# 2013 MONTICELLO GENERATING PLANT INITIAL LICENSE EXAMINATION PROPOSED EXAMINATION

#### ENCLOSURE WITHHELD FROM PUBLIC DISCLOSURE IN ACCORDANCE WITH NUREG-1021 UNTIL AFTER THE EXAMINATION IS COMPLETE.



December 6, 2012

Monticello Nuclear Generating Plant 2807 W County Road 75 Monticello, MN 55362

> L-MT-12-104 10 CFR 55.40 NUREG-1021

Regional Administrator, Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352

Monticello Nuclear Generating Plant Docket 50-263 Renewed Facility Operating License No. DPR-22

Monticello Nuclear Generating Plant (MNGP) Initial Operator Licensing Examination to be Conducted the Weeks of January 28 and February 4, 2013

Reference 1: NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1

In accordance with the requirements of 10 CFR 55.40(b)(4), the Northern States Power Company, a Minnesota corporation (NSPM) requests NRC approval of the proposed written examination and operating tests. Further, 10 CFR 55.40(a), "Implementation," requires that examinations meet the requirements of Reference 1. Therefore, enclosed for review are the proposed examination materials for the initial license examinations for the Monticello Nuclear Generating Plant (MNGP) operator license applicants.

In accordance with 10 CFR 55.49, "Integrity of Examinations and Tests," and NUREG-1021, Section ES-201, Attachment 1, "Examination Security and Integrity Considerations," NSPM requests that the enclosed materials be withheld from public disclosure until after the examinations are complete.

The proposed examination materials were prepared per the guidelines of Reference 1, Sections ES-301, "Preparing Initial Operating Tests," and ES-401, "Preparing Initial Site-Specific Written Examinations". The proposed examination materials have been prepared by NSPM for (1) SRO – Upgrade (U), five (5) Senior Reactor Operator (SRO) – Instant (I), and four (4) Reactor Operator (RO) license candidates. Regional Administrator, Region III L-MT-12-104 Page 2

#### Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

Mark a. Schime

Mark A. Schimmel Site Vice President, Monticello Nuclear Generating Plant Northern States Power Company - Minnesota

Enclosure

cc: Mr. Dell McNeil, Region III, USNRC (with enclosures) Project Manager, Monticello, USNRC (without enclosures) Resident Inspector, Monticello, USNRC (without enclosures)

#### ENCLOSURE WITHHELD FROM PUBLIC DISCLOSURE IN ACCORDANCE WITH NUREG-1021 UNTIL AFTER THE EXAMINATION IS COMPLETE.

## ENCLOSURE 1

## MONTICELLO NUCLEAR GENERATION PLANT

### INITIAL OPERATOR LICENSING EXAMINATION MATERIALS

| Form<br>Number | Number   |     |  |  |
|----------------|--|-----|--|--|
| ES-301-3       |  |     |  |  |
| ES-301-4       | ES-301-4 Simulator Scenario Quality Checklist  |     |  |  |
| ES-401-6       | 01-6 Written Exam Quality Checklist  |     |  |  |
| ES-301-6       | Competencies Checklists  | 2   |  |  |
|                | Job Performance Measures (JPMs)  | 186 |  |  |
|                | Simulator Scenarios  | 141 |  |  |
| ES-401-7       | RO Written Exam Cover Sheet  | 1   |  |  |
|                | RO Written Exam (Ready to Give)  | 80  |  |  |
|                | Provided References for RO Questions   | 1   |  |  |
| ES-401-8       | SRO Written Exam Cover Sheet   | 1   |  |  |
|                | SRO Written Exam (Ready to Give)   | 108 |  |  |
|                | Provided References for SRO Questions<br>(Includes 6 EOP Flow Charts and 1 EAL Matrix) | 29  |  |  |
|                | RO/SRO Written Exam Key with Supportive<br>References                                  | 324 |  |  |
| QF-1071-01     | Master Security Agreement Updated Since 75<br>Day Submittal                            | 6   |  |  |
| QF-1071-02     | Limited Security Agreement Updated Since 75<br>Day Submittal                           |     |  |  |

