ATTACHMENT I TO IPN-99-061

PROPOSED CHANGE TO THE TECHNICAL SPECIFICATION REGARDING ALLOWED OUTAGE TIME ASSOCIATED WITH ONE DIESEL GENERATOR OR ANY DIESEL FUEL OIL SYSTEM

Affected Technical Specification page:

3.7-2

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and is in addition to the fuel requirements for other nuclear units on the site.

6. Three batteries plus three chargers and the D.C. distribution systems operable.

7. No more than one 120 volt A.C. Instrument Bus on the backup power supply.

B. The requirements of 3.7.A may be modified to allow any one of the following power supplies to be inoperable at any one time.

1. One diesel or any diesel fuel oil system or a diesel and its associated fuel oil system may be inoperable for up to 72 hours* provided the 138 KV and the 13.8 KV sources of offsite power are available, and the engineered safety features associated with the remaining diesel generator buses are operable. If the inoperable diesel generator became inoperable due to any cause other than preplanned maintenance or testing, then within 24 hours, either:

   a. Determine by evaluation, that the remaining operable diesel generators are not inoperable due to common-cause failure.

   OR

   b. Verify by testing, that the remaining diesel generators are operable.

2. The 138 KV or the 13.8 KV sources of power may be inoperable for 48 hours provided the three diesel generators are operable. This operation may be extended beyond 48 hours provided the failure is reported to the NRC within the 48 hour period with an outline of the plans for restoration of offsite power and NRC approval is granted.

*32 diesel generator fuel oil storage tank may be inoperable and the 32 diesel generator may be declared technically inoperable, but available and capable of automatic start, for up to 7 days, one-time if needed, during 1999 and prior to Refueling Outage RO-10. This condition may only be invoked to inspect/repair the 32 diesel fuel oil storage tank if deemed necessary based on concerns with water in-leakage. The following additional requirements shall also be met to invoke this extended one-time allowed outage time: (1) performance of offsite power source switching or maintenance evolutions for technical specification required offsite power sources shall not be scheduled during this 32 FOST outage, and (2) this 32 FOST outage shall not be scheduled during predicted severe weather.

ATTACHMENT II TO IPN-99-061

SAFETY EVALUATION FOR PROPOSED CHANGE TO THE TECHNICAL SPECIFICATION REGARDING ALLOWED OUTAGE TIME ASSOCIATED WITH ONE DIESEL GENERATOR OR ANY DIESEL FUEL OIL SYSTEM

NEW YORK POWER AUTHORITY
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I. Description of Proposed Change

This application proposes an amendment to the Indian Point 3 (IP3) Technical Specification (TS) to revise TS Limiting Condition for Operation (LCO) 3.7.B.1 to provide a one-time 7 day allowed outage time (AOT) for the purpose of performing corrective maintenance/repairs on the 32 Emergency Diesel Generator (EDG) Fuel Oil Storage Tank (FOST). TS 3.7.B.1 presently allows 72 hours for one EDG and/or EDG fuel oil system to be inoperable when above cold shutdown, provided that offsite power sources are available, Engineered Safety Features (ESF) associated with the remaining EDGs are operable and the remaining EDGs are operable. Included within this TS change is the requirement to maintain the 32 EDG available and capable of automatic start during this proposed AOT, since the 32 fuel oil day tank can be filled from the 31 and 33 FOSTs. Several additional administrative requirements are added into this proposed one-time change to minimize risk in losing offsite power sources including: (1) not scheduling performance of switching or maintenance of TS required 13.8KV and 138 kV offsite power sources during this 32 FOST outage time and (2) not scheduling this extended allowed outage time for the 32 FOST during predicted severe weather. This potential FOST corrective maintenance could extend beyond 72 hours and take up to 7 days to complete. This change will not affect any other parts of the TS and would only be applicable for the specific instance of a one-time 32 EDG FOST repair and restoration, if needed, during 1999 and only prior to the start of Refueling Outage, RO-10.

II. Purpose of Proposed Change

Because the 32 EDG FOST has been determined to have intermittent water intrusion, it may need to be opened, drained, repaired and tested if New York Power Authority (the Authority) deems that repairs are required in connection with water in-leakage prior to the start of RO-10. This TS change would allow addressing potential concerns with water in-leakage to the 32 EDG FOST where tank repair is considered prudent or necessary prior to the start of RO-10. This repair is currently scheduled as part of the present RO-10 outage scope. The proposed AOT extension would enable the Authority to continue operation of IP3 and avoid an unnecessary shutdown in the months before RO-10 begins, should tank repair be deemed necessary.

