4. Verifying the diesel starts from ambient condition and accelerates to at least 600 rpm in less than or equal to 10 seconds. The generator voltage and frequency shall be 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals:

   a) Manual.

   b) Simulated loss-of-offsite power by itself.

   c) Simulated loss-of-offsite power in conjunction with an ESF actuation test signal.

   d) An ESF actuation test signal by itself.

5. Verifying the generator is synchronized, loaded to greater than or equal to 5500 kW in less than or equal to 120 seconds, and operates with a load greater than or equal to 5500 kW for at least an additional 60 minutes, and

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day tanks.

c. At least once per 92 days and from new fuel prior to its addition to the storage tanks by verifying that a sample obtained in accordance with ASTM-D270-1975 meets the following minimum requirements in accordance with the tests specified in ASTM-D975-1977:

   1. A water and sediment content of less than or equal to 0.05 volume percent;

   2. A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes;

   3. A specific gravity as specified by the manufacturer at 60°F of greater than or equal to 0.80 but less than or equal to 0.99 or an API gravity at 60°F of greater than or equal to 11 degrees but less than or equal to 47 degrees;

   4. An impurity level of less than 2 mg of insolubles per 100 mL when tested in accordance with ASTM-D2274-70; analysis shall be completed within 7 days after obtaining the sample but may be performed after the addition of new fuel oil; and

SURVEILLANCE REQUIREMENTS (Continued)

c. By sampling new fuel oil in accordance with ASTM D4057-81 prior to addition to the storage tanks and:

1) By verifying in accordance with the tests specified in ASTM D975-81 prior to addition to the storage tanks that the sample has:

a) An API Gravity of within 0.3 degrees at 60°F or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89 or an API gravity at 60°F of greater than or equal to 27 degrees but less than or equal to 39 degrees.

b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes, if gravity was not determined by comparison with the supplier's certification.

c) A flash point equal to or greater than 125°F, and

d) A clear and bright appearance with proper color when tested in accordance with ASTM D4176-82.

2) By verifying within 31 days of obtaining the sample that the other properties specified in Table 1 of ASTM D975-81 are met when tested in accordance with ASTM D975-81 except that the analysis for sulfur may be performed in accordance with ASTM D1552-79 or ASTM D2622-82.

SURVEILLANCE REQUIREMENTS (Continued)

d. At least once every 31 days by obtaining a sample of fuel oil from the storage tanks in accordance with ASTM D2276-78, and verifying that total particulate contamination is less than 10 mg/liter when checked in accordance with ASTM D2276-78, Method A.

Justification for Immediate Technical Specification Change

This change is based on two seperate facts, either of which identify the need and basis for the change. The first is that the diesel fuel requirements identified in the existing plant technical specification exceed those identified by the manufacturer. Due to this fact, when the fuel fails to comply with the required specification, however continues to be in compliance with the manufacturers specification, the fuel tanks must be defueled, removing the generator from being capable of performing its safety function, when it actually was capable of performing its function. In effect the technical specification decreases the level of safety, by requiring the system be made inoperable when it is still capable of performing its safety function. The second basis for the change is that the test required by the technical specification does not provide a reliable indication of the fuel quality, or its capability to support continued diesel operation.

The diesel manufacturer has provided specific requirements for the fuel used in the system. These requirements are specified in the Tech. Manual for the diesels, and call for the use of "Light Fuel - ASTM D975-59T No. 1D or 2D." The specification identifies such parameters as Viscocity, Carbon Residue, Ash, Flash Point, Water and Sediment, Cetane Number, etc. The plant technical specifications also list the above specification requirements for the fuel, however in addition, the fuel is required to have an impurity level of less than 2 mg of insolubles per 100 ml when tested in accordance with ASTM D2274-70. This test is a high temperature oxidation test in which fuel is prefiltered and then exposed to pure oxygen at high temperature (203 F) for 16 hours. The resultant deposits and solids are recovered and weighed. This test does not measure the the solids actually in the fuel - these are removed in the prefiltration step - but is intended to predict the oxidative stability of the fuel by severely accelerating the test conditions. The fuel which is in the diesel fuel storage tanks has consistently met all criteria listed for the components by the manufacturer. The fuel has not complied with the specifications for insolubles identified pursuant to ASTM D2274-70. In effect, the fuel complies with the manufacturers specification, however the existing specification requires the equipment be declared inoperable. This necessitates the removal of

the fuel, and truly removing the emergency diesels from operability, even though all manufacturer's specifications are complied with. This decreases the level of safety afforded the plant by administratively requiring the defeat of an operable (manufacturer defined) system.

