page 16] and **Error! ference source not found.** [page 20] to determine affected instruments and logic functions." [Then list the actual affected instruments, power supplies, etc.] I like the inclusion of attachments at end of scenario guide, but highlight or otherwise mark up the relevant line information the applicant will need to find, on the attachment. Event 2: Include important procedural notes, for example "NOTE: RWCU isolation trips at GE 140°F (RWCU-V-4 only)." Would be important to know. All events: Don't need to include lines like "May assist in acknowledging annunciator and monitoring plant parameters while ATC recovers the CRD pump," or "ATC will continue monitoring reactor power, pressure, and level" for the operator who is Pnot primarily responding to event. This is an inherent responsibility. Event 4: what is BISI? Event 4: what does CRS determine for reportability?

Event 4: For multiple TS entries don't put a comment after each one, just put in one list.

Event 5: If you modified the initial conditions of scenario you could make it such that this event requires a TS entry, and delete event 4.

For actions that are N/A, change to a faded gray font – for example, 6.2.9 actions for a Main Turbine / Generator that fails to trip are N/A for this scenario, so make look something like this:

- 6.2.9: If necessary (with Main Generator load < 50 MWe):
  - If Main Turbine did not trip – simultaneously depress both Emerg Trip pushbuttons (H13-P820)
  - If Main Generator did not trip –depress either Unit Emergency Tip pushbutton or Unit Overall Trip pushbutton (H13-P800)

… This worked well for us on a recent PVNGS exam.

For steps that are directed by PPM 5.2.1 or other flowchart legs, include the step number directing the action, e.g. P-6, P-11.1, etc. Examiners need to know where the direction is coming from, and a lot of steps post-Major don't appear to have a reference listed.

[CGS Response:
- CT statement added to each scenario.
- Deleted individual Comment blocks and added a Comment block to end of each event.
- Event 2 - Added Examiner Note "CRS will mark time to track potential entry into LCO 3.1.5 (Control Rod Scram Accumulators) – No Tech Spec call expected to be made based on little time required to start CRD pump." (NRC validation week comment)
- Event 2 - Deleted field action to check Control Rod accumulator pressures locally since not an expected crew response (Facility Representative comment)
- Event 6 – Added Examiner Note "Although it is expected that CRO2 will verify within DSIL, CT # 1 is considered met even if DSIL not verified provided sprays initiated when within DSIL.."
- Added Reportability requirement for unplanned loss of HPCS availability. Specifically, 8 hour reportable to NRC based on Prevention of a Safety Function per 10 CFR 52.72(b)(3)(v)(D).
- Added to CT #2 :" CT considered met if any combination of 7 Safety Relief Valves are opened." Based on NRC validation week comment.
- 10 minute limit for CT #2 and CT #3 is time endorsed by the Facility Representative to distinguish between a competent and non-competent crew. Specifically, a competent crew should take no longer than 10 minutes to assess, direct, get peer checks on key parameters and execute associated EOP steps.
- Updated listed number of Abnormal events from 3 to 5.
- With Event 1 deleted during NRC validation week no need to describe RFW-DPT-4A.
- Deleted ABN-INSTRUMENTATION Attachments from guide since not needed with deletion of Event 1
- Highlighted MS-RV-2B on Attachment 7.1 for ease of identification.
- Important procedure note added.
- BISI stands for Bypass or Inoperable Status Indicator

										• 6.2.9: If necessary (with Main Generator load < 50 MWe): …This step is not N/A for us. • Entered EOP step numbers for major EOP actions. • Added Examiner Note: "If crew does not respond, RWCU-V-4 will not close and no additional alarms or changes in plant status will occur until resin breakthrough is experienced (this will not be simulated)." Based on Facility Representative comment. • Deleted actions where if RWCU automatically generates isolation signal (and crew does not respond in time), since no additional actions would occur until resin breakthrough occurred (beyond scope and duration of the scenario) – Based on Facility Representative comment. • Event 2 - Changed CRS action from "Evaluates Technical Specification 3.1.5 (no entry Condition exists)" to "Refers to ABN-CRD and Tech Spec 3.1.5 as applicable." Which is a more accurate statement if the CRD pump start is delayed. - Based on Facility Representative comment. [NRC • Page 10 of 33 position block at bottom is blank – CRS. • Per previous comment, delete following passive non-informative line items that are not procedure step-directed: o "BOP: Assists ATC with initial diagnosis" (event 4), o "CRS: May update crew …", (event 5) o "BOP: May update crew" (event 5), o "CRS: repeats back scram report" (event 6). [GCS Response: • Page 10 of 33 position block at bottom is blank – CRS **(UPDATED)** • Per previous comment, delete following passive non-informative line items that are not procedure step-directed: o "BOP: Assists ATC with initial diagnosis" (event 4), **(DELETED)** o "CRS: May update crew …", (event 5) **(DELETED)** o "BOP: May update crew" (event 5), **(DELETED)** o "CRS: repeats back scram report" (event 6). **(DELETED)**] [NRC OK]
2									S	CT-2: What is basis of 10 minutes? Is 10 min a short excursion? Copies of scenario guide that the Examiners receive do not need to include simulator setup page or schedule file pages. Specify for each event transition criteria, i.e. when we can move on and trigger next event. Event 3: Group TS into 1 block. CGS Response: • 10 minute limit for CT #2 is time endorsed by the Facility Representative to distinguish between a competent and non-competent crew. Specifically, a competent crew should take no longer than 10 minutes to assess, direct, get peer checks on key parameters and execute associated EOP steps. • Schedule file and simulator setup page have been removed from all 4 scenarios. • Event Transition criteria step has been added to the end of each event. • Event 3 – TS have been grouped into 1 block as requested.

