ATTACHMENT A

REVISED TECHNICAL SPECIFICATION PAGES

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
AUGUST, 1996

3.7 AUXILIARY ELECTRICAL SYSTEMS

Applicability

Applies to the availability of electrical power for the operation of plant auxiliaries.

Objective

To define those conditions of electrical power availability necessary (1) to provide for safe reactor operation and (2) to provide for the continuing availability of engineered safety features.

Specifications

A. The reactor shall not be made critical without:

1. at least two 138 kV lines from offsite sources to Buchanan Substation fully operational (excluding the Refuse Energy Services Company plant), |

2. the 6.9 kV buses 5 and 6 energized from the 138 kV sources at Buchanan Substation through the 138/6.9 kV Station Auxiliary Transformer, |

3. one 13.8 kV source from at least one 138/13.8 kV transformer at Buchanan available and a 13.8/6.9 kV transformer available to supply 6.9 kV power, |

4. the four 480-volt buses 2A, 3A, 5A and 6A energized and the bus tie breakers between buses 5A and 2A and between buses 3A and 6A open,

5. three diesel generators operable with a minimum onsite supply of 6,334 gallons of fuel available in each of the individual storage tanks and 29,000 gallons of fuel available at the Buchanan Substation, or onsite other than the normal supply tanks, and |

6. station batteries Nos. 21, 22, 23, & 24 and their associated battery chargers and dc distribution systems operable.

B. During power operation, the requirements of 3.7.A may be modified as follows:

1. During periods when the 138 kV bus at Buchanan Substation is split such that only one 138 kV offsite source is connected to the portion of the bus that is connected to the 138/6.9 kV Station Auxiliary Transformer, power operation may continue provided:

   a. at least one additional 138 kV line from offsite sources is fully operational and supplying the portion(s) of the 138 kV bus at Buchanan Substation that are not connected to the 138/6.9 kV Station Auxiliary Transformer, and

   b. the Refuse Energy Services Company plant with at least 50 MW power output is supplying the portion of the 138 kV bus at Buchanan Substation that is connected to the 138/6.9 kV Station Auxiliary Transformer.

2. Power operation may continue for seven days provided the 138 kV and the 13.8 kV sources of offsite power are available in compliance with 3.7.A with any combination of or all of the following inoperable:

   a. One diesel generator unavailable provided the remaining diesel generators with their associated fuel oil systems and the required engineered safety features associated with these diesel generator buses are operable,

   b. One diesel generator fuel oil system unavailable. This system consists of a fuel oil storage tank with 6,334 gallons of fuel available, a fuel oil transfer pump and associated piping, valves and instrumentation, or

   c. One diesel fuel oil supply header unavailable.

   If a diesel generator becomes inoperable due to any cause other than planned maintenance or testing, the remaining diesel generators shall be tested to ensure operability. Component Cooling Pump 22 can not be inoperable while either Diesel Generator 21 or 23 is out of service.

3. Power operation may continue for 72 hours provided the 138 kV power source from Buchanan Substation is supplying 6.9 kV buses 5 and 6 through the 138/6.9 kV Station Auxiliary Transformer and the three diesel generators are operable with either of the following:

   a. Only one 138 kV line from an offsite source to Buchanan Substation is operable, (excluding the Refuse Energy Services Company plant).

   b. The 13.8 kV source of offsite power is not available from a 138/13.8 kV transformer at Buchanan Substation, but is available from a gas turbine.

   This operation may be extended beyond 72 hours provided the limiting condition is reported to the NRC within the subsequent 24-hour period with an outline of the plans for restoration of an offsite 138 kV supply line or re-establishing a 138/13.8 kV supply to Buchanan Substation for the 13.8/6.9 kV supply to buses 5 and 6.

4 Power operation may continue for 24 hours, if the entire 138 kV or the entire 13.8 kV source of power is lost, provided the three diesel generators are operable. This operation may be extended beyond 24 hours provided the limiting condition is reported to the NRC within the subsequent 24-hour period with an outline of the plans for restoration of offsite power.