III. Safety Implication of Proposed Changes

In March 1998 water was found in the 32 EDG FOST during routine chemistry sampling. The fuel oil in this tank was determined to be in-specification and the water was subsequently pumped out. In October 1998, water was again found in the 32 EDG FOST during routine chemistry sampling. In both instances, Deviation Event Reports (DERs) were written. A formal action plan was prepared in November 1998 to pursue permanent resolution to the water in-leakage of this FOST.

This action plan included, among other items, additional sealing of the penetrations on the top of the tank as well as increasing the frequency of fuel oil sampling as required. Provisions in this Action Plan also call for on-line repair of this tank if deemed necessary in connection with in-leakage prior to RO-10. This FOST planned inspection and repair, as scheduled in the RO-10 work window for the 32 EDG, would exceed the present AOT of 72 hours. However, this corrective maintenance is expected to be able to be completed within a 7-day period. Although this tank, the fuel oil system and the associated 32 EDG are presently considered operable based upon in-specification FOST capacity and bulk chemistry samples, this situation could degrade. This could subsequently cause the fuel oil system for this EDG to become inoperable with an attendant plant shutdown probably needed for tank repair, since the expected repair will likely extend beyond 72 hours, from opening the tank through final system restoration testing. There has been no water in-leakage observed since October 1998. Besides the normal monthly FOST water sampling, additional samples are to be taken, as required, in the event of excessive precipitation, such as heavy rains.

The Fuel Oil System of the 3 EDGs at IP3 is designed to provide individual FOSTs for each of the EDGs. These individual, underground FOSTs are each equipped with a single vertical fuel oil transfer pump that discharges oil into either of two headers, normal and emergency, according to the manual valving arrangement selected. Both of these headers connect to 175-gallon fuel oil day tanks with one day tank dedicated to each of the three diesel engines. When the associated day tank level drops to 90%, the day tank inlet valves open. Upon decrease in level in any one of the three day tanks to the 65 percent level, an automatic start of the respective fuel oil transfer pump for that day tank would occur. Since each fuel oil transfer pump is capable of supplying fuel oil to all three EDGs via their respective day tanks, this arrangement assures the availability of fuel oil to each EDG. As per the IP3 Final Safety Analysis Report (FSAR), approximately 12,012 gallons of fuel oil (11,782 in storage tanks and 230 in day tanks) is available assuming the unlikely event that one EDG FOST is unavailable. This capacity is sufficient to operate two EDGs at minimum safeguards for at least 48 hours. An additional minimum on-site storage of 30,026 gallons is necessary to assure continuous operation of two EDGs at minimum safeguards load for a total of 168 hours. This reserve is in addition to the storage requirements for other plants at the site.

For the purposes of this 7-day repair of the 32 EDG FOST, the 32 EDG would be considered available, although declared inoperable and aligned for automatic start capability. This is because, although its respective, associated FOST and fuel oil transfer pump are not available for the term of this corrective maintenance, the 32 EDG is able to have its fuel oil day tank supplied with fuel oil from another FOST (either 31 or 33) via the normal or emergency fuel oil supply headers. As a further backup, If needed, operator action can be utilized to supply the 32 EDG fuel oil day tank from another EDG FOST via existing System Operating Procedure (SOP) EL-1, "Diesel Generator Operation". The present design of the EDG fuel oil system as well as SOP-EL-1 operator manual action allows the 32 EDG to be available in the event there is a need for its use.

The two remaining FOSTs are designed to supply fuel oil to all 3 EDGs via the fuel oil supply headers (one via normal header and one via the emergency header) to each of the three EDG fuel oil day tanks. In doing this, both the 31 and 33 EDG FOSTs being initially filled with at least 6671 gallons of fuel oil, have the ability to supply all 3 EDGs.

