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Constellation Energy
Generation Group, LLC

April 3, 2006

U. S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

ATTENTION: Document Control Desk

SUBJECT: **Calvert Cliffs Nuclear Power Plant**
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
Nine Mile Point Nuclear Station
Unit Nos. 1 & 2; Docket Nos. 50-220 & 50-410
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Generic Letter 2006-02, 60-Day Response

REFERENCE: (a) NRC Generic Letter 2006-02, "Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power," dated February 1, 2006

In Reference (a), the Nuclear Regulatory Commission (NRC) requested licensees to respond to a set of questions regarding the impact of electric power grid disturbances as they affect safe operation of nuclear power plants. Specifically, the NRC requested information to help them in their review of NRC programs related to operator examination and training as they relate to capturing the importance of grid conditions and offsite power issues to the design, assessment, and safe operation of the plant, including appropriate interactions with grid operators. This response is required within 60 days of the issuance of Generic Letter 2006-02 in accordance with 10 CFR 50.54(f).

Constellation Generation Group, LLC submits this response on behalf of its three facility licensees, Calvert Cliffs Nuclear Power Plant, Inc, Nine Mile Point Nuclear Station, LLC and R.E. Ginna Nuclear Power Plant, LLC. Please note that some of the factual information in the attached responses is provided based on input from the several transmission system operators for these licensees: PJM Interconnection, LLC, National Grid, and Rochester Gas and Electric Company. Constellation Generation Group maintains working relationships with these entities and has relied upon their provided information.

All facts in the attached responses represent current information as of the date of this letter.

Attachments (1) through (3) are the Constellation Generation Group responses to the NRC questions set forth in the generic letter.

A123

If you have any questions about this response, please contact Mr. G. H. Montgomery at (410) 897-5172 or George.Montgomery@constellation.com.

Very truly yours,

John M. Heffley
Chief Nuclear Officer

STATE OF MARYLAND :
: **TO WIT**
COUNTY OF ANNE ARUNDEL :

I, John M. Heffley, state that I am Chief Nuclear Officer, Constellation Generation Group, LLC, for Calvert Cliffs Nuclear Power Plant, Inc., Nine Mile Point Nuclear Station, LLC, and R. E. Ginna Nuclear Power Plant, LLC, and that I am duly authorized to execute and file this response on behalf of these companies. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by employees and/or consultants of the companies. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

Subscribed and sworn before me, a Notary Public, in and for the State of Maryland and County of Calvert, this 3rd day of April, 2006.

WITNESS my Hand and Notarial Seal:

Notary Public

My Commission Expires:

June 27, 2007
Date

JMH/EMT/jmp

Attachments: (1) Calvert Cliffs Nuclear Power Plant Response
(2) Nine Mile Point Nuclear Station Response
(3) R.E. Ginna Nuclear Power Plant Response

cc: P. D. Milano, NRC
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Resident Inspector, NRC (Calvert Cliffs)
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R. I. McLean, Maryland DNR
J. P. Spath, NYSERDA
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ATTACHMENT (1)

Calvert Cliffs Nuclear Power Plant Response

Constellation Generation Group
April 3, 2006

Attachment (1)

Calvert Cliffs Nuclear Power Plant Response

1. Use of protocols between the NPP licensee and the TSO, ISO, or RC/RA to assist the NPP licensee in monitoring grid conditions to determine the operability of offsite power systems under plant TS.	
(a) Do you have a formal agreement or protocol with your TSO?	Yes. The Calvert Cliffs Nuclear Power Plant (CCNPP) is located in the service territory of PJM Interconnection, LLC (PJM). PJM is the Transmission System Operator (TSO) for CCNPP. The Transmission Owner (TO) providing interconnection services to CCNPP is Baltimore Gas and Electric Company (BGE). The Transmission Owner is a member of PJM. All members of PJM execute the PJM Operating Agreement, which details the obligations and responsibilities of PJM to the members and vice versa. In the Operating Agreement, each member agrees to abide by the requirements contained in the PJM Manuals. The PJM Manuals contain the specific operational requirements that each member is required to follow and also indicates the requirements of PJM to the members. The PJM Operating Agreement requires PJM to, "Incorporate the grid reliability requirements applicable to nuclear generating units in the PJM Region planning and operating principles and practices." The PJM Manual also provides the roles and responsibilities of nuclear stations, transmission owners, and PJM with regard to communications both in normal and emergency circumstances. In addition, CCNPP and BGE adhere to a formal Interconnect Agreement. This agreement details the required voltage requirements for CCNPP and the required notification if the switchyard voltage goes outside or approaches the prescribed limits. The TO is also a signatory to a PJM Transmission Owners Agreement (TOA). The TOA requires the TO to operate and maintain their transmission facilities in accordance with, among other things, the PJM Manuals. Moreover, the TO is required by the TOA to conform to PJM's operating instructions as they apply to the TO's transmission facilities following PJM's operating instructions during an emergency.
(b) Describe any grid conditions that would trigger a notification from the TSO to the NPP licensee and if there is a time period required for the notification.	The PJM Manual identifies a series of alerts, warnings, and actions that PJM issues to PJM members, depending on the identified grid condition. The PJM message is communicated to CCNPP by the PJM generation dispatcher for a variety of system conditions, including: • PJM should notify CCNPP immediately if emergency events or conditions threaten grid stability or reliability. Calvert Cliffs requests notification to reduce the risk of a unit trip. Notification should also be made when conditions no longer exist. • The PJM Manual requires PJM to initiate notification to CCNPP through its respective TO's control center, if PJM identifies a CCNPP switchyard voltage violation. The PJM manual states, "This notification should occur within 15 minutes for voltage contingency violations and immediately for actual voltage violations. To the extent practical, PJM shall direct operations such that the violation is remedied within 30 minutes." • PJM should notify CCNPP of potentially damaging inclement weather or solar magnetic disturbances that may impact the security of the local grid (i.e., transmission system in the area of CCNPP). Notification times are specified within PJM procedures. This includes capacity emergencies, maximum emergency generation loading, weather/environmental emergency, hot/cold weather alerts, thunderstorms and tornadoes. • PJM should notify CCNPP of ordered power reductions, load management curtailment, or manual load dump initiation for system security. • CCNPP requests notification approximately 15 minutes prior to de-energizing, switching, or beginning in-service work on specific equipment associated with CCNPP.

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Calvert Cliffs Nuclear Power Plant Response

(c) Describe any grid conditions that would cause the NPP licensee to contact the TSO. Describe the procedures associated with such a communication. If you do not have procedures, describe how you assess grid conditions that may cause the NPP licensee to contact the TSO.	Calvert Cliffs has limited grid monitoring ability, including voltages, reactive load (VAR), and switchyard alignment. Grid monitoring beyond this level is provided for by our TO. Site procedures for loss of cooling to the main generator require notifying the TSO prior to reducing VAR loading on the main generator so that the TSO can compensate, if needed. The procedure for various major grid disturbances directs coordination with the TSO for status and control of the grid. Procedures for loss of offsite power (LOOP) and station blackout require coordination with the TSO to develop mitigation strategies (e.g., predictions of when offsite power may be restored). Various alarm responses in the site alarm Response Manual direct contacting the TSO for off-normal switchyard conditions, such as: • Switchyard loss of standby power • Loss of No. 1 or No. 2 125 VDC Battery Charger • Loss of 48 VDC Battery Charger • Loss of Relay DC Control Power • Annunciation Trouble Alarm • Various Step-Up Transformer Alarms • Various Main Generator Alarms (negative phase sequence, overvoltage, out-of-step, etc.)
(d) Describe how NPP operators are trained and tested on the use of the procedures or assessing grid conditions in question 1(c).	Operators receive classroom and simulator training on recognition of conditions, selecting the appropriate procedure for response, and procedure usage. Knowledge gained in this training is tested by written quizzes and evaluated simulator scenarios.
(e) If you do not have a formal agreement or protocol with your TSO, describe why you believe you continue to comply with the provisions of GDC 17 as stated above, or describe what actions you intend to take to assure compliance with GDC 17.	Not applicable. Formal agreements exist.
(f) If you have an existing formal interconnection agreement or protocol that ensures adequate communication and coordination between the NPP licensee and the TSO, describe whether this agreement or protocol requires that you be promptly notified when the conditions of the surrounding grid could result in degraded voltage (i.e., below TS	The PJM Manual requires PJM to initiate notification to CCNPP through its respective transmission owner's control center if PJM identifies a CCNPP switchyard voltage violation. The manual states, "This notification should occur within 15 minutes for voltage contingency violations and immediately for actual voltage violations. To the extent practical, PJM shall direct operations such that the violation is remedied within 30 minutes." The trip of CCNPP is one of the contingencies analyzed by PJM. PJM analyzes the CCNPP switchyard contingency voltages to the voltage limits provided by CCNPP. The voltage limits provided by CCNPP are based on the plant's design basis analysis.

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Calvert Cliffs Nuclear Power Plant Response

nominal trip setpoint value requirements; including NPP licensees using allowable value in its TSs) or LOOP after a trip of the reactor unit(s).	
(g) Describe the low switchyard voltage conditions that would initiate operation of plant degraded voltage protection.	Degraded voltage relays at CCNPP are set to ensure adequate voltage from the offsite power source to safety equipment is maintained in the event of anticipated transients (such as a unit trip) or an accident (such as a LOCA). The relay settings are calculated in accordance with CCNPP voltage requirements and reflected in the operational voltage limits detailed in the PJM Manual. Normal switchyard operating range is 500 – 550 kV and the lowest post-contingency voltage is 475 kV. The plant degraded voltage protection would not initiate separation of 1E busses from switchyard sources above 475 kV. The voltage requirements are specified for both normal and emergency (post-contingency) conditions. Since CCNPP utilizes automatic voltage regulators in its plant electrical distribution system, plant-specific analyses show that switchyard voltage conditions would need to be outside the values designated in the formal agreements described above, coincident with a design basis accident, to initiate operation of the plant degraded voltage protection relays.
2. Use of criteria and methodologies to assess whether the offsite power system will become inoperable as a result of a trip of your NPP.	
(a) Does your NPP's TSO use any analysis tools, an online analytical transmission system studies program, or other equivalent predictive methods to determine the grid conditions that would make the NPP offsite power system inoperable during various contingencies? If available to you, please provide a brief description of the analysis tool that is used by the TSO.	Yes. The PJM Energy Management System (EMS) includes a Security Analysis application that currently runs approximately every minute and analyzes approximately 4,000 contingencies on the PJM system. The analysis provides results with respect to thermal, voltage, and voltage drop limit violations. One of the contingencies analyzed by the PJM EMS is the removal of a CCNPP unit from the grid. In addition, the TO possesses a similar system that also calculates post-contingency voltage limit violations. One of the contingencies analyzed by the transmission owner system is the removal of a CCNPP unit from the grid.
(b) Does your NPP's TSO use an analysis tool as the basis for notifying the NPP licensee when such a condition is identified? If not, how does the TSO determine if conditions on the grid warrant NPP licensee	Yes. The results of the PJM Security Analysis application contain the specific contingency of the nuclear power plant tripping as the contingent element. Violation of the unit trip contingency voltage limit would result in notification to CCNPP.

notification?	
(c) If your TSO uses an analysis tool, would the analysis tool identify a condition in which a trip of the NPP would result in switchyard voltages (immediate and/or long-term) falling below TS nominal trip setpoint value requirements (including NPP licensees using allowable value in its TSs) and consequent actuation of plant degraded voltage protection? If not, discuss how such a condition would be identified on the grid.	Yes. The trip of a CCNPP unit is one of the contingencies analyzed by the PJM Security Analysis application. The PJM analyzes the CCNPP switchyard contingency voltages to the voltage limits provided by CCNPP. The voltage limits provided by CCNPP are based on the plant's design basis analysis. This bounding analysis is the basis for the degraded voltage relay settings. Thus, the analysis tool would identify a condition in which the trip of a CCNPP unit could result in degraded voltage relay actuation. The TO possesses similar capability to monitor the same condition.
(d) If your TSO uses an analysis tool, how frequently does the analysis tool program update?	The PJM Energy Management System (EMS) includes a Security Analysis application that currently updates approximately every minute. In addition, the BGE contingency analysis program (like the TSO's similar system) runs a State Estimator solution every 5 minutes and a Contingency Analysis every 15 minutes.
(e) Provide details of analysis tool-identified contingency conditions that would trigger an NPP licensee notification from the TSO.	The PJM notifies CCNPP through its respective TO's control center whenever actual or post-contingency voltages are determined to be below the switchyard voltage limits provided by CCNPP. This requirement applies to all contingencies involving the tripping of CCNPP or any transmission facility as the contingent element. The notification is required even if the voltage limits are the same as the standard PJM voltage limits.
(f) If an interface agreement exists between the TSO and the NPP licensee, does it require that the NPP licensee be notified of periods when the TSO is unable to determine if offsite power voltage and capacity could be inadequate? If so, how does the NPP licensee determine that the offsite power would remain operable when such a notification is received?	Yes. Calvert Cliffs unit trip contingency voltage calculations are performed by the PJM EMS and the TO Security Analysis application. The PJM EMS consists of a primary and backup system. If the PJM EMS fails, the TO Security Analysis application continues to analyze the CCNPP unit trip contingency voltage. Calvert Cliffs is notified if the real time contingency analysis capabilities of PJM and the TO are lost simultaneously. If CCNPP is notified that PJM and BGE have lost their real time contingency analysis capabilities, an Operations Administrative Policy directs CCNPP to request that PJM and BGE provide an assessment of the current condition of the grid based on the tools that PJM and BGE have available. The consideration of the operability and reliability of the offsite sources would be assessed based on the information provided by PJM and BGE and whether the current condition of the grid is bounded by the grid studies previously performed for CCNPP.