5. When 6.9 kV buses 5 and 6 are supplied through a 13.8/6.9 kV transformer, in addition to satisfying the requirements of Specification 3.7.B.4 above, the 6.9 kV bus tie breaker control switches 1-5, 2-5, 3-6, and 4-6 in the CCR shall be placed in the "pull-out" position and tagged to prevent an automatic transfer of the 6.9 kV buses 1, 2, 3 and 4.

6. One battery may be inoperable for 24 hours provided the other batteries and four battery chargers remain operable with one battery charger carrying the dc load of the failed battery's supply system.

7. One battery charger may be inoperable for 24 hours provided the following conditions are satisfied:

   a. The other three battery chargers and their associated batteries are operable; and

b. The affected battery shall have the Specification 4.6.C.1 surveillance initiated within one hour of the time the battery charger is determined to be inoperable and the surveillance shall be repeated every eight hours thereafter to determine battery operability. This surveillance frequency shall be maintained until the battery is declared inoperable or until the battery charger is declared operable.

C. Gas Turbine Generators:

1. At least one gas turbine generator (GT-1, GT-2 or GT-3) and associated switchgear and breakers shall be operable at all times.

2. A minimum of 54,200 gallons of fuel for the operable gas turbine generator shall be available at all times.

3. If the requirements of 3.7.C.1 or 3.7.C.2 cannot be met, then, within the next seven (7) days, either the inoperable condition shall be corrected or an alternate independent power system shall be established.

4. If the requirements of 3.7.C.3 cannot be satisfied, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures. If the requirements of 3.7.C.3 cannot be met within an additional 48 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.

The requirements of Specification 3.7.A may be modified for an emergency "Black Start" of the unit by using the requirements of either Specification 3.7.D.1 or 3.7.D.2 below:

D.1. a. all 138 kV lines to Buchanan de-energized,

b. the 13.8 kV line de-energized,

c. the 6.9 kV buses 5 and 6 energized from the onsite gas turbine through the 13.8/6.9 kV transformer,

d. the four 480-volt buses 2A, 3A, 5A and 6A energized from the diesels and the tie breakers between buses 5A and 2A and between buses 3A and 6A open,

e. three diesel generators operable with a minimum onsite supply of 6,334 gallons of fuel available in each of the individual storage tanks and 29,000 gallons of fuel available at the Buchanan Substation, or onsite other than the normal supply tanks, I I

f. station batteries Nos. 21, 22, 23 & 24 and their associated battery chargers and dc distribution systems operable, and

g. the 480-volt tie breakers 52/2A, 52/3A, 52/5A and 52/6A open.

D.2. a. establish 138 kV bus sections at Buchanan with at least 37 MW power (nameplate rating) from any combination of gas turbines at Buchanan and onsite,

b. two 138 kV lines to Buchanan energized from the gas turbines with breakers to Millwood, the 138/345 kV tie to Buchanan and to the Refuse Energy Services Company plant open, I I

c. the 13.8 kV line to Buchanan operable and the 13.8/6.9 kV transformer available to supply 6.9 kV power,

d. the 6.9 kV buses energized from the 138 kV source,

e. the four 480-volt buses 2A, 3A, 5A and 6A energized and the bus tie breakers between buses 5A and 2A and between buses 3A and 6A open,

f. three diesel generators operable with a minimum onsite supply of 6,334 gallons of fuel available in each of the individual storage tanks and 29,000 gallons of fuel available at the Buchanan Substation, or onsite other than the normal supply tanks, and I I

g. station batteries Nos. 21, 22, 23 & 24 and their associated battery chargers and dc distribution systems operable.

E. Whenever the reactor is critical, the circuit breaker on the electrical feeder to emergency lighting panel 218 inside containment shall be locked open except when containment access is required.