ES-301

## **Operating Test Quality Checklist**

Form ES-301-3

| Facility: Monticello Date of Examination: 01/28/13 Operating Test Number: MNGP 2013  |      |          |          |  |  |  |  |
|--|------|----------|----------|--|--|--|--|
| 1. General Criteria  |      | Initials |          |  |  |  |  |
|  |      | b*       | c#       |  |  |  |  |
| a. The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).   | B    | Km       | Dur      |  |  |  |  |
| b. There is no day-to-day repetition between this and other operating tests to be administered<br>during this examination.   | B    | Ko-      | )<br>Jen |  |  |  |  |
| c. The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)   | B    | Km       | Dan      |  |  |  |  |
| <ul> <li>Overlap with the written examination and between different parts of the operating test is within<br/>acceptable limits.</li> </ul>  | B    | the      | 3m       |  |  |  |  |
| e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.   | B    | V        | Jun      |  |  |  |  |
| 2. Walk-Through Criteria   | ~~   |          |          |  |  |  |  |
| <ul> <li>a. Each JPM includes the following, as applicable: <ul> <li>initial conditions</li> <li>initial conditions</li> <li>initialing cues</li> <li>references and tools, including associated procedures</li> <li>reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee</li> <li>operationally important specific performance criteria and nomenclature <ul> <li>detailed expected actions with exact criteria and nomenclature</li> <li>system response and other examiner cues</li> <li>statements describing important observations to be made by the applicant</li> <li>criteria for successful completion of the task</li> <li>identification of critical steps and their associated performance standards</li> <li>restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul></li></ul> | в    | yber.    | )<br>Jun |  |  |  |  |
| <ul> <li>Ensure that any changes from the previously approved systems and administrative walk-through<br/>outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance<br/>criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified<br/>on those forms and Form ES-201-2.</li> </ul>  |      |          | m        |  |  |  |  |
| 3. Simulator Criteria  | •••• |          |          |  |  |  |  |
| The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.   |      |          | Am       |  |  |  |  |
| a. Author <u>Boman Becker</u> 12-3   |      | ate      |          |  |  |  |  |
| b. Facility Reviewer(*) Kint MArkling / Kent Markling 12-4   | -20  | 12       |          |  |  |  |  |
| c. NRC Chief Examiner (#) Dell McNey / Selfle Mc Hug 12/31/2012  |      |          |          |  |  |  |  |
| d. NRC Supervisor Argun Cherson Africa 1/22/2013   |      |          |          |  |  |  |  |
| NOTE: * The facility signature is not applicable for NRC-developed tests.<br># Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.  |      |          |          |  |  |  |  |

#### Simulator Scenario Quality Checklist

| Facili | ty: Monticello Date of Exam: 01/28/13 Scenario Numbers:1/2/3/4(SPARE   | Dperating Te      | st No: M | NGP 20   | 13   |
|--------|--|-------------------|----------|----------|------|
|        | QUALITATIVE ATTRIBUTES   |                   |          | Initials |      |
|        |  |                   | а        | b*       | c#   |
| 1.     | <ol> <li>The initial conditions are realistic, in that some equipment and/or instrumentation may be out<br/>of service, but it does not cue the operators into expected events.</li> </ol>   |                   |          |          | Xm   |
| 2.     | The scenarios consist mostly of related events.  |                   | B        | K        | 3m   |
| 3.     | <ul> <li>B. Each event description consists of</li> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul> |                   |          |          | *    |
| 4.     | No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.   |                   |          |          | 34   |
| 5.     | The events are valid with regard to physics and thermodynamics.  |                   | B        | Kan      | 12m  |
| 6.     | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.  |                   |          | K        | DM   |
| 7.     | If time compression techniques are used, the scenario summary clearly so indicates.<br>Operators have sufficient time to carry out expected activities without undue time constraints.<br>Cues are given.  |                   |          | K        | Dr   |
| 8.     | The simulator modeling is not altered.   |                   |          |          | Dim  |
| 9.     | The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.  |                   |          | K        | Dan  |
| 10.    | <ul> <li>Every operator will be evaluated using at least one new or significantly modified scenario.</li> <li>All other scenarios have been altered in accordance with Section D.5 of ES-301.</li> </ul>   |                   |          | Kn       | zw   |
| 11.    | <ol> <li>All individual operator competencies can be evaluated, as verified using Form ES-301-6<br/>(submit the form along with the simulator scenarios).</li> </ol>   |                   |          | Kn       | 3~   |
| 12.    | . Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).  |                   |          | K        | ***  |
| 13.    | The level of difficulty is appropriate to support licensing decisions for each crew position.  |                   | B        | Km       | 3m   |
|        | Target Quantitative Attributes (Per Scenario; See Section D.5.d)   | Actual Attributes |          |          |      |
| 1.     | Total malfunctions (5-8)   | 6/6/5/6           | B        | K        | Ym   |
| 2.     | Malfunctions after EOP entry (1-2)   | 1/1/1/1           | Ø        | K        | zm   |
| 3.     | Abnormal events (2-4)  | 4/2/2/3           | B        | K        | 2500 |
| 4.     | Major transients (1–2)   | 1/1/1/1           | B        | the      | am   |
| 5.     | EOPs entered/requiring substantive actions (12)  | 2/2/2/2           | B        | K        | pm   |
| 6.     | EOP contingencies requiring substantive actions (0-2)  | 2/1/1/1           | B        | the      | sm   |
| 7.     | Critical tasks (2–3)   | 3/2/3/2           | B        | 12hr     | Dem  |

