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| O.O. | **18-07482-RT (R7B)**  **18-04326-OO (RavBK3)** | | MISO No. | **1-18624197**  **1-17989260** | File No. | 240802 |
| **Name of Outage:** | | 230 kV Line R7B (Reston – Auburnton) ***and,***  Raven Lake 230–115 kV Bank 3 | | | | |
| **Effective Dates:** | | 2018-06-15 from 1530 to 2018-06-19 at 1600 CDT  (2018-06-15 from 1530 to 2018-06-19 at 1600 EST) | | | | |
| **Standing Guide Reference:** | | MH-SPC Special Study (as per R. Arruda 2018-06-15) | | | | |

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| **System**  **Posturing** | B10T will be operated within the range of "Scheduled / SOL" 115 / 130 MW South and "Scheduled / SOL" 25 / 40 MW North.  **West Flow**  **“GRAPH” MAXIMUM of 825 MW** was studied for this outage for west flow conditions. Monitor Graph by using the “GRAPH LIMIT” calculation. **“GRAPH” MINIMUM of 0 MW**. Maximum **"PH" of 350 MW**. Use "ARC Constant" value of **475 MW**, for "GRAPH LIMIT" monitoring.  **East Flow**  **“GRAPH” MAXIMUM of 825 MW** was studied for this outage for east flow conditions. Monitor Graph by using the “GRAPH LIMIT” calculation. **“GRAPH” MINIMUM of 0 MW**. Maximum **"PH" of 350 MW**. Use "ARC Constant" value of **475 MW**, for "GRAPH LIMIT" monitoring.  Note: **“GRAPH”** = sum of **Grand Rapids** and Power to **Ponton and Herblet Lake**  (This acronym replaces previous “GRPTPH” which had the same parameter value )  Note: **“ARC”** = sum of **U91A and A4D “OUT**” at **Ashern** plus **MR11 “OUT”** at **Raven Lake** plus **C28R “IN”** at **Cornwallis**.  Note: **“PH”** - sum of Power to **Ponton and Herblet Lake** from lines P19W, J30P, W73H and W74H. (N.B: This acronym replaces previous “PTPH” which had the same parameter value). |
| **Description**  **of Work:** | R7B – Forced outage  Raven Lake BK3 – PCB Bushing change, Bank/OLTC maintenance, Arrester testing, Bank 3 relay maintenance, PB82 Insulation test. |



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| **Special Notes to MISO North RC** |  |

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| **Special Instructions to MHEB Operator:** | Monitor RTCA overloads on F27P for loss of G8P, limit PH further if RTCA shows overloading on F27P above SOL rating.  Monitor RTCA for Virden West voltage following loss of B70H. Adjust Brandon voltage as required, and run gas units for voltage support if required. |

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| **Special Instructions** | **TOI Extensions** - This TOI may be extended until 23:59 by performing the following steps:   1. 1. Verify system conditions to confirm there are no additional tie line facilities outages, or new internal MH outages. 2. 2. Review RTCA to confirm there are no new contingencies. 3. 3. Contact MISO to confirm there are no new outages, if there are no new outages provide notice to MISO that MH is extending the TOI. 4. 4. Extend the outage in COLA. 5. 5. Update TLAP outage table.   6. Provide notice to affected balancing authorities. |

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| **Prepared By:** | D. Williams | **Date:** | **2018.06.15** |

Copies to:

SPSO, System Control Centre NSSS, System Control Centre

GSSS, System Control Centre GSO, System Control Centre

Operating Order File 240802

MHEB OASIS MISO – St. Paul

SPC – Yong Zheng SPC - Colin Nicholson