Basis

The electrical system equipment is arranged so that no single contingency can inactivate enough safeguards equipment to jeopardize plant safety. The 480-volt equipment is arranged in four buses. The 6.9 kV equipment is supplied from six buses.

In addition to the unit transformer, three separate sources supply station service power to the plant[1].

There are three sources of 138 kV offsite power to Buchanan Substation. These sources consist of two 138 kV feeders from Con Edison's Millwood 138 kV substation and one connection from the Buchanan 345 kV substation through a 345/138 kV transformer. These 138 kV sources are each capable of supplying all auxiliaries for Indian Point 1, 2 and 3 as well as the Buchanan Substation customer load and can be used to satisfy 3.7.A.1. There is also an additional 138 kV connection to Buchanan Substation from the Westchester Refuse Energy Services Company (RESCO) plant. The RESCO plant does have the capability to supply maximum safeguards loads and safe shutdown loads for both Indian Point 2 and 3 simultaneously, and the capability to supply all auxiliary loads for either Indian Point 2 or 3 with the capability to supply maximum safeguards and safe shutdown loads for the other unit. The RESCO plant alone does not have the capability to supply all expected loads for Indian Point 2 and 3 and connected customer loads supplied by the Buchanan 13.8 kV substation.

Due to scheduled maintenance or equipment failures, the Buchanan 138 kV bus may be configured in such a manner so that only one 138 kV offsite source at Buchanan Substation is directly supplying the Indian Point 2 Station Auxiliary Transformer. At the same time one other 138 kV source is supplying Buchanan Substation and the customer loads through a 138/13.8 kV transformer at Buchanan Substation, but is not directly connected to the Indian Point 2 Station Auxiliary Transformer. For this case, the RESCO plant can be considered as a 138 kV source for satisfying 3.7.A.1 and 2 during the time frame required to perform scheduled maintenance or to replace failed equipment. Under these conditions, the RESCO plant and the other 138 kV source has the capability to supply customer loads and all safeguards and safe shutdown loads for both Indian Point Unit Nos. 2 and 3 and all auxiliary loads for either Indian Point Unit Nos. 2 or 3.

The RESCO plant can also be used to supply the Station Auxiliary Transformer if this connection is isolated from the Buchanan Substation customer loads and offsite sources.

The plant auxiliary equipment is arranged electrically so that multiple items receive their power from different sources. The charging pumps are supplied from the 480-volt buses Nos. 3A, 5A, and 6A. The five containment fans are divided among the 480-volt buses.

The two residual heat pumps are on separate 480-volt buses. Valves are supplied from separate motor control centers.

The station auxiliary transformer or a gas turbine is capable of providing sufficient power for plant startup. The station auxiliary transformer can supply the required plant auxiliary power during normal operation.

There are two 13.8/6.9 kV transformers which can be used to supply 6.9 kV power to Indian Point 2. One transformer is associated with Feeder 13W92 and Indian Point 2, the other is associated with Feeder 13W93 and Indian Point 3. Each transformer is capable of supplying maximum safeguards loads and safe shutdown loads for both Indian Point 2 and 3 taken simultaneously. While during normal operation each unit will take credit for its associated transformer, during the time frame required to perform scheduled maintenance or to replace failed equipment both units may take credit for the same 13.8/6.9 kV transformer. Neither 13.8/6.9 kV transformer is capable of supplying all auxiliaries for either unit. Therefore, the automatic transfer of 6.9 kV buses 1, 2, 3 and 4 is defeated when the 13.8 kV source is supplying power to buses 5 and 6.

The bus arrangements specified for operation ensure that power is available to an adequate number of safeguards auxiliaries. With additional switching, more equipment could be out of service without infringing on safety.