ES-401

Written Examination Quality Checklist

Form ES-401-6

| L   | Monticello Date of Exam: 01/28/13   | Exam Leve           | el: ROX        | SRO X           |         |       |             |
|---|---|---------------------|----------------|-----------------|---------|-------|-------------|
|   |   |                     |                |                 | Initial |       |             |
|   | Item Description  |                     |                |                 | а       | b*    | c*          |
| 1.  | Questions and answers are technically accurate and app  | licable to the faci | lity.          |                 | B       | Km    | Der         |
| 2.  | <ul> <li>a. NRC K/As are referenced for all questions.</li> <li>b. Facility learning objectives are referenced as available.</li> </ul>   |                     |                |                 | B       | Km    | Den         |
| 3.  | SRO questions are appropriate in accordance with Section  | on D.2.d of ES-40   | 1              |                 | B       | Km    | Den         |
|   | The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL program office).   |                     |                |                 |         |       | Dm          |
|   | Question duplication from the license screening/audit exam was controlled<br>as indicated below (check the item that applies) and appears appropriate:<br>the audit exam was systematically and randomly developed; or<br>the audit exam was completed before the license exam was started; or<br>the examinations were developed independently; or<br>the licensee certifies that there is no duplication; or<br>other (explain) |                     |                |                 | в       | Km    | Dr          |
|   | Bank use meets limits (no more than 75 percent  | Bank                | Mod            | New             |         |       |             |
|   | from the bank, at least 10 percent new, and the rest<br>new or modified); enter the actual RO / SRO-only<br>question distribution(s) at right.  | RO 43<br>(57.3%)    | RO 1<br>(1.3%) |                 |         | Km    | Dm          |
|   |   | SRO 11<br>(44%)     | SRO1<br>(4%)   | SRO 13<br>(52%) |         |       |             |
|   | Between 50 and 60 percent of the questions on the RO  | Memory              |                | C/A             |         |       |             |
|   | exam are written at the comprehension/ analysis level;<br>the SRO exam may exceed 60 percent if the randomly<br>selected K/As support the higher cognitive levels; enter  | RO 32 (42.7%        |                |                 | в       | Km    | Den         |
|   | the actual RO / SRO question distribution(s) at right.  | SRO 4 (16%)         | SRC            | ) 21 (84%)      |         |       |             |
|   | References/handouts provided do not give away answers<br>or aid in the elimination of distracters.  |                     |                |                 | Ø       | km    | Dhu         |
|   | Question content conforms with specific K/A statements in the previously approved<br>examination outline and is appropriate for the tier to which they are assigned;<br>deviations are justified.   |                     |                |                 | B       | Km    | <b>þ</b> an |
| 10.   | Question psychometric quality and format meet the guidelines in ES Appendix B.  |                     |                |                 | 6       | Km    | Ja.         |
|   | The exam contains the required number of one-point, multiple choice items;<br>the total is correct and agrees with the value on the cover sheet.  |                     |                |                 | B       | Km    | )<br>Den    |
| Printed Name / Signature  |   |                     |                |                 |         |       | ate         |
| a. Author " <u>NonAN Decker</u>   <u>Hushing</u><br>b. Facility Reviewer (*)  |   |                     |                |                 | 12-3-12 |       |             |
| c. NRC Chief Examiner (#)   |   |                     |                |                 | 12      | 31/12 |             |
| d. NRC Regional Supervisor <u>Hironor</u> , Vetron Stan   |   |                     |                |                 | 40      | 413   |             |
| Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations.<br># Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. |   |                     |                |                 |         |       |             |