By maintaining the 32 EDG available, additional backup support is provided during this extended AOT, if for some reason one of the remaining 2 operable EDGs (31 and 33) do not start and load as required in response to an initiation signal. To compensate for three EDGs starting and running, in case of a extended DBA requiring their actuation, with two underground FOSTs (31 and 33), additional fuel oil would be required within the 48 hours and 168 hours design bases required time frames to assure continuous operation of two EDGs at minimum safeguards loads. This would require IP3 to closely monitor EDG fuel consumption and move needed additional fuel in the required time frame to ensure continued EDG operation to support minimum shutdown loads as necessary. This additional fuel, if needed, would be transported to the installed, underground EDG FOSTs by truck. Administrative controls, such as Indian Point 2/3 Memorandum of Understanding No.7, "Rules Governing The Maintenance And Use Of A Dedicated (By Consolidated Edison For The Power Authority) Diesel Fuel (No. 2) Supply" and IP3 operations procedure SOP-EL-9, "Filling The Diesel Fuel Oil Storage Tanks", are in place to assist in obtaining the necessary additional TS required fuel oil of 30,026 gallons from other normal supply tanks on the Indian Point site or at the Buchanan Substation. Further, additional fuel oil (beyond the TS required amounts) could also be provided from other Indian Point site/Buchanan Substation storage locations (30,000 and 200,000 gallon seismic class III tanks) or from locally available sources, where about 25,000 gallons can be delivered on a one or two day notice. Finally, additional fuel oil supplies are maintained in the New Rochelle-Mount Vernon area (about 40 miles from the site). This New Rochelle-Mount Vernon fuel oil source would be available during needed emergencies subject to adverse weather and available transportation. These various EDG fuel oil supply sources, along with the necessary administrative controls to supply them to the EDG FOSTs, provide the Authority the necessary EDG fuel oil for supporting extended operation of the 3 EDGs, if required, to meet FSAR design bases required time frames and provide at least 2 EDGs with continuous operation at minimum safeguards loads.

In conjunction with the above discussion of 32 EDG being made available during this AOT and the provisions for EDG fuel oil supplies to support EDG design bases continuous operation requirements, this one-time extended AOT is further justified for several reasons:

(1) IP3 TS required off-site power 138 and 13.8kV distribution systems are independent. There are two separate TS feeders each for 138kV and 13.8kV offsite sources as dependable power supplies to minimize the reliance on EDGs and supply the 480 VAC electrical distribution system;
(2) The additional requirements added to this proposed TS change to allow this one-time condition involve further minimization of potential risk associated with losing offsite power sources when extending this AOT to 7 days.

By not scheduling TS offsite power switching or maintenance as well as not scheduling this extended 32 FOST AOT during severe weather conditions, which could impact offsite power availability, greater defense in depth is provided during this evolution; and

(3) IP3 uses a proceduralized on-line work scheduling process. This station directive, SPO-SD-03, "On-Line Work Scheduling Process", provides decision-making and planning guidance for the execution of system and component outages, applicable when reactor coolant system (RCS) temperature is greater than 350 degrees F. This work process is based upon probabilistic risk assessment (PRA) and sound operating judgement. As mentioned, included within the overall process involving operation of the 32 EDG, as it is still being maintained available and aligned for automatic start capability, is operator action, if necessary, to supply fuel oil to the 32 fuel oil day tank as a backup method via operations procedure SOP-EL-1, "Diesel Generator Operation".

The Authority performed site-specific probabilistic risk assessment (PRA) calculations of the proposed one-time increased AOT duration of 7 days to quantify the risk.
The PRA calculations concluded that, for the case of removing 32 EDG FOST only and having the 32 EDG and associated remainder of the 32 fuel oil system available (though declared inoperable) for use if needed, the conditional core damage probability is below the threshold value of 1E-6. Therefore, sufficient risk-informed safety margin exists for the duration of the proposed, one-time extended 32 EDG fuel oil system AOT, while keeping the 32 EDG available throughout.