Two diesel generators have sufficient capacity to start and run, at design load, the minimum required safeguards equipment[1]. If one diesel is inoperable, the minimum required safeguards equipment associated with the remaining two diesels must be operable. Equipment that is not required for minimum safeguards such as a third non-essential service water pump, a third charging pump or a third component cooling water pump associated with the remaining two diesels is not required to be operable when a diesel is inoperable as long as the remaining two diesels can not be overloaded by this configuration. Component Cooling Pump 22 can not be inoperable while either Diesel Generator 21 or 23 is out of service because this configuration would overload one of the remaining two diesels. The minimum diesel fuel oil inventory in the storage tanks is maintained at all times to assure the operation of two diesels carrying their associated engineered safeguards equipment for at least seventy-three hours with three storage tanks available and for at least fifty hours with two storage tanks available[2]. Additional fuel oil suitable for use in the diesel generators will be stored either onsite or at the Buchanan Substation. The minimum storage of 29,000 gallons of additional fuel oil will assure continuous operation of two diesels for at least 118 hours at the minimum load for safeguards. Commercial oil supplies and trucking facilities exist to assure deliveries within one day's notice.

There are three onsite fuel oil storage tanks adjacent to the diesels. Each tank has an associated fuel oil transfer pump which has the capability to automatically feed two of the three diesels through either of two redundant supply headers. If one storage tank or transfer pump is unavailable, the remaining tanks or pumps with the additional 29,000 gallons of fuel oil at Buchanan Substation can supply the three diesels if required to supply at least minimum engineered safeguards equipment for at least 139 hours[2].

If a diesel generator is out of service due to planned maintenance or testing, testing of the remaining diesel generators is not required. In this case, testing is not required because a planned emergency diesel generator maintenance or testing outage does not directly affect the availability or reliability of the remaining emergency diesel generators and is not indicative of a potential failure in the remaining emergency diesel generators.

One battery charger shall be in service on each battery so that the batteries will always be at full charge in anticipation of a loss-of-ac power incident. This ensures that adequate dc power will be available for starting the emergency diesel generators and other emergency uses.

The plant can be safely shut down without the use of offsite power since all vital loads (safety systems, instruments, etc.) can be supplied from the emergency diesel generators.

Any two of three diesel generators, the station auxiliary transformer or the separate 13.8 to 6.9 kV transformer are each capable of supplying the minimum safeguards loads and therefore provide separate sources of power immediately available for operation of these loads. Thus, the power supply system meets the single failure criteria required of the safety systems.

Three (3) gas turbine generators are directly available to the Indian Point site. One is located onsite (GT-1) and two additional units are located at the adjacent Buchanan Substation (GT-2 and GT-3). One gas turbine generator is more than adequate to provide an additional contingency of backup electrical power for maintaining the plant in a safe shutdown condition. The specified gas turbine generator minimum fuel inventory of 54,200 gallons assures that one gas turbine generator will be capable of supplying more than the maximum electrical load for the Indian Point Unit No. 2 alternate safe shutdown power supply system (i.e., 750 kW) for at least three (3) days. Commercial oil supplies and trucking facilities exist to assure deliveries of additional fuel oil within one day's notice.

Conditions of a system-wide blackout could result in a unit trip. Since normal offsite power supplies as required in Specification 3.7.A are not available for startup, it is desirable to be able to blackstart this unit with onsite power supplies as a first step in restoring the system to an operable status and restoring power to customers for essential service. Specification 3.7.D.1 provides for startup using the onsite gas turbine to supply the 6.9 kV loads and the diesels to supply the 480-volt loads. Tie breakers between the 6.9 kV and 480-volt systems are open so that the diesels would not be jeopardized in the event of any incident and would be able to continue to supply 480-volt safeguards power. The scheme consists of starting two reactor coolant pumps, one condensate pump, 2 circulating water pumps and necessary auxiliaries to bring the unit up to approximately 10% power. At this point, loads can be assumed by the main generator and power supplied to the system in an orderly and routine manner.

Specification 3.7.D.2 is identical with normal start-up requirements as in Specification 3.7.A except that offsite power is supplied exclusively from gas turbines with a minimum total power of 37 MW (nameplate rating), which is sufficient to carry out normal plant startup.