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Calvert Cliffs Nuclear Power Plant Response

(g) After an unscheduled inadvertent trip of the NPP, are the resultant switchyard voltages verified by procedure to be bounded by the voltages predicted by the analysis tool?	No. There is no formal process for comparing the actual post-trip voltages to the post-trip contingency voltage results calculated by the PJM and TO Security Analysis applications.
(h) If an analysis tool is not available to the NPP licensee's TSO, do you know if there are any plans for the TSO to obtain one? If so, when?	Not Applicable. The TSO has an analysis tool.
(i) If an analysis tool is not available, does your TSO perform periodic studies to verify that adequate offsite power capability, including adequate NPP post-trip switchyard voltages (immediate and/or long-term), will be available to the NPP licensee over the projected timeframe of the study?	Not Applicable. The TSO has an analysis tool.
(a) Are the key assumptions and parameters of these periodic studies translated into TSO guidance to ensure that the transmission system is operated within the bounds of the analyses?	Not Applicable.
(b) If the bounds of the analyses are exceeded, does this condition trigger the notification provisions discussed in question 1 above?	Not Applicable.
(j) If your TSO does not use, or you do not	Not Applicable. Both PJM and BGE have an analysis tool and the applicable contingency

have access to the results of an analysis tool, or your TSO does not perform and make available to you periodic studies that determine the adequacy of offsite power capability, please describe why you believe you comply with the provisions of GDC 17 as stated above, or describe what compensatory actions you intend to take to ensure that the offsite power system will be sufficiently reliable and remain operable with high probability following a trip of your NPP.	voltage results are made available to CCNPP.
3. Use of criteria and methodologies to assess whether the NPP's offsite power system and safety-related components will remain operable when switchyard voltages are inadequate.	
(a) If the TSO notifies the NPP operator that a trip of the NPP, or the loss of the most critical transmission line or the largest supply to the grid would result in switchyard voltages (immediate and/or long-term) below TS nominal trip setpoint value requirements (including NPP licensees using allowable value in its TSs) and would actuate plant degraded voltage protection, is the NPP offsite power system declared inoperable under the plant TSs? If not, why not?	Yes. The offsite source would be considered inoperable for the contingency violation of a unit trip resulting in switchyard voltages that could result in actuation of degraded voltage protection relays. This is consistent with the design and licensing bases which require the offsite circuits to remain connected and be able to supply required loads during an accident. However, the offsite source would not be considered inoperable for other contingency violations. Such events would be only postulated and not yet occurred. They would not affect the ability of the offsite source to commence safe shutdown and mitigate the consequences of an accident.
(b) If onsite safety-related equipment (e.g., emergency diesel generators or safety-related motors) is lost	Based on the scenario described, we do not anticipate the loss of any system performance or safety function other than the loss of the offsite AC power supply. We do not believe any equipment would fail and be incapable of meeting its safety function as a result of this scenario. A LOCA with delayed LOOP event is outside the licensing basis at CCNPP. If switchyard voltages are inadequate, immediate action is taken by PJM to restore system

when subjected to a double sequencing (LOCA with delayed LOOP event) as a result of the anticipated system performance and is incapable of performing its safety functions as a result of responding to an emergency actuation signal during this condition, is the equipment considered inoperable? If not, why not?	voltages to nominal values. In the unlikely event a LOCA should occur when switchyard voltages are inadequate, the degraded voltage relays would separate the offsite source from the plant electrical system as designed. In the event of a postulated LOCA with delayed LOOP, the degraded voltage relays remain connected to the plant safety busses, and would sense the LOOP condition whenever it occurred. After actuation of the relays, all loads would be shed from the busses and the safety loads would be sequenced back on to the emergency diesel generators (EDG). Required safety equipment would continue to be capable of performing its safety function following this condition.
(c) Describe your evaluation of onsite safety-related equipment to determine whether it will operate as designed during the condition described in question 3(b).	Since the scenario is outside the licensing basis at CCNPP, there is no formal evaluation of an event as described in question 3(b). The following description is based on a review of applicable design documents. In the event of a LOCA condition without a LOOP, all safety loads would start simultaneously (not sequenced) and the EDGs would start and not load. Since the degraded voltage relays remain connected to the safety busses, they would initiate a load shed of the safety busses on a LOOP condition, causing the safety busses to separate from the offsite source. After load shed verification relays confirm safety bus separation from the offsite source and adequate EDG voltage and frequency is confirmed, safety loads are automatically sequenced back on the safety busses.
(d) If the NPP licensee is notified by the TSO of other grid conditions that may impair the capability or availability of offsite power, are any plant TS action statements entered? If so, please identify them.	No. Action statements are not entered based on potential impairments. It should be noted that other, non-Technical Specification actions, would likely be evaluated to respond to such a notification. For example, the procedure for major grid disturbances directs proactive actions (e.g. equipment operational restoration, enhanced equipment monitoring, and reviews of anticipated emergency procedures) in response to solar magnetic disturbances, even if no adverse effects are apparent.
(e) If you believe your plant TSs do not require you to declare your offsite power system or safety-related equipment inoperable in any of these circumstances, explain why you believe you comply with the provisions of GDC 17 and your plant TSs, or describe what compensatory actions you intend to take to ensure that the offsite power system	If a clear path to reduced voltage conditions exists or is predicted based upon actual grid conditions (i.e., State Estimator), the plant response would be to declare the offsite power supply inoperable as discussed in 3(a) for post-trip contingencies. As discussed in 3(a) and (d), for all other notifications of possible impairment, the operating crew would initiate compensatory actions, but would not enter into a Technical Specification action statement.

and safety-related components will remain operable when switchyard voltages are degraded.	
(f) Describe if and how NPP operators are trained and tested on the compensatory actions mentioned in your answers to questions 3(a) through (e).	The Licensed Operator Requalification Program ensures that, on a 2 year cycle, licensed operators are trained on major grid disturbances, loss of offsite power, and station blackout. Simulator scenarios are designed to test the operator's response to various grid instabilities. Also included in the training are discussions of how these degraded voltage conditions can affect non-safety related equipment and how SOER 99-01 applies to Calvert Cliffs. In initial license class, the operators are given the same type of training during their electrical panels week with additional focus on the fundamental concepts. Retrain tasks (2 year cycle tasks) are in place to ensure this topic continues to be covered.
4. Use of criteria and methodologies to assess whether the offsite power system will remain operable following a trip of your NPP.	
(a) Do the NPP operators have any guidance or procedures in plant TS bases sections, the final safety analysis report, or plant procedures regarding situations in which the condition of plant-controlled or -monitored equipment (e.g., voltage regulators, auto tap changing transformers, capacitors, static VAR compensators, main generator voltage regulators) can adversely affect the operability of the NPP offsite power system? If so, describe how the operators are trained and tested on the guidance and procedures.	Yes. Calvert Cliffs procedures give guidance on the relationship between our 4kV voltage regulators, 4kV and 13 kV bus alignments and configurations, and operability of offsite circuits. Specific guidance is provided to address declaring the associated off-site power source inoperable when aligned to a bus (busses) via a voltage regulator operating in the manual mode. Enabling objectives in the CCNPP AC electrical distribution lesson plan for licensed operators cover precautions and limitations, and their bases, for procedures that control operation of CCNPP AC electrical distribution system equipment. The objectives also include system startup, shutdown and off-normal sections of the applicable procedures. The method and standard of evaluation for each training topic is specified in the applicable lesson plan.
(b) If your TS bases sections, the final safety analysis report, and plant procedures do not provide guidance regarding situations in which the condition of plant-controlled or -monitored equipment can adversely affect	Not applicable. Technical Specification Bases and plant procedures have the required guidance.

the operability of the NPP offsite power system, explain why you believe you comply with the provisions of GDC 17 and the plant TSs, or describe what actions you intend to take to provide such guidance or procedures.	
5. Performance of grid reliability evaluations as part of the maintenance risk assessments required by 10 CFR 50.65(a)(4).	
(a) Is a quantitative or qualitative grid reliability evaluation performed at your NPP as part of the maintenance risk assessment required by 10 CFR 50.65(a)(4) before performing grid-risk-sensitive maintenance activities? This includes surveillances, post-maintenance testing, and preventive and corrective maintenance that could increase the probability of a plant trip or LOOP or impact LOOP or SBO coping capability, for example, before taking a risk-significant piece of equipment (such as an EDG, a battery, a steam-driven pump, an alternate AC power source) out-of-service?	Yes. In accordance with site procedures that implement the Maintenance Rule and NUMARC 93-01, we assess and manage the increase in risk that may result from proposed maintenance activities before performing them. If there are concerns over the current reliability of the power grid, that information is used to make a quantitative adjustment to our LOOP frequencies and the probability of a LOOP subsequent to a plant trip. This may result in compensatory actions based on the results of the quantitative assessment. Site operating instructions provide criteria before taking grid-risk-sensitive equipment out of service for maintenance, which is an amplification of the CCNPP Technical Specifications and Technical Specification Bases.
(b) Is grid status monitored by some means for the duration of the grid-risk-sensitive maintenance to confirm the continued validity of the risk assessment and is risk reassessed when warranted? If not, how is the risk assessed during grid-risk-sensitive	Yes. Grid status is continually evaluated by PJM using the Security Analysis application. PJM notifies CCNPP through its TO of emergent grid conditions as discussed in the response to Question 1(b). In addition, the TO is performing similar monitoring and evaluation. Based on these notifications, CCNPP personnel reassess impacts to in-plant maintenance activities.

maintenance.	
(c) Is there a significant variation in the stress on the grid in the vicinity of your NPP site caused by seasonal loads or maintenance activities associated with critical transmission elements? *Is there a seasonal variation (or the potential for a seasonal variation) in the LOOP frequency in the local transmission region?* *If the answer to either question is yes, discuss the time of year when the variations occur and their magnitude.*	Electric Power Research Institute (EPRI) 1011759, Frequency Determination Method for Cascading Grid Events, published in December 2005, suggests that grid-centered LOOP events have the highest likelihood in the summer months in the Mid-Atlantic Area Council (MAAC) region applicable for CCNPP. It also states that there is a medium risk in Winter and low risk in Spring and Fall. This correlates with recent NRC publications on seasonal risk. We assume a higher LOOP frequency in the summer months and in the coldest winter weather (a factor of four higher than baseline) in the quantitative tool used for Maintenance Rule risk assessment.
(d) Are known time-related variations in the probability of a LOOP at your plant site considered in the grid-risk-sensitive maintenance evaluation? If not, what is your basis for not considering them?	Yes. The probability of a LOOP is increased by a factor of four from July through September. This increase is based on NRC and EPRI studies. Although there have been very few actual LOOP events in MAAC, it is assumed that the indicators of the higher LOOP potential in summer months justify addressing this potential in the quantitative tool during the summer months.
(e) Do you have contacts with the TSO to determine current and anticipated grid conditions as part of the grid reliability evaluation performed before conducting grid-risk-sensitive maintenance activities?	Yes. Established protocols exist for communicating with the TSO through the CCNPP Control Room. Procedures direct that the TSO be contacted for an assessment of grid status prior to performing grid-risk-sensitive activities. Grid-risk-sensitive maintenance (i.e., switchyard work) is performed outside of CCNPP maintenance. We provide sponsorship and oversight of work performed in our switchyard, but we are not the organization performing the actual maintenance.
(f) Describe any formal agreement or protocol that you have with your TSO to assure that you are promptly alerted to a worsening grid condition that may	The PJM has final operational authority for BGE transmission assets. The PJM and BGE have formal planning and reporting protocols for controlling grid maintenance activities. Direct contact is made with the transmission system maintenance staff to get up to the minute information, facilitate the return of the asset to service, and to stop work, if necessary, as grid conditions change.