										• CT-1 and 2 have been combined as discussed during NRC validation week. [NRC • Per validation week comments, CT#2 should read: "With reactor scram required and the reactor not shutdown, commence inserting control rods per PPM 5.5.11 Attachment 6.1 Tab B prior to transitioning to Tab E." As discussed, it is not desired to credit initiating SLC in Event 7 as satisfying the CT because SLC is severely degraded, as is its qualification to satisfy the requirements of ATWS rule 10 CFR 50.62.] [CGS Response: • Changed CT #2 to read: "With reactor scram required and the reactor not shutdown, commence inserting control rods per PPM 5.5.11 Attachment 6.1 Tab B prior to transitioning to Tab E" • Updated body of guide to reflect CT change.]
3									S	CT-1: Provide a full-page inage of the MSOT display found on page 38 as an attachment. CT-2: What is significance of 10 minute limit? On past BWR exams at other sites we've used the bounding criteria: "When 2 areas exceed their Max Safe Temperature limit (195°F), crew Emergency Depressurizes by opening 6 SRVs before reaching Max Safe Temperature in a third area." Would that be reasonable in this scenario? CT-2: If applicant opens non-ADS SRVs, is CT met? CGS Response: • Full page image of the MSOT graphic has been added as requested. • Added to CT #2 "CT considered met if any combination of 7 Safety Relief Valves are opened." Based on NRC validation week comment. • 10 minute limit for CT #2 is time endorsed by the Facility Representative to distinguish between a competent and non-competent crew. Specifically, a competent crew should take no longer than 10 minutes to assess, direct, get peer checks on key parameters and execute associated EOP steps. [NRC • Event 5 discussion page 5: "The CRS ~~may~~ WILL direct a reactor pressure reduction …" • Event 1, step 5.1.10, validation week comment to cue crew that maximum cooling is desired. Include in turnover sheet. 5.1.11 should therefore be NA. • Event 1 page 9, wait 1 minute for all reports, not 2. • Event 3 page 12, 1st BOOTH ROLEPLAY entry, "wait ___ minute"? • Event 4 Booth Roleplay entries, wait 1 minute not 2. • Event 4: Move the examiner note at bottom of pg 16 regarding credit for the event to page 17 just before tripping the RFPT. Modify to say, "If the same operator adjusted RFP bias and performed the downpower, cue the CRS after he directs tripping RFW-P-1B that the SM desires the [other operator: CRO1 or CRO2] to trip the pump." This is to ensure both board operators get credit for the event. • Event 4 page 17, delete line that BOP may peer check ATC … Maintains communication … • Event 5 page 22 delete "CRS: Repeats back scram report". • Event 5 page 24, CRS WILL direct BOP to establish a new pressure band … • Steam leaks: During validation the MSL tunnel steam leak was too small, temps actually turned and started decreasing. We had booth increase size impromptu … have you modified trigger to reflect increased size/rate?]