As a result of an investigation of the effect components, that might become submerged following a LOCA, may have on ECCS, containment isolation, and other safety-related functions, a fuse and a locked-open circuit breaker were provided on the electrical feeder to emergency lighting panel 218 inside containment. With the circuit breaker in the open position, containment electrical penetration H-70 is de-energized during the accident condition. Personnel access to containment may be required during power operation. Since it is highly improbable that a LOCA would occur during this short period of time, the circuit breaker may be closed during that time to provide emergency lighting inside containment for personnel safety.

When the 138 kV source of offsite power is out of service, the automatic transfer of 6.9 kV Buses 1, 2, 3 and 4 to offsite power after a unit trip could result in overloading of the 20 MVA 13.8 kV/6.9 kV auto-transformer. Accordingly, the intent of Specification 3.7.B.5 is to prevent the automatic transfer when only the 13.8 kV source of offsite power is available. However, this specification is not intended to preclude subsequent manual operations or bus transfers once sufficient loads have been stripped to assure that the 20 MVA auto-transformer will not be overloaded by these manual actions. I

References

(1) UFSAR Section 8.2.1
(2) UFSAR Section 8.2.3

ATTACHMENT B

ADDITIONAL JUSTIFICATION FOR THE RESCO PLANT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
AUGUST, 1996

The following provides justification for taking credit for the RESCO plant as one of the two required 138 kV sources to Buchanan. This will occur when the Buchanan 138 kV bus is configured in such a manner so that only one 138 kV offsite source at Buchanan Substation is supplying the Indian Point 2 Station Auxiliary Transformer. At the same time one other 138 kV source is supplying the Buchanan Substation loads.

In our degraded voltage analysis it was shown that offsite power remained the preferred source for normal system operation which is 136-142 kV on the 138 kV system and 346-359 on the 345 kV system. In that analysis, the pre-contingency Buchanan voltage was taken to be 136 kV. That analysis was silent about the number of 138 kV sources into Buchanan (it did show that whether or not the RESCO plant was available had a very small impact on the Buchanan voltage). This analysis considered the two Millwood feeders and TA-5 as being available.

This resulted in the following:

	Buch 138 kV	IP2-6.9 kV	IP2-480V @ t = 0+	IP2-480V @ t = 42s
Pre-cont.	136.0 kV	7.05 kV	(475V @ t = 0-)	
Loss of IP2 w/o SI	132.2 kV	6.116 kV	408V	440V
Loss of IP2 w/ SI	132.2 kV	6.308 kV	438V	441V

Con Edison ran the following scenarios with the Buchanan 138 kV bus split, that is, Millwood feeder 96952 and the RESCO plant with 50 MW power output supplying 138/13.8 kV Transformer 3 and the plant loads (with IP2 only and with IP2 and 3) and with TA5 only supplying 138/13.8 kV transformer 1:

- Scenario 1 - Feeder 96952 is lost (IP3 not available).
- Scenario 2 - Feeder 96952 and IP2 are lost concurrently (IP3 not available).
- Scenario 3 - Feeder 96952 is lost (IP3 available).

The results of these scenario runs follows:

	Buch 345kV	Buch 138kV (TA5 sec.)	Buch 138kV	IP2Aux	IP3Aux
Pre-cont.	356.3 kV	136.9 kV	141.7 kV	7.1 kV	7.1 kV
Scen. 1	356.2 kV	137.0 kV	142.0 kV	7.1 kV	7.1 kV
Scen. 2	346.4 kV	132.1 kV	131.7 kV	5.9 kV	6.6 kV
Pre-cont.	355.7 kV	142.1 kV	141.8 kV	7.1 kV	7.1 kV
Scen. 3	355.6 kV	142.2 kV	142.3 kV	7.1 kV	7.1 kV
Pre-cont.	355.9 kV	136.8 kV	137.2 kV	7.0 kV	7.0 kV
Scen. 2	346.4 kV	132.6 kV	132.9 kV	6.1 kV	6.8 kV
Pre-cont.	355.7 kV	136.8 kV	136.1 kV	6.9 kV	6.9 kV
Scen. 2	345.8 kV	131.3 kV	118.1 kV	5.2 kV	6.0 kV