emerge during a maintenance activity.	
(g) Do you contact your TSO periodically for the duration of the grid-risk-sensitive maintenance activities?	No. The initial contact is made prior to the initiation of grid-risk-sensitive maintenance, as described in 5(e), and adverse changes to grid conditions are communicated to CCNPP as described in 5(f).
(h) If you have a formal agreement or protocol with your TSO, describe how NPP operators and maintenance personnel are trained and tested on this formal agreement or protocol.	The Licensed Operator Re-Qualification Program ensures that, on a 2 year cycle, licensed operators are trained on major grid disturbances, loss of offsite power, and station blackout. Procedures for these conditions invoke the protocols for communication and interaction between CCNPP and the TSO. Simulator scenarios are designed to test operator response to various grid instabilities. Also included are discussions of how these degraded voltage conditions can affect non-safety related equipment. Application of SOER 99-01 to Calvert Cliffs is discussed. Training on SOER 99-01 specifically addresses the interconnection agreements and procedures that are the basis for the communication protocols. Maintenance personnel are not trained on the formal agreement or protocols as all communications with the TO and TSO and control of maintenance activities are conducted through the operations and work management departments.
(i) If your grid reliability evaluation, performed as part of the maintenance risk assessment required by 10 CFR 50.65(a)(4), does not consider or rely on some arrangement for communication with the TSO, explain why you believe you comply with 10 CFR 50.65(a)(4).	Not Applicable. Calvert Cliffs does rely on a communications protocol.
(j) If risk is not assessed (when warranted) based on continuing communication with the TSO throughout the duration of grid-risk-sensitive maintenance activities, explain why you believe you have effectively implemented the relevant provisions of the endorsed industry guidance associated with the maintenance rule.	Not Applicable. Risk is assessed based on continuing communications with the TSO.
(k) With respect to	Not Applicable. No alternatives are required.

questions 5(i) and 5(j), you may, as an alternative, describe what actions you intend to take to ensure that the increase in risk that may result from proposed grid-risk-sensitive activities is assessed before and during grid-risk-sensitive maintenance activities, respectively.	
6. Use of risk assessment results, including the results of grid reliability evaluations, in managing maintenance risk, as required by 10 CFR 50.65(a)(4).	
(a) Does the TSO coordinate transmission system maintenance activities that can have an impact on the NPP operation with the NPP operator?	Yes. Planned transmission outages are coordinated in accordance with a process detailed in the PJM Manual. The process requires advance notice and subsequent PJM approval for all outages to ensure grid reliability. On the outage start day, the system is analyzed one last time by PJM before permitting the equipment to be switched out of service. Once the equipment is switched out of service, grid status is continually evaluated by the PJM Security Analysis application. In addition, the TO is performing similar monitoring and evaluation. The PJM notifies CCNPP through the TO's control center, as discussed in the response to Question 1(b). Any work in the on-site switchyard or on off-site facilities that is determined to be risk significant is included in the Maintenance Rule quantitative evaluation of maintenance risk. This includes increased probabilities of partial or full LOOPs and of LOOPs subsequent to a CCNPP plant trip. Thus, the impact of grid sensitive component maintenance is appropriately evaluated.
(b) Do you coordinate NPP maintenance activities that can have an impact on the transmission system with the TSO?	Yes. Grid-sensitive maintenance activities at CCNPP that can have an impact on the transmission system are coordinated with the TSO by procedure. Switchyard maintenance is performed by the TO in coordination with CCNPP Operations staff. Short of inducing a trip of the main generator, no maintenance activity at the plant is able to make a significant change to the status of the power grid in the vicinity of the plant or the power grid at large.
(c) Do you consider and implement, if warranted, the rescheduling of grid-risk-sensitive maintenance activities (activities that could (i) increase the likelihood of a plant trip, (ii) increase LOOP probability, or (iii) reduce LOOP or SBO coping capability) under existing, imminent, or worsening degraded grid reliability	Yes. Calvert Cliffs attempts to plan all extended grid-risk-sensitive maintenance outside of the expected high grid stress time frames. Any activities that are grid sensitive are evaluated based on the grid stress assumed at the time of the maintenance. This includes higher LOOP frequencies during summer months. If the analysis shows undue risk to the site, rescheduling is considered. Also, during periods of maximum generation, activities that result in a calculated medium trip risk per 10 CFR 50.65(a)(4) are re-considered and potentially postponed until better grid conditions are projected. Any notifications such as solar magnetic disturbances (SMD) or emergency/maximum generation initiate a review/recalculation of PRA and an evaluation of approved work. When appropriate, work is stopped and out of service equipment is restored.

conditions?	
(d) If there is an overriding need to perform grid-risk-sensitive maintenance activities under existing or imminent conditions of degraded grid reliability, or continue grid-risk-sensitive maintenance when grid conditions worsen, do you implement appropriate risk management actions? If so, describe the actions that you would take. (These actions could include alternate equipment protection and compensatory measures to limit or minimize risk).	Yes. Risk is controlled and managed per site procedures. The risks exist in two aspects: the grid risk to the site and the site's risk to the grid. In the case of grid risk to the site, CCNPP has procedures in place that address removing equipment important to safety from service. If grid conditions worsen, there are abnormal operating procedures that go into effect, based on either Solar Magnetic Disturbances or bus voltage. If CCNPP is performing maintenance that could increase the risk to the grid (i.e., unit trip sensitive maintenance) and the grid conditions worsen, actions would be taken per site procedures to mitigate risk to the grid.
(e) Describe the actions associated with questions 6(a) through 6(d) above that would be taken, state whether each action is governed by documented procedures and identify the procedures, and explain why these actions are effective and will be consistently accomplished.	Calvert Cliffs has procedures for evaluating the risk for all maintenance, including grid risk-sensitive maintenance activities, control of on-line work activities and shutdown safety for offline activities. Consistent accomplishment of grid reliability evaluations is assured through the use of procedures and associated training of personnel responsible to implement the processes. The associated procedures include: • NO-1-117: Integrated Risk Management • Operations Administrative Policy 94-5: Guidelines for Nuclear Plant Operations (NPO) Support & Planning Department (ESO&PD) Transmission System Operator (TSO) Unit • OI-21-A1: 1A Diesel Generator • OI-21-A2: 2A Diesel Generator • OI-21B-1: 1B Diesel Generator • OI-21B-2: 2B Diesel Generator • OI-21C: 0C Diesel Generator • MN-1-114: Control of CCNPP 500 kV Switchyard System Maintenance
(f) Describe how NPP operators and maintenance personnel are trained and tested to assure they can accomplish the actions described in your answers to question 6(e).	Operations personnel receive initial and, if necessary, continuing training on the use of the procedures described in 6(e) above. This is mandated in the licensed operators' initial training program. Maintenance personnel receive training on the applicable procedures listed in 6(e) as needed to support their role in managing maintenance risk as required by 10 CFR 50.65(a)(4). Risk assessment of planned and on-going work is conducted through Operations and Work Management.
(g) If there is no effective coordination between the NPP	Not Applicable. There is effective coordination between the TSO and CCNPP regarding maintenance activities.

operator and the TSO regarding transmission system maintenance or NPP maintenance activities, please explain why you believe you comply with the provisions of 10 CFR 50.65(a)(4).	
(h) If you do not consider and effectively implement appropriate risk management actions during the conditions described above, explain why you believe you effectively addressed the relevant provisions of the associated NRC-endorsed industry guidance.	Not Applicable. As discussed in questions 6(a) through 6(d), CCNPP effectively implements appropriate risk management actions.
(i) You may, as an alternative to questions 6(g) and 6(h) describe what actions you intend to take to ensure that the increase in risk that may result from grid-risk-sensitive maintenance activities is managed in accordance with 10 CFR 50.65(a)(4).	Not Applicable. No alternative actions are required.
7. Procedures for identifying local power sources that could be made available to resupply your plant following a LOOP event.	
(a) Briefly describe any agreement made with the TSO to identify local power sources that could be made available to re-supply power to your plant following a LOOP event.	The PJM Restoration Manual details the process to be followed during a system restoration. The process reiterates the specific offsite power requirements for CCNPP, "Offsite power should be restored as soon as possible to nuclear units, both units that had been operating and those that were already offline prior to the system disturbance, without regard to using these units for restoring customer load." However, due to the myriad of possible restoration scenarios, no specific power sources to restart CCNPP are identified. The PJM restoration process allows for the fact that the blacked-out area may or may not be separated from the remainder of the system. Regardless of the scenario, there is a clear recognition of the importance of restoring a CCNPP offsite power source The PJM Manual further states: "Transmission Owners and Nuclear Power Plants must effectively communicate to keep the Nuclear Power Plant apprised of the anticipated restoration time for offsite power." The manual also states that for PJM restoration drills, "Ensure that all nuclear units have

	been provided with one offsite source within 4 hours" and that the PJM Nuclear Generation Owner/Operator Users Group should be debriefed on the drill results. The adequacy of black-start resources to support system restoration is managed through a process contained in the PJM Manual.
(b) Are your NPP operators trained and tested on identifying and using local power sources to resupply your plant following a LOOP event? If so, describe how.	The only local power source not under the direct control of the TSO is the local Southern Maryland Electric Cooperative (SMECO) 69 kV supply breaker. The Licensed Operator Requalification Program ensures that, on a 2 year cycle, licensed operators are trained on major grid disturbances, loss of offsite power, and station blackout. Simulator scenarios are designed to test the operator's response to various grid instabilities. Use of the SMECO 69 kV supply breaker is procedurally controlled and is included in the Licensed Operator Training Program. Also included are discussions of how these degraded voltage conditions can affect non-safety related equipment. During the training, SOER 99-01 is discussed with application to Calvert Cliffs. In initial license class, the operators are given the same type of training during their electrical panels week with additional focus on the fundamental concepts. Retrain tasks (2 year cycle tasks) are in place to ensure this topic continues to be covered.
(c) If you have not established an agreement with your plant's TSO to identify local power sources that could be made available to resupply power to your plant following a LOOP event, explain why you believe you comply with the provisions of 10 CFR 50.63, or describe what actions you intend to take to establish compliance.	Not applicable. Agreements are in place as described in 7(a) above.
8. Maintaining SBO coping capabilities in accordance with 10 CFR 50.63.	
(a) Has your NPP experienced a total LOOP caused by grid failure since the plant's coping duration was initially determined under 10 CFR 50.63?	Not applicable. No total LOOP events have occurred at CCNPP since the plant's coping duration was initially determined under 10 CFR 50.63.
(b) If so, have you reevaluated the NPP using the guidance in Table 4 of RG 1.155 to determine if your NPP should be assigned to the P3 offsite power design characteristic group?	Not applicable. Reference response to 8(a).
(c) If so, what were the results of this	Not Applicable. Reference response to 8(a).

reevaluation, and did the initially determined coping duration for the NPP need to be adjusted?	
(d) If your NPP has experienced a total LOOP caused by grid failure since the plant's coping duration was initially determined under 10 CFR 50.63 and has not been reevaluated using the guidance in Table 4 of RG 1.155, explain why you believe you comply with the provisions of 10 CFR 50.63 as stated above, or describe what actions you intend to take to ensure that the NPP maintains its SBO coping capabilities in accordance with 10 CFR 50.63.	Not Applicable. Reference response to 8(a).
9. If you determine that any action is warranted to bring your NPP into compliance with NRC regulatory requirements, including TSs, GDC 17, 10 CFR 50.65(a)(4), 10 CFR 50.63, 10 CFR 55.59 or 10 CFR 50.120, describe the schedule for implementing it.	Calvert Cliffs has not determined that any further actions are warranted to bring the site into compliance with NRC regulatory requirements.

ATTACHMENT (2)

Nine Mile Point Nuclear Station Response

Constellation Generation Group
April 3, 2006

Attachment (2)

Nine Mile Point Nuclear Station Response

1. Use of protocols between the NPP licensee and the TSO, ISO, or RC/RA to assist the NPP licensee in monitoring grid conditions to determine the operability of offsite power systems under plant TS.	
(a) Do you have a formal agreement or protocol with your TSO?	Yes. Nine Mile Point Nuclear Station, LLC (NMPNS) and National Grid (NG) have formal interconnection agreements. National Grid is both the Transmission Owner (TO) and the Transmission System Operator (TSO). The agreements are documented in "Interconnection Agreement Between Niagara Mohawk Power Corporation and Constellation Nuclear, LLC for the Nine Mile Point Unit 1 Nuclear Generating Station" and "Interconnection Agreement Between Niagara Mohawk Corporation, New York State Electric & Gas Corporation, Long Island Lighting Company d/b/a LIPA and Constellation Nuclear, LLC for the Nine Mile Point Unit 2 Nuclear Generating Station." The "Nine Mile Point Nuclear Station, LLC – National Grid Station Operating Guidelines" supplements these agreements. The former Niagara Mohawk Corporation is now doing business under the name National Grid (NG). The New York Transmission System is controlled by New York Independent System Operator (NYISO), and operated by the Local Transmission Owner's Energy Control Centers (National Grid, Con Edison, New York Power Authority and Rochester Gas & Electric-Energy East). The nuclear power plants located in the NYISO-controlled area do not communicate directly with the NYISO on transmission matters. Transmission-related communication is through the Local Transmission Owner's Energy Control Center. Nine Mile Point is in NG's operational area.
(b) Describe any grid conditions that would trigger a notification from the TSO to the NPP licensee and if there is a time period required for the notification.	National Grid notifies NMPNS whenever an impairment or potentially degraded grid condition is recognized by NG. National Grid has the following information in their notification procedures: • National Grid should notify NMPNS immediately if emergency events or conditions threaten the 115 kV or 345 kV grid stability or reliability. Nine Mile Point requests notification to reduce the risk of a unit trip. Notification should also be made when conditions no longer exist. • Nine Mile Point requests notification approximately 15 minutes prior to de-energizing, switching, or beginning in-service work on specific power lines associated with NMPNS. • National Grid should notify NMPNS of potentially damaging inclement weather or solar magnetic disturbances that may impact the security of the Oswego complex (i.e., transmission system in the area of NMPNS). Notification times are specified within NG procedures. However, good utility practice would require a prompt notification, commensurate with the duty burden of the system security operator during the time of the event. • National Grid should notify NMPNS of ordered power reductions in generation for system security. • Notifications for post-LOCA contingency voltage violations should be made in accordance with NG procedures. Notification time is immediately following a verification of the alarm, via a second contingency load flow analysis, generated by the Energy Management System (EMS) computer system. National Grid Central Regional Control Center notifies NMPNS of alarms affecting equipment at the Scriba substation.
(c) Describe any grid conditions that would cause the NPP licensee to contact the TSO. Describe the procedures associated with such a communication. If you do not have procedures, describe how you assess	Nine Mile Point has procedures that require notification and communication with NG. These procedures include: • Real-time power changes. • Entry into Limiting Conditions for Operation associated with offsite power. • When plant conditions threaten continued plant operation or necessitate increased grid reliability. • When emergent conditions no longer exist. • Loss of equipment in the Scriba substation.