As described above, we do not believe that the use of ASTM D2274-70 provides a reliable indication of the capability of the diesel fuel to perform as expected. Attached is a report prepared by Mr. K. H. Strauss which supports this contention. Section III.D identifies specific problems with this method, refers to other reports which support these conclusions, and makes recommendations which are consistent with the proposed technical specification change.

Finally, we note that other operating plants have been granted this change to their technical specifications in recent months, and that near term operating license applicants have recieved preliminary approval of similar technical specifications. We believe that the proposed change, when considered in light of the above bases, will not only improve the operability of the plant and prevent unnecessary delays in the completion of the power ascension test program, but also provide an increased margin of safety to protect the health and safety of the public.

NOTE: This page from specification M018-388-3, the Technical Manual for the Emergency Diesel Generators, as supplied by Cooper Energy Services.

2. Place a NEW copper gasket on small end of nozzle.
3. Insert small end of nozzle holder into recessed port, orient fuel drain, and place clamp plate over nozzle holder and holder studs.
4. Apply washers and nuts, and tighten to 50 ft. lbs. torque.

A tight nozzle holder will prevent accumulation of carbon by eliminating leakage of fuel mixture and exhaust gases that eventually will form a solid mass of carbon between fuel nozzle port and fuel nozzle.

Storing Spare Nozzles:

If the fuel nozzle assembly is not immediately installed on the engine, pour clean SAE-10 lubricating oil into fuel inlet and drain holes and close with a threaded protector cap.

Protect nozzle tip by covering the spray holes with grease; then dip the nozzle in a hot plastic dip of ethyl cellulose. Cover the inlet port of the nozzle with hot plastic dip.

Handle carefully to avoid damage to nozzle tip or threads.

Never take a chance with injection equipment. If it needs replacing - replace it, rather than try to extend its life.

Fuel Oil Specification

The following specification is offered as a guide to assist in obtaining suitable fuel oil. It is broad enough to include a wide range of commercial fuels in general distribution.

Light Fuel - ASTM D975-59T No. 1D or 2D

Viscosity at 100F	45 secs., Max. 32.6 Secs. Min.
Carbon Residue on 10% residium	.35% Max.
Ash	.02 Max.
Flash	125F or legal
Water and Sediment, % by volume	0.1
Cetane Number, Diesel	40 Min.
Sulphur, % by weight	1.0 Max.
Copper Strip Corrosion	No. 3 Max.
Distillation - 90% Point, °F	540 Min., 675 Max.
Pour Point, °F	10F below ambient

Where cetane number by test D613 is not available, calculated cetane index may be used as an approximation. However, where there is disagreement, method D613 should be used.

No Significant Hazards Consideration Documentation

The attached amendment request to the PVNGS Unit 1 Operating License does not involve a significant hazard consideration because:

(A) Operation of PVNGS Unit 1 in accordance with this change would not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2) Create the possibility of a new or different kind of accident from any accident previously analyzed; or

3) Involve a significant reduction in a margin of safety; and

(B) The proposed amendment is a change that constitutes an additional limitation, restriction or control not presently included in the technical specifications.

The basis for this determination is included in the attached justification for immediate technical specification change. This justification states that with the proposed change, the margin of safety to protect the health and safety of the public will be increased by removing the administrative requirement to remove an operable (manufacturer's definition) safety component form service. The proposed change also substitutes for a questionable test of the fuels capablility to perform its safety function, a set of more reliable and representative tests.

Safety Review and Evaluation of Proposed Technical Specification Amendment
Dated May 31, 1985

1. The proposed change will not increase the probability of occurence of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report because the change does not decrease the level of protection provided by the existing technical specification. Rather the change will increase the margin of safety, and decrease the probability of any accident or malfunction by improving the quality of the testing performed on the diesel fuel to assure its continued ability to support the operation of the diesel generator.during an emergency situation. This conclusion is supported by the report prepared by Mr. K. Strauss for SNUPPS in October of 1983, and attached to the technical specification amendment package.

2. The proposed change will not raise the possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis report because no changes are made to the facility or its operation. The change is solely a revision of the surveillance performed to assure that the diesel fuel supply is capable of supporting the safety function of the diesel generators. This revised surveillance will increase the level of assurance that the fuel will support this emergency function.

3. The margin of safety defined in the bases for the technical specification is not being reduced, again because the change proposed will provided an increased assurance that the system will function as designed. The change will also prevent the administrativly required removal of an operable (as defined by the manufacturer's specifications) safety system from service during the replacement of the fuel to correct alleged deficiencies.

In conclusion, the proposed change does not raise an unreviewed safety question as defined in 10CFR50.59.

5/31/85
Karl W. Gross, Compliance Supv.

5/31/85
O.T. Zeringue, PRB Chairman