These scenario runs are analyzed as follows:

Scenarios 1 and 3 - The Buchanan voltage actually rises slightly for these scenarios. Therefore, the RESCO plant and TA5 can supply the Buchanan and plant loads with no degraded voltage concerns. Also, IP3 availability even further increases the Buchanan Voltage.

Scenario 2 - For the Buchanan 138 kV pre-contingency of 141. 7 kV the Buchanan voltage goes to 131.7 kV with the scenario. This is within 0.5% of the results in the previous degraded voltage analysis. Therefore, no degraded voltage concerns are expected, and the RESCO plant and TA5 can supply the Buchanan and plant loads.

For the Buchanan 138 kV pre-contingency of 137.2 kV(an intentional lowering of the RESCO plant terminal voltage was done to achieve this voltage level), the Buchanan voltage decreases to 132.9 kV. This is higher than the results of the degraded voltage analysis, and no degraded voltage concerns are expected. Therefore, the RESCO plant and TA5 can supply the Buchanan and plant loads. For the Buchanan 138 kV pre-contingency of 136.1 kV the Buchanan voltage decreases to 118.1 kV. This is a degraded voltage condition. However, in order to obtain the 136.1 kV pre-contingency, one of the two area 20 MVAR capacitor banks had to be shut down in addition to lowering the RESCO plant voltage. This does not reflect normal system operation, and if the voltage is indeed degraded, the 480 V buses are designed to go to the emergency diesels because the offsite power no longer remains the preferred source. Although 136.1 kV is within the normal operating range of 136-142 kV, this range is for the 138 kV transmission system in general. In order to keep the whole system in this range and to minimize the effects of voltage fluctuations, the System Operator will generally maintain the Buchanan area above 140 kV.

Based on the above, the RESCO plant and TA5 with the Buchanan bus split have the capability to supply plant loads and Buchanan customer loads with no degraded voltage concerns for normal operating conditions. Therefore, the RESCO plant can be credited as one of the two Technical Specification required 138 kV sources as long as another 138 kV source (such as TA5) is available to supply the customer load via a 138/13.8 kV transformer.

ATTACHMENT C

REVISED SAFETY ASSESSMENT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
AUGUST, 1996

SECTION I - Description of Changes

This application seeks to amend Section 3.7 of the Indian Point 2 Technical Specifications to clarify offsite power availability requirements and revise emergency diesel generator fuel oil availability requirements. Section 3.7.A presently requires two 138 kV lines to Buchanan to be fully operational prior to going critical. However, there is no specific action statement that addresses having only one 138 kV line to Buchanan operational during power operation. In the past, Indian Point 2 has entered the action statement for not having the 138 kV source available whenever only one 138 kV line to Buchanan was operational. This proposed amendment would add an action statement addressing the situation where only one 138 kV line to Buchanan is available.

Section 3.7.A also requires one 13.8 kV source to be fully operational with the 13.8/6.9 kV transformer available to supply the 6.9 kV buses prior to going critical. The source of this 13.8 kV power is not addressed. 13.8 kV power can be supplied from any one of the three 138/13.8 kV transformers at Buchanan which have the offsite 138 kV transmission system as the source of power or from any one the three gas turbines. As the gas turbines are described as a separate source of power in the UFSAR and are credited as an alternate AC power source in compliance with 10 CFR 50.63, the gas turbines are not intended to be the only source of 13.8 kV power under normal conditions. This amendment will require the source of 13.8 kV power to be from at least one of the 138/13.8 kV transformers prior to going critical.