grid conditions that may cause the NPP licensee to contact the TSO.	• Verification protocols for emergency power reductions ordered by NG. • Synchronizing a unit to or removing it from the grid. • Pre-scheduled and emergent maintenance, with or without equipment outages. • Major grid disturbance special operating procedures (SOP) require communication with NG immediately and at a frequency of hourly. These procedures also address offsite power system operability when notified that the offsite power system post-LOCA Contingency Voltage Alarm is received at NG. • Loss of offsite power SOPs require communication with NG to facilitate power restoration. • Station blackout SOPs require communications with NG to prioritize power restoration to the nuclear station in accordance with NG procedures. • Communications with NG for diesel generator unavailability. • Outages of automatic generator voltage control. • Alarm annunciation associated with offsite power systems. Changes associated with modifications, maintenance rule, and voltage studies are required by the Interconnection Agreement to be communicated to the TSO.
(d) Describe how NPP operators are trained and tested on the use of the procedures or assessing grid conditions in question 1(c).	Currently, licensed operators have prescribed training topics in the biennial licensed operator requalification schedule that include but are not limited to: • Special Operating Procedures (which include loss of offsite power and major grid disturbance events). • Electrical distribution systems. • Selected Significant Operating Event Report (SOER) Recommendations, which include SOER 99-01, Loss of Grid, and SOER 02-03, Large Power Transformer Reliability. Examination criterion for each of the above topics is specified in the applicable program lesson plan.
(e) If you do not have a formal agreement or protocol with your TSO, describe why you believe you continue to comply with the provisions of GDC 17 as stated above, or describe what actions you intend to take to assure compliance with GDC 17.	Not applicable. Formal agreements exist.
(f) If you have an existing formal interconnection agreement or protocol that ensures adequate communication and coordination between the NPP licensee and the TSO, describe whether this agreement or protocol requires that you be promptly notified when the conditions of the surrounding grid could result in degraded voltage (i.e., below TS	As previously stated, NMPNS does have a formal agreement with the TSO that addresses communication and coordination between NMPNS and NG. Notifications for post-LOCA contingency voltage violations are made in accordance with NG procedures. Notification time is immediate, following a verification of the alarm. The verification is made using contingency load flow analyses that are generated by NG on the EMS computer system. A major grid disturbance special operating procedure requires communication with NG immediately and at a frequency of approximately hourly. This procedure also addresses offsite power system operability when notified that the offsite power system post-LOCA contingency voltage alarm is received at NG.

nominal trip setpoint value requirements; including NPP licensees using allowable value in its TSs) or LOOP after a trip of the reactor unit(s).	
(g) Describe the low switchyard voltage conditions that would initiate operation of plant degraded voltage protection.	For NMP Unit 1, switchyard voltage was analyzed for worst case reserve transformer loading conditions, which is the unit trip with LOCA scenario. The minimum required 115 kV switchyard voltage is based on maintaining emergency bus voltage above the reset point of the second level voltage protection relays (degraded voltage relay reset is approximately 3,790 VAC) during the unit trip with the LOCA scenario. This requires switchyard voltage to remain above 109.3 kV. If the load tap changers (LTC) are operated in manual, the minimum acceptable switchyard voltage is 110.3 kV. If switchyard voltage falls below the levels described above, and 4 kV emergency bus voltage reaches the degraded voltage relay dropout setpoint (maximum dropout of approximately 3,770 V for 21 seconds), the emergency switchgear is transferred to the on-site emergency diesel generators. As the NMP Unit 1 unit trip with LOCA provides the greatest reserve transformer loading, the minimum acceptable switchyard voltage is based on this analyzed scenario. For NMP Unit 2, the 115 kV offsite sources that energize the reserve station service transformers have a normal operating voltage range of 109.25 kV (95 percent) to 120.75kV (105 percent). The reserve station service transformers have automatic LTC mechanisms that operate over a range of ±10 percent. The 4.16 kV tertiary winding voltage fluctuates in accordance with the foregoing selected tap position, primary voltage variation, and/or 4.16 kV emergency switchgear bus load condition. The minimum required 115 kV switchyard voltage is based on maintaining emergency bus voltage above the reset point of the second level voltage protection relays. Switchyard voltage was analyzed for worst case reserve transformer loading conditions. From the voltage profile study for the reserve station service transformers, the minimum 115 kV system voltage that will satisfy the conditions for minimum bus voltages is 107.8 kV (93.74 percent of 115 kV) under the worst loading conditions. This voltage (107.8 kV) is less than the minimum 115 kV system voltage of 109.25 kV (95 percent of 115 kV). If switchyard voltage falls below the levels described above, and the 4 kV emergency bus voltage reaches the degraded voltage relay dropout setpoint (approximately 3,847 VAC for 8 seconds with LOCA or 30 seconds without LOCA), the emergency switchgear is transferred to the on-site emergency diesel generators. As the NMP Unit 2 unit trip with LOCA provides the greatest reserve transformer loading, the minimum acceptable switchyard voltage is based on this analyzed scenario.
2. *Use of criteria and methodologies to assess whether the offsite power system will become inoperable as a result of a trip of your NPP.*	
(a) Does your NPP's TSO use any analysis tools, an online analytical transmission system studies program, or other equivalent predictive methods to determine the grid conditions that would make the NPP offsite power system inoperable during various	Yes. National Grid maintains an Energy Management System (EMS) and a security model. The EMS is a system of computer-aided tools used by operators to monitor and control the performance of the transmission system. National Grid also maintains a security model that includes a State Estimator (SE) and a Contingency Evaluation Program (CEP). The CEP solves pre-defined contingencies on the electric system, including plant trip and addition of LOCA loading on offsite power, and provides indications to grid operators of voltage limit violations for real time and contingency evaluations.

contingencies? If available to you, please provide a brief description of the analysis tool that is used by the TSO.	
(b) Does your NPP's TSO use an analysis tool as the basis for notifying the NPP licensee when such a condition is identified? If not, how does the TSO determine if conditions on the grid warrant NPP licensee notification?	Yes. The TSO notifies the respective NMPNS control room operator of post-trip contingency voltage violations determined by the TSO's State Estimator and CEP computer system. The notifications from the TSO are made in accordance with NG procedures.
(c) If your TSO uses an analysis tool, would the analysis tool identify a condition in which a trip of the NPP would result in switchyard voltages (immediate and/or long-term) falling below TS nominal trip setpoint value requirements (including NPP licensees using allowable value in its TSs) and consequent actuation of plant degraded voltage protection? If not, discuss how such a condition would be identified on the grid.	Yes. The State Estimator and CEP solves the pre-defined contingency of a plant trip and addition of LOCA loading on offsite power. Limiting switchyard voltage that would result in actuation of plant degraded voltage protection triggers an alarm to provide indication to the TSO of contingency voltage limit violations.
(d) If your TSO uses an analysis tool, how frequently does the analysis tool program update?	At present, the analysis tool program updates between 5 minutes and 25 minutes depending on load, network changes and elapsed time.
(e) Provide details of analysis tool-identified contingency conditions that would trigger an NPP licensee notification from the TSO.	The State Estimator and CEP would trigger a notification to the respective NMPNS control room for a voltage violation associated with the pre-defined contingency of a plant trip and addition of LOCA loading on offsite power.
(f) If an interface agreement exists between the TSO and the NPP licensee, does it require that the NPP licensee be notified of periods when the TSO is unable to	Yes. Notifications for an outage on the EMS system that monitors for post-LOCA contingency voltage violations are made in accordance with NG procedures. Procedures at NMPNS contain guidance for operators to monitor 115 kV voltages when notified of an EMS outage. If pre-contingency voltages fall to prescribed threshold values, offsite power is declared inoperable and Technical Specification requirements are followed.

determine if offsite power voltage and capacity could be inadequate? If so, how does the NPP licensee determine that the offsite power would remain operable when such a notification is received?	
(g) After an unscheduled inadvertent trip of the NPP, are the resultant switchyard voltages verified by procedure to be bounded by the voltages predicted by the analysis tool?	No. There is no formal process for comparing the actual post-trip voltages to the post-trip contingency voltage results calculated by the State Estimator and CEP programs.
(h) If an analysis tool is not available to the NPP licensee's TSO, do you know if there are any plans for the TSO to obtain one? If so, when?	Not Applicable. The TSO has an analysis tool.
(i) If an analysis tool is not available, does your TSO perform periodic studies to verify that adequate offsite power capability, including adequate NPP post-trip switchyard voltages (immediate and/or long-term), will be available to the NPP licensee over the projected timeframe of the study?	Not Applicable. The TSO has an analysis tool.
(a) Are the key assumptions and parameters of these periodic studies translated into TSO guidance to ensure that the transmission system is operated within the bounds of the analyses?	Not Applicable.
(b) If the bounds of the analyses are exceeded, does this condition trigger the notification provisions discussed in question	Not Applicable.

1 above?	
(j) If your TSO does not use, or you do not have access to the results of an analysis tool, or your TSO does not perform and make available to you periodic studies that determine the adequacy of offsite power capability, please describe why you believe you comply with the provisions of GDC 17 as stated above, or describe what compensatory actions you intend to take to ensure that the offsite power system will be sufficiently reliable and remain operable with high probability following a trip of your NPP.	Not Applicable. The TSO uses an analysis tool and the applicable contingency voltage results are made available to NMPNS.
3. Use of criteria and methodologies to assess whether the NPP's offsite power system and safety-related components will remain operable when switchyard voltages are inadequate.	
(a) If the TSO notifies the NPP operator that a trip of the NPP, or the loss of the most critical transmission line or the largest supply to the grid would result in switchyard voltages (immediate and/or long-term) below TS nominal trip setpoint value requirements (including NPP licensees using allowable value in its TSs) and would actuate plant degraded voltage protection, is the NPP offsite power system declared inoperable under the plant TSs? If not, why not?	Yes, for trip of a NMPNS unit. Site procedures contain guidance for operators to declare offsite power systems inoperable and enter Technical Specification actions when notified by the TSO of post-LOCA contingency voltage violations determined by the TSO's EMS computer system. The notifications from the TSO are made in accordance with the TSO's procedures. Other postulated contingencies on the transmission grid (e.g. loss of the most critical transmission line or the largest supply to the grid) are not used as a basis for functional determinations of offsite power since: • Such events are only postulated and have not actually occurred, • The offsite power circuits remain capable of effecting a safe shutdown and mitigating the effects of an accident, and • The GDC 17 criterion discussed in the Generic Letter is still met (i.e., the loss of NMPNS generation will not result in the loss of offsite power from the transmission network).
(b) If onsite safety-related equipment (e.g., emergency diesel generators or safety-related motors) is lost when subjected to a double sequencing	Not applicable. Onsite safety related loads (e.g. emergency diesel generators or safety related motors) will not be lost if subject to a LOCA with delayed LOOP event. The scenario of a LOCA with delayed LOOP resulting in a double sequencing event is not addressed in the NMP Unit 1 licensing basis. NMP Unit 2 is designed for the scenario of a LOCA with a delayed LOOP as described