IV. Evaluation of Significant Hazards

The Authority has evaluated the proposed Technical Specification change using the criteria of 10CFR50.92 and found that no significant hazards consideration exists for the following reasons:

1) Does the proposed License amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   No. The proposed License amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. The EDGs and their associated fuel oil systems are not part of any accident initiation; therefore there is no increase in the probability of an accident. At a minimum, two EDGs are still available with sufficient fuel oil supply to mitigate IP3 design basis accidents. The minimum safeguards equipment can still be powered even if the 32 EDG is assumed to be lost due to single failure. This has been verified by EDG loading calculation, IP3-CALC-ED-00207, "480V Bus 2A, 3A, 5A & 6A and EDGs 31,32 and 33 Accident Loading". With the 32 EDG available and aligned for automatic start capability (although declared inoperable) during this 32 FOST outage, further backup to the 31 and 33 EDGs is provided. By the design of the overall EDG fuel oil system, the 32 EDG fuel oil day tank is able to be supplied with sufficient fuel oil supply from either the 31 or 33 FOSTs in order to support operation of the 32 EDG, if necessary.

To support fuel oil needs of all three EDGs, if necessary, the FSAR describes that additional fuel oil supplies are available on the Indian Point site and locally near the site. Further EDG fuel oil supplies are maintained in the New Rochelle-Mount Vernon, NY area, about 40 miles from IP3. Overall, the EDGs are designed as backup AC power sources in the event of a Loss of Offsite Power (LOOP). The proposed AOT does not change the conditions or minimum amount of safeguards equipment assumed in the safety analysis for design basis accident mitigation, since a minimum of 2 EDGs is assumed. No changes are proposed as to how the EDGs provide plant protection. Additionally, no new modes of overall plant operation are proposed as a result of this change. A PRA evaluation determined that the conditional core damage probability (CCDP) for this scenario will be less than the threshold value of 1 E-6. Therefore, the proposed one-time license amendment to TS 3.7.B.1 does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Does the proposed License amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

No. The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The proposed change does not introduce any new overall modes of plant operation or make any permanent physical changes to plant systems necessary for effective accident mitigation. The minimum required EDG operation remains unchanged by removal of this single FOST for repair. Additionally, added requirements to minimize risk associated with loss of offsite power also support this one-time extended AOT. Also, as previously stated, the EDGs and FOSTs are not part of any accident initiation. Therefore the proposed one-time license amendment to TS 3.7.B.1 does not create the possibility of a new or different kind of accident from any previously evaluated.

3) Does the proposed License amendment involve a significant reduction in a margin of safety?

No. The proposed License amendment does not involve a significant reduction in a margin of safety. The minimum safeguards loads can be maintained available if needed for design basis accident mitigation with 2 EDGs operable combined with their respective FOSTs. The 32 EDG will be available and aligned for automatic start capability (though declared inoperable) during this outage. The additional fuel oil needed to support 3 EDGs in this condition is available as indicated in the present design and licensing basis. The FSAR describes that this fuel can be provided from the Indian Point site, local sources and from a source about 40 miles away to support the additional 30,026 gallons TS required fuel oil already existing at the Buchanan substation. Therefore, sufficient fuel oil will be available for potential events that could occur during this 7-day AOT. The PRA evaluation for the case of maintaining the 32 EDG available (though declared inoperable) with its FOST out for repair indicates an acceptable safety margin below the risk-informed threshold of 1E – 6.

The 480VAC electrical distribution system can be fed from a number of TS independent 13.8kV and 138kV offsite power sources to minimize reliance of IP3 on EDG power sources during the extended AOT requested. Additional requirements to minimize risk associated with the potential for loss of offsite power sources within this TS change also ensure that this extended AOT does not involve a significant reduction in safety margin. On this basis, the proposed one-time license amendment to TS 3.7.B.1 does not involve a significant reduction in the margin of safety.

V. Implementation of Proposed Changes

The proposed TS change will not adversely affect the ALARA Program, the Security and Fire Protection Programs, or the Emergency Plan. This conclusion is based on the type of change being made in comparison to the purpose, scope and content of these programs. The physical changes to the FOST of concern would involve corrective maintenance repairs, if deemed necessary, and do not change the 32 EDG fuel oil system licensing or design function, as design provision already exists for filling 32 EDG day tank with fuel oil from the other 2 EDG FOSTs. The proposed changes also do not effect the conclusions of the Final Safety Analysis Report or the Safety Evaluation Report because IP3 plant design in the analyzed Design Basis Accidents relies on two EDGs operating at minimum safeguard loads, if required. The single failure assumption is suspended while in LCO action statements. The 32 EDG is still available and aligned for automatic start capability during this one-time extended AOT extension, if required for electrical loading. Additional fuel oil supplies as specified by current design and licensing bases are available to support extended fuel needs to all 3 EDGs, via IP2/IP3 Memorandum of Understanding and SOP-EL-9, "Filling the Diesel Fuel Oil Storage Tanks", if needed, during this 7-day AOT. These design bases fuel oil supplies are available to assure continuous operation of two EDGs at minimum safeguards loads for the required design bases time frames of 48 and 168 hours. Further, System Operating Procedure, SOP-EL-1, "Diesel Generator Operation", has backup provision for operator action in filling the 32 EDG fuel oil day tank from the 31 or 33 EDG FOST to further ensure that the 32 EDG can receive the necessary fuel oil and perform its function if required.