Section 3.7.B.1 does not presently address the unavailability of a diesel fuel oil system or supply header. If a fuel oil system, which consists of a storage tank, or transfer pump is unavailable, an associated diesel, the one normally supplied by the unavailable tank or pump, is considered to be unavailable. Fuel oil in any storage tank can be automatically pumped through either supply header to two diesel fuel oil day tanks. If an associated transfer pump fails to supply a day tank, a second transfer pump will automatically start and supply the tank. With two storage tanks and pumps available, all three day tanks can be supplied. With manual realignment any transfer pump can supply any day tank through either supply header. This amendment proposes to add an action statement that will allow an unavailable fuel oil storage tank, transfer pump, or supply header without requiring a diesel to be considered unavailable. If a diesel is unavailable for any reason, only the fuel oil system associated with that diesel will be permitted to be unavailable. This is because each diesel fuel oil system relies on electrical power which is backed-up by its associated diesel. If one diesel is unavailable, Section 3.7.B.1 presently requires all engineered safety features (ESF) associated with the remaining two diesels be operable. The proposed changes allow ESF on the remaining diesels to be inoperable provided that minimum safeguards are operable and neither of the remaining diesels is overloaded by supplying redundant loads in order to meet minimum safeguards. Also, the proposed changes will require the source of 13.8kV power to be from at least one of the 138/13.8kV transformers for entering diesel and diesel fuel oil action statements.

Existing Section 3.7.B.1 will be redesignated as 3.7.B.2. A new Section 3.7.B.1 will be added. The new section will allow Section 3.7.A to be met during periods when the 138 kV bus at Buchanan Substation is split.

The proposed changes are specified in Attachment A to the Application for Amendment enclosed with this letter. Attachment D contains a summary of the proposed changes.

SECTION II - Evaluation of Changes

There are no modifications to the existing offsite power supply configuration or diesel fuel oil supply system proposed by this application. There are three sources of 138 kV offsite power which can be considered lines to Buchanan. These consist of two 138 kV feeders from Con Edison's Millwood 138 kV substation, one connection from the Buchanan 345 kV substation through a 345/138 kV transformer. There is also one connection from the 138 kV output from the RESCO plant. This source can be used to meet the requirements in Section 3.7.A. The use and justification of this source is explained in Attachment B.
138 kV offsite power is supplied to the Indian Point 2 6.9 kV system (buses 5 and 6 for normal power operation) through the station auxiliary transformer from one of two 138 kV feeders from Buchanan. One 138 kV and one 13.8 kV feeder from Buchanan with any two of the above three sources can be used to satisfy the requirements in Section 3.7.A or 3.7.B. This amendment proposes to add an action statement that will address having only one line to Buchanan from an offsite source available during power operation.

This amendment will require the 13.8 kV source of power in Section 3.7.A.3 and 3.7.B.1 to include at least one of the three 138/13.8 kV transformers at Buchanan. The gas turbines can be considered a 13.8 kV source for Section 3.7.B.2 and 3.7.B.3 as these action statements already reflect an abnormal condition. The intent is to avoid having the gas turbines as the only normal 13.8 kV source.

Additionally, this amendment will allow for an unavailable diesel fuel oil storage tank, transfer pump or supply header without considering the associated diesel to be unavailable. The original licensing basis for Indian Point 2 requires fuel oil for 139 hours of two diesel operation be available from any two of the three fuel oil storage tanks (12,680 gallons from two tanks) with 20,000 gallons available in the gas turbine tanks dedicated for the emergency diesel generators (29,000 gallons are presently required in the gas turbine tanks and this change provides for 6,334 gallons in each of the three fuel oil storage tanks). If the inventory from one fuel oil storage tank is unavailable, two diesel operation with minimum safeguards can continue for 168 hours, and three diesel operation with maximum safeguards for the first 24 hours and load management with at least minimum safeguards maintained thereafter can continue for the duration of the 139-hour licensing basis.