(LOCA with delayed LOOP event) as a result of the anticipated system performance and is incapable of performing its safety functions as a result of responding to an emergency actuation signal during this condition, is the equipment considered inoperable? If not, why not?	in the Updated FSAR. As described in the response to Question #2, offsite sources are monitored to ensure that sufficient voltage will be available to minimize the potential for separation from offsite power during LOCA sequencing. If it is determined that post-LOCA voltage will not be sufficient for this case, offsite power is declared inoperable. Special operating procedures contain compensatory actions to be implemented by NMPNS under this condition.
(c) Describe your evaluation of onsite safety-related equipment to determine whether it will operate as designed during the condition described in question 3(b).	The scenario of a LOCA with delayed LOOP resulting in a double sequencing event is not addressed in NMP Unit 1 licensing basis. However, in the event a design basis LOCA should occur when switchyard voltage is inadequate, the degraded voltage relays would separate the offsite source from the safety related electrical busses as designed. In the event of a postulated LOCA with delayed LOOP, the degraded voltage relays would sense the LOOP condition whenever it occurred and initiate separation from the offsite source. Loads would be shed from the busses, the emergency diesel generators would start, and safety related loads re-sequenced back on. Safety related equipment would continue to be capable of performing its safety functions during this condition. Nine Mile Point Unit 2 is designed for the scenario of a LOCA with a delayed LOOP as described in the Updated FSAR. During a LOCA, onsite safety related loads are sequenced onto offsite power by a sequential relaying scheme. Each emergency diesel generator (EDG) starts on the LOCA signal and runs in standby mode. A subsequent LOOP will trip the offsite power supply breakers and shed loads from the emergency busses. When residual voltage decays to a pre-determined level, the EDG output breakers close and re-energize the safety busses. Safety related loads then begin to re-sequence onto onsite power after a one (1) second time delay.
(d) If the NPP licensee is notified by the TSO of other grid conditions that may impair the capability or availability of offsite power, are any plant TS action statements entered? If so, please identify them.	No. Technical Specification action statements are not entered based on identification of grid conditions that potentially impair offsite power. As described in the response to question 3(a), applicable TS action statements are only entered under actual grid conditions in which a contingent unit trip with LOCA would result in insufficient offsite voltage.
(e) If you believe your plant TSs do not require you to declare your offsite power system or safety-related equipment inoperable in any of these circumstances, explain why you believe you comply with the provisions of GDC 17 and your plant TSs, or describe what compensatory actions you intend to take to ensure that the offsite	If reduced voltage exists or is predicted based upon actual grid conditions (i.e., State Estimator), the plant response would be to declare the offsite power supply inoperable as discussed in 3(a) for post-trip contingencies. As discussed in 3(a) and (d), for all other notifications of possible impairment, the operating crew would initiate compensatory actions, but would not enter into a Technical Specification action statement.

power system and safety-related components will remain operable when switchyard voltages are degraded.	
(f) Describe if and how NPP operators are trained and tested on the compensatory actions mentioned in your answers to questions 3(a) through (e).	Licensed operator training prescribed topics include Special Operating Procedures (SOP) governing compensatory actions required in response to receipt of notifications from the TSO regarding grid conditions that impair offsite power. These SOPs address loss of offsite power and major grid disturbances. The method and standard of evaluation for each training topic is specified in the applicable lesson plan.
4. Use of criteria and methodologies to assess whether the offsite power system will remain operable following a trip of your NPP.	
(a) Do the NPP operators have any guidance or procedures in plant TS bases sections, the final safety analysis report, or plant procedures regarding situations in which the condition of plant-controlled or -monitored equipment (e.g., voltage regulators, auto tap changing transformers, capacitors, static VAR compensators, main generator voltage regulators) can adversely affect the operability of the NPP offsite power system? If so, describe how the operators are trained and tested on the guidance and procedures.	Yes. For NMPNS Unit 1, operation of the load tap changers (LTC) for the reserve station service transformers is normally automatic, as the LTCs support the voltage requirements for NMPNS Unit 1 emergency equipment. If LTCs for these transformers are operated in manual, specific tap settings are required. If LTCs for these transformers are operated in manual at other tap settings, an evaluation is required. These conditions are detailed in site operating procedures. For NMPNS Unit 2, operation of LTCs for the Scriba transformers may be in automatic or manual. Although operation in automatic is preferred, automatic operation of the LTCs is not required by NMPNS Unit 2 calculations. Therefore manual operation of the LTCs for Scriba transformers does not impact offsite power system operability, provided the LTCs have been adjusted to the proper 115 kV voltage range (between 109.25 kV and 120.75 kV). Operation of the LTCs for the NMPNS Unit 2 reserve station service transformers is required to be in automatic, as the LTCs support the voltage requirements for NMPNS Unit 2 emergency equipment. If LTCs for these transformers are operated in manual, an evaluation is required. These conditions are detailed in site operating procedures. Enabling objectives in the NMPNS AC electrical distribution lesson plan for licensed operators cover the precautions and limitations and their bases for procedures used that control operation of NMPNS AC electrical distribution system equipment. The objectives also include system startup, shutdown and off-normal sections of the applicable procedures. The method and standard of evaluation for each training topic is specified in the applicable lesson plan.
(b) If your TS bases sections, the final safety analysis report, and plant procedures do not provide guidance regarding situations in which the condition of plant-controlled or -monitored equipment can adversely affect the operability of the NPP offsite power system, explain why you believe you comply with the provisions of GDC 17	Not Applicable. Station procedures have required guidance.

and the plant TSs, or describe what actions you intend to take to provide such guidance or procedures.	
5. Performance of grid reliability evaluations as part of the maintenance risk assessments required by 10 CFR 50.65(a)(4).	
(a) Is a quantitative or qualitative grid reliability evaluation performed at your NPP as part of the maintenance risk assessment required by 10 CFR 50.65(a)(4) before performing grid-risk-sensitive maintenance activities? This includes surveillances, post-maintenance testing, and preventive and corrective maintenance that could increase the probability of a plant trip or LOOP or impact LOOP or SBO coping capability, for example, before taking a risk-significant piece of equipment (such as an EDG, a battery, a steam-driven pump, an alternate AC power source) out-of-service?	Yes. In accordance with site procedures, which implement the Maintenance Rule and NUMARC 93-01, we assess and manage the increase in risk that may result from proposed maintenance activities before performing them. Risk assessments at NMPNS include a combination of quantitative and qualitative assessments of the likelihood of the initiating event occurring. The frequencies are determined by data analysis but the likelihood is qualitatively assessed by reviewing environmental factors related to the maintenance activity. These factors include complexity of the activity, spatial relationships, training, weather and grid stress. If there are concerns over the current reliability of the power grid, that information is used to make adjustments, if necessary, to our work week risk assessment. This may result in compensatory actions based on the results of the quantitative assessment.
(b) Is grid status monitored by some means for the duration of the grid-risk-sensitive maintenance to confirm the continued validity of the risk assessment and is risk reassessed when warranted? If not, how is the risk assessed during grid-risk-sensitive maintenance?	Yes. Grid status is monitored by the TSO using the Energy Management System (EMS). When changes in grid status occur, notifications to NMPNS are made in accordance with established protocols. Emergent conditions (i.e., significant changes to conditions assumed in the original risk assessment) could change the results of a previously performed assessment. Examples include plant configuration or mode changes, additional structures, systems and components (SSCs) out of service due to failures, or significant changes in external conditions (e.g., weather or offsite power availability). When identified, the safety assessment is re-evaluated to address these changes in plant conditions on a reasonable schedule commensurate with the safety significance of the condition. Based on the results of the assessment, ongoing or planned maintenance activities may need to be suspended or rescheduled, and SSCs may need to be returned to service.

Attachment (2)

Nine Mile Point Nuclear Station Response

(c) Is there a significant variation in the stress on the grid in the vicinity of your NPP site caused by seasonal loads or maintenance activities associated with critical transmission elements? *Is there a seasonal variation (or the potential for a seasonal variation) in the LOOP frequency in the local transmission region?* *If the answer to either question is yes, discuss the time of year when the variations occur and their magnitude.*	Stress In general there is greater stress on the 115 kV system in the vicinity of NMP Unit 1 during peak loading conditions. This is usually during the peaking months of winter and summer due to the combined effects of seasonal loads and outages. There is no significant variation in stress on the 115 kV supply to NMP Unit 2 or on the 345 kV system in the vicinity of NMPNS. The NYISO Reliability Coordination Area is a summer peaking area. Due to high intra-area and inter-area power flows, it would be expected that the grid would be stressed. However, this stress is managed through facility maintenance coordination. During the summer peak season, transmission facility maintenance is avoided in June, July and August if possible. During the months that maintenance is scheduled, the schedules are managed in order to maintain operation of the bulk power system within established operating criteria. LOOP Frequency Yes. Electric Power Research Institute (EPRI) TR-1011759, dated December 2005, indicates that there is no statistically significant seasonal-regional variation in recorded LOOP events from 1997 to 2004. However, the data does show a comparatively higher probability of a LOOP occurring in the summer months in the NPCC region, the NERC reliability council applicable to NMPNS. This correlates with recent NRC publications on seasonal variations in LOOP frequency. Seasonal weighted values of grid-centered events for the NMPNS region from Table 4-6 of EPRI TR-1011759 are as follows: Spring 0.75 Summer 4 Fall - Winter 1.25
(d) Are known time-related variations in the probability of a LOOP at your plant site considered in the grid-risk-sensitive maintenance evaluation? If not, what is your basis for not considering them?	Yes. Time-related variations are considered. Nine Mile Point does adjust risk associated with grid conditions during the summer and other seasons for severe weather, grid instability, and severe sunspots. Other events (not only grid specific) outside the plant are also routinely considered. Station risk management procedures require increased controls on maintenance during the described conditions. Risk is usually not calculated solely due to changes in grid reliability. Risk due to grid reliability is assessed in conjunction with plant equipment being out of service.
(e) Do you have contacts with the TSO to determine current and anticipated grid conditions as part of the grid reliability evaluation performed before conducting grid-risk-sensitive maintenance activities?	Yes. Nine Mile Point has contacts with the TSO (National Grid) to assist in performing grid reliability evaluations before conducting grid-risk-sensitive maintenance activities. National Grid and NMPNS share a common protocol for standard communications. Both NMPNS procedures and NG procedures have similar communication forms to implement this protocol. The protocol ensures that post-trip contingency voltage issues are addressed prior to removing a transmission line from service. The TSO uses the State Estimator and CEP for evaluating requested transmission and generator scheduled outages. The TSO has the ability to take snapshots of the EMS program and uses peak load snapshots to study future requested outages. The dynamic nature of loads and active generation on the power grid make prediction of grid conditions days or weeks ahead of time uncertain. Therefore, the TSO also evaluates the effect of scheduled outages on grid conditions shortly before maintenance

	tasks commence and monitors grid conditions any time maintenance tasks are underway.
(f) Describe any formal agreement or protocol that you have with your TSO to assure that you are promptly alerted to a worsening grid condition that may emerge during a maintenance activity.	National Grid is required to notify NMPNS whenever an impairment or potentially degraded grid condition is recognized. The response provided in 1(b) lists the required notifications captured in NG's procedures. Contingencies developed through work management processes may stipulate additional notification needs associated with the individual aspect of the maintenance activity.
(g) Do you contact your TSO periodically for the duration of the grid-risk-sensitive maintenance activities?	No. The initial contact is made prior to the initiation of grid-risk-sensitive maintenance, as described in 5(e) and adverse changes to grid conditions are communicated to NMPNS as described in 5(f).
(h) If you have a formal agreement or protocol with your TSO, describe how NPP operators and maintenance personnel are trained and tested on this formal agreement or protocol.	The Licensed Operator Requalification Program ensures that, on a 2 year cycle, licensed operators are trained on major grid disturbances, loss of offsite power, and station blackout. Procedures for these conditions invoke the protocols for communication and interaction between NMPNS and the TSO. Simulator scenarios are designed to train operators to respond to various grid instabilities. Also included are discussions of how these degraded voltage conditions can affect plant equipment. Training on SOER 99-01 is specifically addressed in the Licensed Operator Requalification Training Program. Classroom training is provided on integrated risk management, on-line work activities and shutdown safety as part of the licensed operators' initial training program. The method and standard of evaluation for each training topic is specified in the applicable lesson plan. Maintenance personnel are not trained on the formal agreement or protocols. Grid related communication with the TSO is conducted through Operations and Work Management.
(i) If your grid reliability evaluation, performed as part of the maintenance risk assessment required by 10 CFR 50.65(a)(4), does not consider or rely on some arrangement for communication with the TSO, explain why you believe you comply with 10 CFR 50.65(a)(4).	Not Applicable. Nine Mile Point does rely on a communication protocol.
(j) If risk is not assessed (when warranted) based on continuing communication with the TSO throughout the duration of grid-risk-sensitive maintenance activities, explain why you believe you have effectively implemented the relevant provisions of the endorsed industry guidance associated with	Not Applicable. Risk is assessed based on continuing communications with the TSO.