VI. Conclusions

The incorporation of these changes:

a) will not involve a significant increase in the probability or the consequence of an accident or malfunction of equipment important to safety as previously evaluated in the Final Safety Analysis Report;
b) will not create the possibility of a new or different kind of accident from any accident previously evaluated in the Final Safety Analysis Report;
c) will not significantly reduce the margin of safety as defined in the bases for any Technical Specifications; and
d) involves no significant hazards considerations as defined in 10CFR50.92.

The Plant Operating review Committee (PORC) and Safety Review Committee (SRC) have reviewed this proposed one-time change to the TS and have concluded that it does not involve an unreviewed safety question or a significant hazards consideration and will not endanger the health and safety of the public.

VII. References

1. Indian Point 3 Updated Final Safety Analysis Report (FSAR) , dated December 1997

2. NRC Safety Evaluation Report (SER) for Indian Point 3 Nuclear Generating Station and Supplements 1,2 and 3, dated September 21, 1973, February 21, 1975 and April 5, 1976.

3. RE-99-025, "IP3 – Evaluation of Fuel Oil Storage Tank Extended Outage", dated April 12, 1999.

4. IP3 System Operating Procedure, SOP-EL-1, "Diesel Generator Operation", Revision 23, dated October 10, 1997.

5. NRC Generic Letter 80-30, "NRC Letter Clarifying The Term Operable As It Applies To The Single Failure Criterion For Safety Systems", dated April 10, 1980.

6. IP3 Procedure, SPO-SD-03, "On-Line Work Scheduling Process", Revision 4, dated April 21, 1998.

7. IP3-DBD-307, "Design Basis Document for the 480VAC, 125VDC, 120 Vital AC Electrical Distribution Systems, Revision 2, dated February 19, 1998.

8. IP3-CALC-00207, "480V Bus 2A, 3A, 5A & 6A and EDGs 31, 32 and 33 Accident Loading", Revision 6, dated October 30, 1997.

9. IP3 System Operating Procedure, SOP-EL-9, "Filling the Diesel Fuel Oil Storage Tanks", Revision 11, dated February 21, 1997.

10. IP2/IP3 Memorandum of Understanding, SSZ-94-01, No. 1, "Rules Governing The Use Of Electrical Supplies And Interties Between Consolidated Edison And The Power Authority", Revision 1, dated September 25, 1993.

11. IP2/IP3 Memorandum of Understanding, SSZ-94-01, No.7, "Rules Governing The Maintenance And Use Of A Dedicated (By Consolidated Edison For The Power Authority) Diesel Fuel Oil (No. 2) Supply", Revision 2, dated October 13, 1994.

ATTACHMENT III TO IPN-99-061

MARKUP OF THE PROPOSED CHANGE TO THE TECHNICAL SPECIFICATION REGARDING ALLOWED OUTAGE TIME ASSOCIATED WITH ONE DIESEL GENERATOR OR ANY DIESEL FUEL OIL SYSTEM

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***32 diesel generator fuel oil storage tank may be inoperable and the 32 diesel generator may be declared technically inoperable, but available and capable of automatic start, for up to 7 days, one-time if needed, during 1999 and prior to Refueling Outage RO-10. This condition may only be invoked to inspect/repair the 32 diesel fuel oil storage tank if deemed necessary based upon concerns with water in-leakage. The following additional requirements shall also be met to invoke this extended one-time allowed outage time: (1) performance of offsite power source switching or maintenance evolutions for technical specification required offsite power sources shall not be scheduled during this 32 FOST outage, and (2) this 32 FOST outage shall not be scheduled during predicted severe weather.**

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