If a diesel or diesel fuel oil system is inoperable, 138 kV power with two lines to Buchanan and 13.8 kV power available from at least one of the 138/13.8 kV transformers will be required to assure a high offsite power reliability for the duration of the action statement. If a diesel is inoperable at least minimum safeguards supplied by the remaining two diesels will be operable. The remaining two diesels will supply at least minimum safeguards without being overloaded.

SECTION III - No Significant Hazards Evaluation

Consistent with the requirements of 10 CFR 50.92, the enclosed application involves no significant hazards based on the following information:

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

Response:

Neither the probability nor the consequences of an accident previously analyzed is increased due to the proposed changes. There are no changes on the existing offsite power supply configuration or on the existing diesel fuel oil supply system or inventory requirements. This proposed amendment will allow for three diesel operation when a fuel oil storage tank or transfer pump is unavailable. In the event of an accident at this time, the three diesel operation would allow for more than minimum safeguards to be available, with maximum safeguards available for the first part of the event.

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

Response:

The existing 138 kV and 13.8 kV offsite power reliability is maintained with this change. There is no impact on availability of the alternate AC system, the three gas turbines, with this change. This change is consistent with the original licensing basis that the AEC accepted for the diesel fuel oil supply system.

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

Response:

The proposed amendment does not involve a significant reduction in the margin of safety. The proposed amendment maintains the reliability of the preferred 138 kV and 13.8 kV offsite power and is consistent with the original licensing basis for diesel fuel oil inventory.

SECTION IV - Impact of Changes

These changes will not adversely impact the following:

ALARA Program
Security and Fire Protection Programs
Emergency Plan
FSAR or SER Conclusions
Overall Plant Operations and the Environment

There are no modifications to the existing offsite power supply

configuration or emergency diesel fuel oil supply system proposed by these changes. The unavailability of the inventory of one diesel fuel oil storage tank was addressed in the original licensing basis of the plant and was accepted by the AEC. At least minimum safeguards will be available during periods when a diesel is inoperable.

SECTION V - Conclusions

The incorporation of these changes: a) will not increase the probability or the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not create the possibility for an accident or malfunction of a new or different kind from any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any Technical Specification; d) does not constitute an unreviewed safety question; and e) involves no significant hazards considerations as defined in 10 CFR 50.92.

These proposed changes have been reviewed by the Station Nuclear Safety Committee and the Nuclear Facilities Safety Committee.

ATTACHMENT D

UPDATED SUMMARY OF THE PROPOSED CHANGE

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50-247
AUGUST, 1996

SUMMARY OF THE PROPOSED CHANGE

The proposed change will clarify offsite power availability requirements. Two offsite 138 kV power sources from Buchanan are required for normal power operation. In addition, 13.8 kV power from the Buchanan 138 kV substation through a 138/13.8 kV transformer and from a gas turbine source must be available for normal power operation. A 72 hour action statement is being added to address the condition where only one 138 kV offsite source is supplying the Buchanan 138 kV substation or where 13.8 kV power is only available from gas turbines. The proposed change will allow for split bus configurations at Buchanan Substation without entering an action statement.

The proposed change will also revise emergency diesel generator fuel oil availability requirements to address unavailability of a fuel oil storage tank, transfer pump, or supply header. A seven day action statement will be added for fuel oil storage tank, transfer pump, or supply header unavailability. All three diesels can still be operable when in the action statement. A minimum of 6,334 gallons of fuel oil will be required in each of the three fuel oil storage tanks. This will still ensure a minimum of 19,000 gallons for all three tanks. When in either the fuel oil supply or diesel unavailability action statements, 138 kV offsite power with two lines to Buchanan from offsite sources and 13.8 kV power availability from a 138/13.8 kV transformer and a gas turbine will be required to assure a highly reliable offsite power source for the duration of the action statement. The proposed change will allow ESF to be out of service on the remaining two diesels when one diesel is out of service provided minimum safeguards is available from the two operable diesels.