the maintenance rule.	
(k) With respect to questions 5(i) and 5(j), you may, as an alternative, describe what actions you intend to take to ensure that the increase in risk that may result from proposed grid-risk-sensitive activities is assessed before and during grid-risk-sensitive maintenance activities, respectively.	Not Applicable. No alternatives are required.
6. Use of risk assessment results, including the results of grid reliability evaluations, in managing maintenance risk, as required by 10 CFR 50.65(a)(4).	
(a) Does the TSO coordinate transmission system maintenance activities that can have an impact on the NPP operation with the NPP operator?	Yes. National Grid coordinates with NMPNS on transmission system maintenance activities that can have an impact on station operation. Both NMPNS and NG procedures have processes to address coordinating transmission system maintenance activities. The process requires advanced notice and subsequent mutual agreement for planned outages to ensure grid reliability is maintained. Once equipment is switched out of service, grid status is monitored by NG using the Energy Management System (EMS).
(b) Do you coordinate NPP maintenance activities that can have an impact on the transmission system with the TSO?	Yes. Work activities on the 115 kV and 345 kV systems that have the potential to affect the operation of NMPNS as identified in site procedures are coordinated with the TSO by NMPNS. Other maintenance activities that can potentially impact the transmission system (e.g., voltage regulator maintenance), are also coordinated with the TSO. Site procedures require notifications to the TSO for limiting conditions of operation associated with off-site power systems.
(c) Do you consider and implement, if warranted, the rescheduling of grid-risk-sensitive maintenance activities (activities that could (i) increase the likelihood of a plant trip, (ii) increase LOOP probability, or (iii) reduce LOOP or SBO coping capability) under existing, imminent, or worsening degraded grid reliability conditions?	Yes. Although rescheduling is not in the Maintenance Rule definitions, the risk-informed Maintenance Rule allows many choices for NMPNS. Grid risk-sensitive maintenance is performed when on-shift NMPNS personnel conclude that the risk of the work is small compared to the safety benefit. When the maintenance work is done in response to a Technical Specification Action or Surveillance, the risk assessment is informative for sequencing tasks, but not controlling. Emergent issues with the grid are managed to maintain a high level of plant safety. At times, appropriate management may mean rescheduling activities, at other times the shift manager may order the on-shift NMPNS staff to back out of the task and restore the safety-related function of the equipment.
(d) If there is an overriding need to perform grid-risk-sensitive maintenance activities under existing or imminent conditions of degraded grid	Yes. Same response as 6(c).

reliability, or continue grid-risk-sensitive maintenance when grid conditions worsen, do you implement appropriate risk management actions? If so, describe the actions that you would take. (These actions could include alternate equipment protection and compensatory measures to limit or minimize risk).	
(e) Describe the actions associated with questions 6(a) through 6(d) above that would be taken, state whether each action is governed by documented procedures and identify the procedures, and explain why these actions are effective and will be consistently accomplished.	Nine Mile Point has procedures for evaluating the risk for all maintenance, including grid-risk-sensitive maintenance activities, control of on-line work activities and shutdown safety for offline activities. Consistent accomplishment of grid reliability evaluations is assured through use of procedures and associated training of personnel responsible to implement the processes. The associated procedures include: • GAP-OPS-117, Integrated Risk Management • GAP-PSH-03, Control of On-Line Work Activities • NIP-OUT-01, Shutdown Safety
(f) Describe how NPP operators and maintenance personnel are trained and tested to assure they can accomplish the actions described in your answers to question 6(e).	Operations personnel receive initial and, if necessary, continued training on the use of the procedures described in 6(e). This is part of the licensed operators' initial training program. The method and standard of evaluation for each training program topic is specified in the applicable lesson plan. Maintenance personnel are not trained on the procedures described in 6(e). Risk assessment of planned and on-going work is conducted through Operations and Work Management.
(g) If there is no effective coordination between the NPP operator and the TSO regarding transmission system maintenance or NPP maintenance activities, please explain why you believe you comply with the provisions of 10 CFR 50.65(a)(4).	Not Applicable. There is effective coordination between NMPNS and the TSO regarding transmission system maintenance activities.
(h) If you do not consider and effectively implement appropriate risk management actions during the conditions described above, explain why you believe you effectively addressed the	Not Applicable. As discussed in responses to questions 6(a) through 6(d), NMPNS effectively implements appropriate risk management actions.

relevant provisions of the associated NRC-endorsed industry guidance.	
(i) You may, as an alternative to questions 6(g) and 6(h) describe what actions you intend to take to ensure that the increase in risk that may result from grid-risk-sensitive maintenance activities is managed in accordance with 10 CFR 50.65(a)(4).	Not Applicable. No alternative actions are required.
7. Procedures for identifying local power sources that could be made available to resupply your plant following a LOOP event.	
(a) Briefly describe any agreement made with the TSO to identify local power sources that could be made available to re-supply power to your plant following a LOOP event.	An agreement is in place with the TSO to restore power to NMPNS as soon as possible following a blackout event. Substation operating guidelines and TSO procedures require, if a black start situation occurs, the TSO to prioritize restoration of power to the nuclear stations. Since there is no way to predict the extent and characteristics of a specific blackout, the TSO utilizes the best sources available for specific events to restore offsite power and to determine the specific power sources and paths. The TSO has many options available to restore offsite power and would not be limited to identified local power sources. New York Independent System Operator operating procedures govern prompt restoration of load within the NYISO control area. While specific generation sources are not defined, highest priority is given to restoring off-site power to nuclear plants once the power system is re-energized.
(b) Are your NPP operators trained and tested on identifying and using local power sources to resupply your plant following a LOOP event? If so, describe how.	No. In order to properly respond when offsite power sources are restored as described in the response to question 7(a), licensed operators receive classroom, practical and simulator training in the areas of partial LOOP, complete LOOP, grid instabilities, and station blackout. The method and standard of evaluation for each training topic is specified in the applicable lesson plan.
(c) If you have not established an agreement with your plant's TSO to identify local power sources that could be made available to resupply power to your plant following a LOOP event, explain why you believe you comply with the provisions of 10 CFR 50.63, or describe what actions you intend to take to establish	Not applicable. Agreements are in place as described in 7(a) above.

compliance.	
8. Maintaining SBO coping capabilities in accordance with 10 CFR 50.63.	
(a) Has your NPP experienced a total LOOP caused by grid failure since the plant's coping duration was initially determined under 10 CFR 50.63?	Yes. NMP Unit 1 and Unit 2 have each experienced one grid-related LOOP event since coping durations were initially determined under 10 CFR 50.63. Both LOOP events occurred on August 14, 2003.
(b) If so, have you reevaluated the NPP using the guidance in Table 4 of RG 1.155 to determine if your NPP should be assigned to the P3 offsite power design characteristic group?	Yes. Following the August 14, 2003 LOOP event, the station blackout coping duration was reevaluated under the station corrective action program using the guidance in Table 4 of Regulatory Guide 1.155 and NUMARC 87-00, Rev. 1.
(c) If so, what were the results of this reevaluation, and did the initially determined coping duration for the NPP need to be adjusted?	The initial coping durations for NMPNS Unit 1 and Unit 2 were prepared based on 10 CFR 50.63 and using the guidance provided in NUMARC 87-00, Rev. 1. The evaluation cited in response to question 8(b) resulted in no change to the coping durations.
(d) If your NPP has experienced a total LOOP caused by grid failure since the plant's coping duration was initially determined under 10 CFR 50.63 and has not been reevaluated using the guidance in Table 4 of RG 1.155, explain why you believe you comply with the provisions of 10 CFR 50.63 as stated above, or describe what actions you intend to take to ensure that the NPP maintains its SBO coping capabilities in accordance with 10 CFR 50.63.	Not Applicable. Station blackout coping durations were reevaluated under the station corrective action program following a grid-related LOOP event that occurred since the initial coping durations were determined under 10 CFR 50.63.
9. If you determine that any action is warranted to bring your NPP into compliance with NRC regulatory requirements, including TSs, GDC 17, 10 CFR 50.65(a)(4), 10 CFR 50.63, 10 CFR	Not Applicable. Nine Mile Point has determined that NMP Unit 1 and NMP Unit 2 are in compliance with the NRC regulatory requirements listed.

55.59 or 10 CFR 50.120, describe the schedule for implementing it.	

ATTACHMENT (3)

R.E. Ginna Nuclear Power Plant Response

Constellation Generation Group
April 3, 2006

Attachment (3)

R.E. Ginna Nuclear Power Plant Response

1. Use of protocols between the NPP licensee and the TSO, ISO, or RC/RA to assist the NPP licensee in monitoring grid conditions to determine the operability of offsite power systems under plant TS.	
(a) Do you have a formal agreement or protocol with your TSO?	Yes. R.E. Ginna Nuclear Power Plant (Ginna) does have a formal agreement with its TSO, Rochester Gas and Electric (RG&E). The agreement is documented in the Substation Operating Agreement between Ginna and Rochester Gas and Electric. Ginna does not have a formal agreement with the New York Independent System Operator (NYISO). The New York Transmission System is controlled by the Regional Transmission Operator, New York Independent System Operator (NYISO), and operated by the Local Transmission Owner's Energy Control Centers (National Grid, Con Edison, New York Power Authority and Rochester Gas & Electric-Energy East). The nuclear power plants located in the NYISO-controlled area do not communicate directly with the NYISO on transmission matters. Transmission-related communication is through the Local Transmission Owner's Energy Control Center. Ginna is in Rochester Gas and Electric's operational area.
(b) Describe any grid conditions that would trigger a notification from the TSO to the NPP licensee and if there is a time period required for the notification.	The TSO is required by the substation operating agreement between Ginna and Rochester Gas and Electric to notify Ginna whenever an impaired or potentially degraded grid condition is recognized by the TSO. Specific examples of known potentially degrading conditions identified in the agreement include: • Frequency greater than 60.1 hz or less than 59.9 hz. • Grid voltage above 123 kV or below 118 kV at the Ginna output substation. • Impending separation of the New York State Control Area transmission system. • Local problems affecting substations with Ginna output transmission lines, the output transmission lines or offsite power transmission lines. • Any disturbance local to the RG&E system that could affect grid reliability or plant operations. The occurrence of a grid condition that impacts Ginna requires prompt notification. The TSO defines prompt to be as soon as practicable. Immediate notifications are required for alarms affecting Ginna equipment, offsite power sources or unidentified entry into the Ginna output substation control room. Immediate notification is also required upon receipt of severe weather warnings or solar magnetic storm disturbances that could impact the local grid. Immediate is defined as without delay.
(c) Describe any grid conditions that would cause the NPP licensee to contact the TSO. Describe the procedures associated with such a communication. If you do not have procedures, describe how you assess grid conditions that may cause the NPP licensee to contact the TSO.	Grid conditions and status are the primary responsibility of the TSO and the NYISO. The grid parameters observable to a Ginna operator are voltage and frequency, generator reactive output and breaker status. Grid conditions that result in control room alarms for 4 kV bus voltage <70% normal and frequency <57.7 hertz would result in contact with the TSO. Other conditions that would cause the Ginna operator to contact the TSO are: • Plant conditions that require the main generator output voltage to be lowered. • Placing the main generator voltage regulator in manual control. • To verify reliability of offsite power prior to shifting offsite power alignment. • To verify grid frequency is > 59.9 hertz during restoration of a loss of power. • When adverse weather could affect grid reliability. • When assessing offsite power operability.
(d) Describe how NPP operators are trained and tested on the use of the procedures or assessing grid	Operators receive classroom and simulator training on recognition of conditions, on selecting the appropriate procedure for response, and procedure usage. They are tested via written quizzes and evaluated simulator scenarios.

conditions in question 1(c).	
(e) If you do not have a formal agreement or protocol with your TSO, describe why you believe you continue to comply with the provisions of GDC 17 as stated above, or describe what actions you intend to take to assure compliance with GDC 17.	Not applicable. Formal agreement exists.
(f) If you have an existing formal interconnection agreement or protocol that ensures adequate communication and coordination between the NPP licensee and the TSO, describe whether this agreement or protocol requires that you be promptly notified when the conditions of the surrounding grid could result in degraded voltage (i.e., below TS nominal trip setpoint value requirements; including NPP licensees using allowable value in its TSs) or LOOP after a trip of the reactor unit(s).	As previously stated, Ginna does have a formal TSO agreement. This agreement makes the TSO notifications listed in response to Question 1(b) a requirement. Ginna maintains operability curves based on pre-trip 115 kV grid voltages and reactive power being supplied by the plant. These curves are based on historical plant trip conditions and accident load conditions. Ginna procedures use the curves for determining offsite power operability. If the operability curve limits are being approached, coordination with the TSO is required to ensure curve limits are not exceeded. When unable to remain within the operability limits, the offsite power is declared inoperable. The TSO is contacted to take actions to restore offsite power to operability. Current and planned work is evaluated for postponement or suspension until grid conditions improve.
(g) Describe the low switchyard voltage conditions that would initiate operation of plant degraded voltage protection.	The Ginna offsite power is supplied by two medium voltage distribution circuits that have voltage regulating transformers. The plant has the ability to configure these offsite supplies such that one or both provide power to the plant. Actuation of the plant degraded voltage protection occurs when the grid system voltage is not adequate to maintain the safeguards (safety-related) bus voltage above the degraded voltage relay voltage and time delay setpoints at any given plant load condition. Plant analysis has evaluated the minimum switchyard voltage requirements for accident mitigation conditions. Ginna procedures contain offsite power operability curves that are based on pre-trip 115 kV grid voltages and reactive power being supplied by the plant. These curves were developed using historical plant trip conditions and Ginna load flow design analysis minimum acceptable switchyard voltage. The load flow design analysis determined the switchyard 115 kV voltage during accident loading conditions following a Ginna trip must be no lower than 111.8 kV to prevent initiation of degraded voltage protection. If post trip switchyard voltage falls below this level and 480 volt emergency bus voltage