										[CGS Response: • Event 5 discussion page 5: "The CRS ~~may~~ WILL direct a reactor pressure reduction …" **(UPDATED)** • Event 1, step 5.1.10, validation week comment to cue crew that maximum cooling is desired. Include in turnover sheet. 5.1.11 should therefore be NA. **(UPDATED)** • Event 1 page 9, wait 1 minute for all reports, not 2. **(UPDATED)** • Event 3 page 12, 1st BOOTH ROLEPLAY entry, "wait ___ minute"? **(UPDATED WITH 1 MINUTE)** • Event 4 Booth Roleplay entries, wait 1 minute not 2. **(UPDATED)** • Event 4: Move the examiner note at bottom of pg 16 regarding credit for the event to page 17 just before tripping the RFPT. Modify to say, "If the same operator adjusted RFP bias and performed the downpower, cue the CRS after he directs tripping RFW-P-1B that the SM desires the [other operator: CRO1 or CRO2] to trip the pump." This is to ensure both board operators get credit for the event. **(MOVED and MODIFIED)** • Event 4 page 17, delete line that BOP may peer check ATC … Maintains communication **(DELETED)** • Event 5 page 22 delete "CRS: Repeats back scram report". **(DELETED)** • Event 5 page 24, CRS WILL direct BOP to establish a new pressure band …**(UPDATED)** • Steam leaks: During validation the MSL tunnel steam leak was too small, temps actually turned and started decreasing. We had booth increase size impromptu … have you modified trigger to reflect increased size/rate? **YES - Automatic trigger now occurs at 750 psig and lowering to increase leak size sooner. Booth operator will also coordinate with scenario coordinator to ensure steam tunnel temperature does not start lowering (see guide page 29). This will be accomplished by inserting trigger manually if necessary. Crew actions taken and when will impact when trigger gets inserted.** • Changed remaining references of ATC/BOP within action steps to CRO-1 and CRO-2, respectively.] [NRC OK. ATC and BOP should both get credit for event 4 on D-1]
4 Spare									S	CT-2: What is significance of 10 minute limit? CT-2: If applicant opens non-ADS SRVs, is CT met? Event 1: Any procedural reference? [CGS Response: • 10 minute limit for CT #2 is time endorsed by the Facility Representative to distinguish between a competent and non-competent crew. Specifically, a competent crew should take no longer than 10 minutes to assess, direct, get peer checks on key parameters and execute associated EOP steps. • Added to CT #2 "CT considered met if any combination of 7 Safety Relief Valves are opened." Based on NRC validation week comment. • Added reference to SOP-CR-MOVEMENT (Control Rod Movement) for Event 1 to include required steps to perform. • Under Initial Conditions, raised reactor power to 5% with APRM downscale indicators off to allow unambiguous us of Manual Scram pushbuttons when manual scram required. Changing power to 5% also required changing initial pressure to 500 psig and updating expected actions of the crew following turnover (which remains withdrawing control rods but just further along in the rod sequence). • Added Examiner Note for what Suppression Pool (Wetwell) level indications to use for Event 6. • Deleted individual Comment blocks and added a Comment block to end of each event.] [NRC

										• D-1, page 2 event 4 include "auto xfer to SL-21 fails to occur • D-1, page 2 event 6 include "RHR-V4A fails to close to isolate. • Event 1 STEPS 3.1/.2/.3/.4, include Div 2 components in parentheses. Step 3.1.2 do they close all 4 valves or 2 of 4? • Event 6 page 17, add "The following steps are from ABN-FLOODING" where appropriate. • Event 8 delete "CRS repeats back scram report."] • D-1, page 2 event 4 include "auto xfer to SL-21 fails to occur (Changed to **"Differential current lockout of transformer (TR-1/11) results in a loss of SL-11 (due to the failure to automatically transfer to SL-21) which requires bus to be manually** transferred to SL-21.") • D-1, page 2 event 6 include "RHR-V4A fails to close to isolate. (Changed to "**Failure of the RHR-P-2A suction line results in lowering wetwell level (RHR-V-4A fails to close preventing isolation of leak)**" UPDATED D-2 to reflect. • Event 1 STEPS 3.1/.2/.3/.4, include Div 2 components in parentheses (I believe you meant Event 2 steps 3.1.1 through 3.1.4) Step 3.1.2 do they close all 4 valves or 2 of 4? **Div 2 components added in parentheses. YES – All 4 valves are closed.** • Event 6 page 17, add "The following steps are from ABN-FLOODING" where appropriate. [ADDED Examiner Note (middle of page 17) "**Due to timing of actions, steps performed for ABN-FLOODING are not listed here but instead are referenced as actions occur. See note for last BOP action on page 16, 4th CRS action below, CRS action at bottom of page, and last ATC action on page 18 for ABN-FLOODING actions.**"] • Event 8 delete "CRS repeats back scram report."] **[DELETED]** [NRC OK]

Instructions for Completing Matrix

This form is not contained in or required by NUREG-1021. Utilities are not required or encouraged to use it. The purpose of this form is to enhance regional consistency in reviewing operating test scenario sets. Additional information on these areas may be found in Examination Good Practices Appendix D. Check or mark any item(s) requiring comment and explain the issue in the space provided.

1. ES: ES-301 checklists 4, 5, & 6 satisfied.
2. TS: Set includes SRO TS actions for each SRO, with required actions explicitly detailed.
3. Crit: Each manipulation or evolution has explicit success criteria documented in Form ES-D-2.
4. IC: Out of service equipment and other initial conditions reasonably consistent between scenarios and not predictive of scenario events and actions.
5. Pred: Scenario sequence and other factors avoid predictability issues.
6. TL: Time line constructed, including event and process triggered conditions, such that scenario can run without routine examiner cuing.
7. L/C: Length and complexity for each scenario in the set is reasonable for the crew mix being examined, such that all applicants have reasonably similar exposure and events are needed for evaluation purposes.
8. Eff: Sequence of events is reasonably efficient for examination purposes, especially with respect to long delays or interactions.
9. Based on the reviewer=s judgment, rate the scenario set as (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory.
10. Provide a brief description of problem in the explanation column.
11. Save initial review comments as normal black text; indicate how comments were resolved using blue text so that each JPM used on the exam is reflected by a (S)atisfactory resolution on this form.