	reaches the degraded relay dropout setpoints, the emergency busses are transferred to the onsite emergency diesel generators. The minimum acceptable 115 kV voltage is based on the offsite power being supplied from the weaker of the two offsite sources. If the operability curve limits are being approached, coordination with the TSO is required to ensure curve limits are not exceeded. When unable to remain within the operability limits, offsite power is declared inoperable and the TSO is contacted to take actions to restore offsite power to operability. Current and planned work is evaluated for postponement or suspension until grid conditions improve.
2. Use of criteria and methodologies to assess whether the offsite power system will become inoperable as a result of a trip of your NPP.	
(a) Does your NPP's TSO use any analysis tools, an online analytical transmission system studies program, or other equivalent predictive methods to determine the grid conditions that would make the NPP offsite power system inoperable during various contingencies? If available to you, please provide a brief description of the analysis tool that is used by the TSO.	No. The TSO does not have an analysis tool to predict grid conditions that would make the Ginna offsite power system inoperable.
(b) Does your NPP's TSO use an analysis tool as the basis for notifying the NPP licensee when such a condition is identified? If not, how does the TSO determine if conditions on the grid warrant NPP licensee notification?	The TSO does not use an analysis tool as the basis. The TSO makes notifications based on the conditions listed in Question 1(b).
(c) If your TSO uses an analysis tool, would the analysis tool identify a condition in which a trip of the NPP would result in switchyard voltages (immediate and/or long-term) falling below TS nominal trip setpoint value requirements (including NPP licensees using	The TSO does not have an analysis tool. Ginna maintains operability curves based on pre-trip 115 kV grid voltages and reactive power being supplied by the plant. These curves are based on historical plant trip conditions and accident load conditions. Ginna procedures use the curves for determining offsite power operability. If the operability curve limits are being approached, coordination with the TSO is required to ensure curve limits are not exceeded. When unable to remain within the operability limits, offsite power is declared inoperable and the TSO is contacted to take actions to restore offsite power to operability. Current and planned work is evaluated for postponement or suspension until grid conditions improve.

allowable value in its TSs) and consequent actuation of plant degraded voltage protection? If not, discuss how such a condition would be identified on the grid.	
(d) If your TSO uses an analysis tool, how frequently does the analysis tool program update?	The TSO does not use an analysis tool.
(e) Provide details of analysis tool-identified contingency conditions that would trigger an NPP licensee notification from the TSO.	The TSO does not use an analysis tool.
(f) If an interface agreement exists between the TSO and the NPP licensee, does it require that the NPP licensee be notified of periods when the TSO is unable to determine if offsite power voltage and capacity could be inadequate? If so, how does the NPP licensee determine that the offsite power would remain operable when such a notification is received?	The TSO does not monitor the Ginna offsite power voltage and capacity adequacy. Ginna maintains operability curves based on pre-trip 115 kV grid voltages and reactive power being supplied by the plant. These curves are based on historical plant trip conditions and accident load conditions. Ginna procedures use the curves for determining offsite power operability. If the operability curve limits are being approached, coordination with the TSO is required to ensure curve limits are not exceeded. When unable to remain within the operability limits, offsite power is declared inoperable and the TSO is contacted to take actions to restore offsite power to operability. Current and planned work is evaluated for postponement or suspension until grid conditions improve.
(g) After an unscheduled inadvertent trip of the NPP, are the resultant switchyard voltages verified by procedure to be bounded by the voltages predicted by the analysis tool?	The TSO does not use an analysis tool. There is no validation by procedure for post-event analysis to check accuracy of the Ginna operability curves.
(h) If an analysis tool is not available to the NPP licensee's TSO, do you know if there are any plans for the TSO to obtain one? If	The TSO is developing a contingency analysis tool. It is expected to be available in the second quarter of 2006.

so, when?	
(i) If an analysis tool is not available, does your TSO perform periodic studies to verify that adequate offsite power capability, including adequate NPP post-trip switchyard voltages (immediate and/or long-term), will be available to the NPP licensee over the projected timeframe of the study?	The TSO does not perform periodic studies for Ginna. The TSO does perform periodic stability studies, which include a loss of Ginna. However, these studies do not verify the adequacy of the post-trip switchyard voltages.
(a) Are the key assumptions and parameters of these periodic studies translated into TSO guidance to ensure that the transmission system is operated within the bounds of the analyses?	Not Applicable.
(b) If the bounds of the analyses are exceeded, does this condition trigger the notification provisions discussed in question 1 above?	Not Applicable.
(j) If your TSO does not use, or you do not have access to the results of an analysis tool, or your TSO does not perform and make available to you periodic studies that determine the adequacy of offsite power capability, please describe why you believe you comply with the provisions of GDC 17 as stated above, or describe what compensatory actions you intend to take to ensure that the	Compliance with GDC-17, as supported by NUREG 0800, is solely based on "each [offsite power] circuit has been sized with sufficient capacity to supply all connected loads" and "results of the ... grid stability analysis indicated that loss of the largest generating capacity being supplied to the grid, loss of largest load from the grid, loss of the most critical transmission line, or loss of the unit itself will not cause grid instability." As confirmed in the generic letter, definitions for a given disturbance stability equates to maintaining a state of equilibrium, and not a specific voltage. However, the TSO is presently required by the Northeast Power Coordinating Council (NPCC) to perform periodic studies to ensure compliance with their grid stability criteria and planning standards. These criteria include limits on the maximum allowable voltage deviation and duration of transients for a given grid disturbance. This provides additional Ginna offsite power assurance beyond that required by GDC-17. Ginna maintains operability curves based on pre-trip 115 kV grid voltages and reactive power being supplied by the plant. These curves are based on historical plant trip conditions and accident load conditions. Ginna procedures use the curves for determining offsite power operability. If the operability curve limits are being approached, coordination with the TSO is required to ensure curve limits are not exceeded. When unable to remain within the operability limits, offsite power is declared

offsite power system will be sufficiently reliable and remain operable with high probability following a trip of your NPP.	inoperable and the TSO is contacted to take actions to restore offsite power to operability. Current and planned work is evaluated for postponement or suspension until grid conditions improve.
3. Use of criteria and methodologies to assess whether the NPP's offsite power system and safety-related components will remain operable when switchyard voltages are inadequate.	
(a) If the TSO notifies the NPP operator that a trip of the NPP, or the loss of the most critical transmission line or the largest supply to the grid would result in switchyard voltages (immediate and/or long-term) below TS nominal trip setpoint value requirements (including NPP licensees using allowable value in its TSs) and would actuate plant degraded voltage protection, is the NPP offsite power system declared inoperable under the plant TSs? If not, why not?	The TSO does not have an analysis tool. Ginna maintains operability curves based on pre-trip 115 kV grid voltages and reactive power being supplied by the plant. These curves are based on historical plant trip conditions and accident load conditions. Ginna procedures use the curves for determining offsite power operability. If the operability curve limits are being approached, coordination with the TSO is required to ensure curve limits are not exceeded. When unable to remain within the operability limits, offsite power is declared inoperable and the TSO is contacted to take actions to restore offsite power to operability. Current and planned work is evaluated for postponement or suspension until grid conditions improve.
(b) If onsite safety-related equipment (e.g., emergency diesel generators or safety-related motors) is lost when subjected to a double sequencing (LOCA with delayed LOOP event) as a result of the anticipated system performance and is incapable of performing its safety functions as a result of responding to an emergency actuation signal during this condition, is the equipment considered inoperable? If not, why not?	Based on the scenario described, we do not anticipate the loss of any system performance or safety function other than the loss of the offsite AC power supply. We do not believe equipment would fail and be incapable of meeting its safety function as a result of this scenario. A LOCA with delayed LOOP event is outside the Ginna licensing basis. If switchyard voltages are inadequate, action is taken by the TSO to restore system voltages to nominal values. In the unlikely event a LOCA should occur when switchyard voltages are inadequate, the degraded voltage relays would separate the offsite source from the plant electrical system as designed. In the event of a postulated LOCA with delayed LOOP, the degraded voltage relays remain connected to the plant safety busses, and would sense the LOOP condition whenever it occurred. After actuation of the relays, all loads would be shed from the busses and the safety loads would be sequenced on to the diesel generators. Required safety equipment would continue to be capable of performing its safety function during this condition.

Attachment (3)

R.E. Ginna Nuclear Power Plant Response

(c) Describe your evaluation of onsite safety-related equipment to determine whether it will operate as designed during the condition described in question 3(b).	Since the scenario is outside the Ginna design and license basis, there is no formal evaluation of an event as described in question 3(b). The following is based on a review of the applicable design documents: In the event of a LOCA condition without a LOOP, safety loads would be sequenced on. Since the degraded voltage relays remain connected to the safety busses, they would initiate a load shed of the safety busses on a LOOP condition, causing the safety busses to separate from the offsite source and, after a time delay, the diesel generator would be connected to the safety busses and safety loads sequenced back on to the safety busses.
(d) If the NPP licensee is notified by the TSO of other grid conditions that may impair the capability or availability of offsite power, are any plant TS action statements entered? If so, please identify them.	No. Technical Specifications are not entered for grid conditions that might occur. The Ginna operator declares offsite power inoperable and enters the appropriate Technical Specification Action when the operability curves described in question 2c are not met. Postulated contingencies on the transmission grid are not used as a basis for operability determinations since: • Such events are only postulated and have not actually occurred, • The offsite power circuits remain capable of effecting a safe shutdown and mitigating the effects of an accident, and • The GDC 17 criterion discussed in Generic Letter 2006-02 is still met, (i.e., loss of power from the transmission network would not occur as a result of loss of power generated by Ginna).
(e) If you believe your plant TSs do not require you to declare your offsite power system or safety-related equipment inoperable in any of these circumstances, explain why you believe you comply with the provisions of GDC 17 and your plant TSs, or describe what compensatory actions you intend to take to ensure that the offsite power system and safety-related components will remain operable when switchyard voltages are degraded.	Ginna procedures that contain the operability curves described in response to question 3.a. require plant operators to declare the offsite power system inoperable if switchyard real-time conditions are inadequate.
(f) Describe if and how NPP operators are trained and tested on the compensatory actions mentioned in your answers to questions 3(a) through (e).	When the operability curves were first implemented, an initial read and acknowledge training document was developed. This was subsequently followed by simulator training that required the operators to assess Ginna reactive output versus grid voltage to determine offsite power operability. The operability curves are in a procedure that provides guidance on operator actions (e.g. entry into Technical Specifications, TSO contact and offsite power lineup changes). Operators receive classroom and simulator training on recognition of conditions, selecting the appropriate procedure for response, and procedure usage. They are tested

	through written quizzes and evaluated simulator scenarios.
4. Use of criteria and methodologies to assess whether the offsite power system will remain operable following a trip of your NPP.	
(a) Do the NPP operators have any guidance or procedures in plant TS bases sections, the final safety analysis report, or plant procedures regarding situations in which the condition of plant-controlled or -monitored equipment (e.g., voltage regulators, auto tap changing transformers, capacitors, static VAR compensators, main generator voltage regulators) can adversely affect the operability of the NPP offsite power system? If so, describe how the operators are trained and tested on the guidance and procedures.	Yes. Procedural guidance for reactive output versus voltage to ensure operability of safeguards (safety related) busses following a Ginna trip is provided. Guidance is also provided to declare an offsite power source inoperable if its voltage regulator is inoperable. Initial training was conducted on associated procedures and continuing training incorporates voltage regulator inoperability in relation to offsite power source operability.
(b) If your TS bases sections, the final safety analysis report, and plant procedures do not provide guidance regarding situations in which the condition of plant-controlled or -monitored equipment can adversely affect the operability of the NPP offsite power system, explain why you believe you comply with the provisions of GDC 17 and the plant TSs, or describe what actions you intend to take to provide such guidance or procedures.	Not Applicable. Station procedures have required guidance.

5. Performance of grid reliability evaluations as part of the maintenance risk assessments required by 10 CFR 50.65(a)(4).	
(a) Is a quantitative or qualitative grid reliability evaluation performed at your NPP as part of the maintenance risk assessment required by 10 CFR 50.65(a)(4) before performing grid-risk-sensitive maintenance activities? This includes surveillances, post-maintenance testing, and preventive and corrective maintenance that could increase the probability of a plant trip or LOOP or impact LOOP or SBO coping capability, for example, before taking a risk-significant piece of equipment (such as an EDG, a battery, a steam-driven pump, an alternate AC power source) out-of-service?	Yes. In accordance with site procedures which implement the Maintenance Rule and NUMARC 93-01, we assess and manage the increase in risk that may result from proposed maintenance activities before performing them. Risk assessments at Ginna include a combination of quantitative and qualitative assessments of the likelihood of the initiating event occurring. The frequencies are determined by data analysis but the likelihood is qualitatively assessed by reviewing environmental factors related to the maintenance activity. These factors include complexity of the activity, spatial relationships, training, weather and grid stress. If there are concerns over the current reliability of the power grid, that information is used to make adjustments, if necessary, to our work week risk assessment. This may result in compensatory actions based on the results of the quantitative assessment. Site operating instructions provide criteria before taking grid-risk-sensitive equipment out of service for maintenance, which is an amplification of the Ginna Technical Specifications and Technical Specification Bases.
(b) Is grid status monitored by some means for the duration of the grid-risk-sensitive maintenance to confirm the continued validity of the risk assessment and is risk reassessed when warranted? If not, how is the risk assessed during grid-risk-sensitive maintenance?	The Ginna Control Room will be notified by RG&E Energy Operations if NYISO declares an "Alert State" for conditions that have the potential to affect Ginna operations. Procedures require that if, due to environmental or plant activities, there is a higher than usual risk of an initiating event (such as a trip, station blackout, loss of off-site power, or turbine trip), SSCs that perform key system functions following the event (such as off-site power, diesel generators, safety injection, auxiliary feedwater, or batteries) should not be removed from service or, if already removed from service, returned to available status as soon as practical.
(c) Is there a significant variation in the stress on the grid in the vicinity of your NPP site caused by seasonal loads or maintenance activities associated with critical	Per the TSO, there are seasonal variations in the grid loading capability, load and maintenance. However, they do not result in significant grid stress. There is no seasonal variation in the LOOP frequency in the local transmission region. The NYISO Reliability Coordination Area is a summer peaking area. Due to higher intra-area and inter-area power flows during the summer, it would be expected that the grid would be more stressed than in other seasons. However, this additional stress is managed through facility maintenance coordination. Transmission facility maintenance is avoided during the summer peak season, if possible. During the months that

transmission elements? *Is there a seasonal variation (or the potential for a seasonal variation) in the LOOP frequency in the local transmission region?* *If the answer to either question is yes, discuss the time of year when the variations occur and their magnitude.*	maintenance is scheduled, the schedules are managed in order to maintain operation of the bulk power system within established operating criteria. Electric Power Research Institute (EPRI) TR-1011759, dated December 2005, indicates there is no statistically significant seasonal-regional variation in recorded LOOP events from 1997 to 2004. However, the data does show a comparatively higher probability of a LOOP occurring in the summer months in the NPCC region, the NERC reliability council applicable to Ginna Station. This correlates with recent NRC publications on seasonal variations in LOOP frequency.
(d) Are known time-related variations in the probability of a LOOP at your plant site considered in the grid-risk-sensitive maintenance evaluation? If not, what is your basis for not considering them?	Yes. As part of Ginna's configuration risk management program, time related variations (e.g., grid instability, severe weather) are sometimes (during hot weather or upon notification from the TSO) considered a configuration change. They are sometimes explicitly evaluated. Severe weather is routinely considered within Ginna's Equipment Out of Service (EOOS) model. Switchyard maintenance and test activities are routinely considered within Ginna's EOOS model. Other events (not only grid specific) outside the plant are considered separately under heightened risk conditions. The Ginna EOOS Program procedures require increased controls on maintenance during the described conditions. Risk is usually not calculated solely due to changes in grid reliability (i.e., assessed in conjunction with plant equipment being out of service). Thus, the risk assessment for the purposes of 10CFR50.65(a)(4) does not vary the LOOP frequency strictly as a function of "time-related" issues.
(e) Do you have contacts with the TSO to determine current and anticipated grid conditions as part of the grid reliability evaluation performed before conducting grid-risk-sensitive maintenance activities?	Yes. Procedures require that the TSO is contacted prior to grid-risk-sensitive maintenance activities. The dynamic nature of loads and active generation on the power grid make prediction of grid conditions days or weeks ahead of time uncertain. Therefore, the TSO also evaluates the effect of scheduled outages on grid conditions shortly before maintenance tasks commence and monitors grid conditions any time maintenance tasks are underway.
(f) Describe any formal agreement or protocol that you have with your TSO to assure that you are promptly alerted to a worsening grid condition that may emerge during a maintenance activity.	The Substation Operating Agreement between Ginna and Rochester Gas and Electric requires the TSO to promptly notify Ginna should emergent events or conditions threaten grid stability or reliability. Notification is made whether or not plant maintenance is on-going. See response to question 1(b).
(g) Do you contact your TSO periodically for the duration of the grid-risk-sensitive maintenance	No. The initial contact is made prior to the initiation of grid-risk-sensitive maintenance, as described in 5(e) and adverse changes to grid conditions are communicated to Ginna as described in 5(f).

activities?	
(h) If you have a formal agreement or protocol with your TSO, describe how NPP operators and maintenance personnel are trained and tested on this formal agreement or protocol.	Ginna operators are trained on major grid disturbances, loss of offsite power and station blackout procedures. These procedures invoke the protocols for communication between Ginna and the TSO. Simulator scenarios are designed to test operator response to various grid instabilities. Maintenance personnel are not trained on the formal agreement or protocols. Grid related communication with the TSO is conducted through Operations or Work Management.
(i) If your grid reliability evaluation, performed as part of the maintenance risk assessment required by 10 CFR 50.65(a)(4), does not consider or rely on some arrangement for communication with the TSO, explain why you believe you comply with 10 CFR 50.65(a)(4).	Not Applicable. Ginna does rely on a communications protocol.
(j) If risk is not assessed (when warranted) based on continuing communication with the TSO throughout the duration of grid-risk-sensitive maintenance activities, explain why you believe you have effectively implemented the relevant provisions of the endorsed industry guidance associated with the maintenance rule.	Not Applicable. Risk is assessed based on continuing communications with the TSO.
(k) With respect to questions 5(i) and 5(j), you may, as an alternative, describe what actions you intend to take to ensure that the increase in risk that may result from proposed grid-risk-sensitive activities is	Not Applicable. No alternatives are required.

assessed before and during grid-risk-sensitive maintenance activities, respectively.	
6. Use of risk assessment results, including the results of grid reliability evaluations, in managing maintenance risk, as required by 10 CFR 50.65(a)(4).	
(a) Does the TSO coordinate transmission system maintenance activities that can have an impact on the NPP operation with the NPP operator?	Yes. The Substation Operating Agreement between Ginna and Rochester Gas and Electric (TSO) requires a 12 week review and coordination of planned line outages and substation maintenance activities that could affect Ginna. Activities are reviewed again 7 days prior the planned work. Ginna is notified at least 15 minutes prior to commencement of planned work.
(b) Do you coordinate NPP maintenance activities that can have an impact on the transmission system with the TSO?	Yes. Per the Substation Operating Agreement between RG&E and Ginna, Ginna coordinates maintenance that could affect offsite power circuits.
(c) Do you consider and implement, if warranted, the rescheduling of grid-risk-sensitive maintenance activities (activities that could (i) increase the likelihood of a plant trip, (ii) increase LOOP probability, or (iii) reduce LOOP or SBO coping capability) under existing, imminent, or worsening degraded grid reliability conditions?	Yes. Although rescheduling is not in the Maintenance Rule definitions, the risk-informed Maintenance Rule allows many choices for Ginna. Maintenance that has an associated trip risk is performed when the on-shift Ginna personnel conclude that the risk of the work is small compared to the safety benefit. When the maintenance work is done in response to a Technical Specification Action or Surveillance, the risk assessment is informative for sequencing tasks, but not controlling. Maintenance that has an associated trip risk would be activities such as: • RPS calibrations, • ATWS, • CRD testing, • Main turbine control testing or • Switchyard breaker cycling. Emergent issues with the grid are managed to maintain a high level of plant safety. At times, appropriate management means rescheduling activities, at other times the Shift Manager will order the on-shift Ginna staff to back out of the task and restore the safety-related function of the equipment.
(d) If there is an overriding need to perform grid-risk-sensitive maintenance activities under existing or imminent conditions of degraded grid reliability, or continue grid-risk-sensitive maintenance when grid conditions worsen, do you implement appropriate risk management actions? If so,	Yes. Proceduralized risk management actions that are considered include: • Discussing planned maintenance activities with the operating shift and obtaining operator awareness and approval of planned evolution. • Conducting a pre-job briefing of maintenance personnel. • Obtaining plant management approval of the proposed activity. • Reducing the duration of maintenance activity by pre-staging parts, walking down maintenance activity prior to conducting maintenance, performing maintenance around the clock, establishing contingency plan to restore out-of-service equipment rapidly, if needed. • Minimizing magnitude of risk increase by minimizing other work in areas that could affect initiators (such as reactor protective system equipment areas, switchyard, diesel generator rooms, relay room) to decrease the frequency of initiating events that are mitigated by the safety function served by the out-of-service SSC.

describe the actions that you would take. (These actions could include alternate equipment protection and compensatory measures to limit or minimize risk).	
(e) Describe the actions associated with questions 6(a) through 6(d) above that would be taken, state whether each action is governed by documented procedures and identify the procedures, and explain why these actions are effective and will be consistently accomplished.	Procedures for Integrated Work Schedule, Integrated Work Schedule Risk Management, and 10 CFR 50.65 (a)(4) Program, govern the actions identified. Action effectiveness and implementation are accomplished through procedure adherence. The associated procedures include: • IP-PSH-1, Integrated Work Schedule • IP-PSH-2, Integrated Work Schedule Risk Management • IP-REL-5, 10CFR50.65(a)(4) Program
(f) Describe how NPP operators and maintenance personnel are trained and tested to assure they can accomplish the actions described in your answers to question 6(e).	Operations personnel receive initial and, if necessary, continued training on the use of the procedures described in 6(e). This is part of the licensed operators' initial training program. The method and standard of evaluation for each training program topic is specified in the applicable lesson plan. Maintenance personnel are not trained on the procedures described in 6(e). Risk assessment of planned and on-going work is conducted through Operations and Work Management.
(g) If there is no effective coordination between the NPP operator and the TSO regarding transmission system maintenance or NPP maintenance activities, please explain why you believe you comply with the provisions of 10 CFR 50.65(a)(4).	Not Applicable. There is effective coordination between Ginna and the TSO regarding maintenance activities.
(h) If you do not consider and effectively implement appropriate risk management actions during the conditions described above, explain why you believe you effectively	Not Applicable. As discussed in responses to questions 6(a) through 6(d), Ginna effectively implements appropriate risk management actions.

addressed the relevant provisions of the associated NRC-endorsed industry guidance.	
(i) You may, as an alternative to questions 6(g) and 6(h) describe what actions you intend to take to ensure that the increase in risk that may result from grid-risk-sensitive maintenance activities is managed in accordance with 10 CFR 50.65(a)(4).	Not Applicable. No alternative actions are required.
7. Procedures for identifying local power sources that could be made available to resupply your plant following a LOOP event.	
(a) Briefly describe any agreement made with the TSO to identify local power sources that could be made available to re-supply power to your plant following a LOOP event.	Ginna does not have an agreement for use of local power supplies to restore power. The TSO maintains procedures for black start restoration of power to Ginna in accordance with the Interconnection Agreement Between Ginna and Rochester Gas and Electric, which states the TSO shall have written procedures for prompt restoration of offsite power to Ginna. This is in tandem with the New York ISO bulk power restoration plan for restoring offsite power to nuclear units.
(b) Are your NPP operators trained and tested on identifying and using local power sources to resupply your plant following a LOOP event? If so, describe how.	No. As described above Ginna does not have an agreement for use of local power supplies to restore power. However, offsite power restoration procedures exist at Ginna and operators are trained and tested on them.
(c) If you have not established an agreement with your plant's TSO to identify local power sources that could be made available to resupply power to your plant following a LOOP event, explain why you believe you comply with the provisions of 10 CFR 50.63, or describe what actions you intend to take to establish compliance.	Not applicable. Agreements are in place as described in 7(a) above.

Attachment (3)

R.E. Ginna Nuclear Power Plant Response

8. Maintaining SBO coping capabilities in accordance with 10 CFR 50.63	
(a) Has your NPP experienced a total LOOP caused by grid failure since the plant's coping duration was initially determined under 10 CFR 50.63?	Ginna has not experienced a total LOOP since the plant's coping duration was initially determined under 10 CFR 50.63.
(b) If so, have you reevaluated the NPP using the guidance in Table 4 of RG 1.155 to determine if your NPP should be assigned to the P3 offsite power design characteristic group?	Not Applicable. See the response to 8(a).
(c) If so, what were the results of this reevaluation, and did the initially determined coping duration for the NPP need to be adjusted?	Not Applicable. See the response to 8(a).
(d) If your NPP has experienced a total LOOP caused by grid failure since the plant's coping duration was initially determined under 10 CFR 50.63 and has not been reevaluated using the guidance in Table 4 of RG 1.155, explain why you believe you comply with the provisions of 10 CFR 50.63 as stated above, or describe what actions you intend to take to ensure that the NPP maintains its SBO coping capabilities in accordance with 10 CFR 50.63.	Not Applicable. See the response to 8(a).
9. If you determine that any action is warranted to bring your NPP into compliance with NRC	Ginna has determined no actions are warranted to bring the site into compliance with NRC regulatory requirements.

regulatory requirements, including TSs, GDC 17, 10 CFR 50.65(a)(4), 10 CFR 50.63, 10 CFR 55.59 or 10 CFR 50.120, describe the schedule for implementing it.	