U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-334/89-17
50-412/89-17

Docket No. 50-334
50-412

License No. DPR-66
NPE-73

Licensee: Duquesne Light Company
P. O. Box 4
Shippingport, Pennsylvania 15077

Facility Name: Beaver Valley Power Station, Units 1 and 2

Inspection At: Shippingport, Pennsylvania

Inspection Dates: July 31 - August 10, 1989

Inspectors: R. W. Winters, Reactor Engineer, MPS, EB, DRS, Region I — 8/23/89 date

C. H. Woodard, Reactor Engineer, PSS, EB, DRS, Region I — 8/23/89 date

Approved by: J. R. Strosnider Chief, MPS, Engineering Branch, DRS, RI — 8/24/89 date

Inspection Summary: A routine unannounced inspection was performed from July 31 - August 10, 1989 (Combined Report Nos. 50-334/89-17 and 50-412/89-17). The Corporate Engineering support program for Beaver Valley Units 1 and 2 was inspected. Areas inspected included organization, staffing, quality assurance, training, management support, and communications. The inspection also included the receipt and storage of fuel oil for the emergency diesel generators.

Results: No violations or deviations were identified. One unresolved item concerning diesel fuel analysis was identified.

DETAILS

1.0 Persons Contacted

Duquesne Light Company

L. Arch, Project Manager, Safety System Functional Evaluation
A. Bakken, III, Shift Technical Advisor
(1)(2) G. Beatty, Senior Licensing Supervisor
(1) J. Crockett, General Manager, Corporate Nuclear Services
R. Dambaugh, Power and Distribution Systems Engineer
(2) L. Freeland, Operations Supervisor
(1)(2) K. Grada, Manager, Nuclear Safety
G. Guzak, Maintenance Engineer
H. Hruby, Materials, Codes and Standards Engineer
(2) J. Kasunick, Site Maintenance Director
K. LeGoullon, Instrumentation, Control and Systems Engineer
(1) R. Martin, Director, Nuclear and Mechanical Engineering
(1) T. Noonan, General Manager, Nuclear Operations Unit
(2) D. Orndorf, Chemistry Supervisor
(1)(2) B. Selelak, Licensing Engineer
C. Schmitt, Director, Electrical and Control Engineering
(1) N. Tonet, Manager, Nuclear Engineering
D. Weakland, Supervisor, Materials and Standards
K. Woessner, Team Leader, Safety System Functional Evaluation

United States Nuclear Regulatory Commission

(1) P. Tam, NRR, Senior Project Manager
(1) P. Wilson, Resident Inspector

(1) Denotes those attending the August 4, 1989 exit meeting.
(2) Denotes those attending the August 10, 1989 exit meeting.

The inspectors also contacted other administrative and technical personnel during the inspection.

2.0 Inspection Scope

The scope of this inspection included engineering activities performed for design changes and modifications. This included both modifications and changes that require NRC approval and those that do not. The inspection also covered the installation of selected modifications to verify the adequacy of the design. In addition an inspection of the receipt, handling and storage of the fuel oil for the emergency diesel generators was included.

3.0 References and Requirements

Procedures and documents reviewed are listed in Attachment A.

4.0 Organization (37700, 37701, 37702)

The Duquesne Light Company Nuclear Group is organized under the Vice President Nuclear into four sections for the operation of the Beaver Valley Power Station. The sections are:

-- Nuclear Operations

-- Nuclear Operations Services

-- Corporate Nuclear Services

-- Quality Assurance

The Nuclear Engineering Department (NED) reports to the Vice President Nuclear through the Corporate Nuclear Services section.

NED is organized primarily into four groups that report to the Manager, NED and include the following:

-- General and Plant Engineering

-- Electrical and Control Engineering

-- Nuclear and Mechanical Engineering

-- Materials and Standards Engineering

The Safety System Functional Evaluation (SSFE) Project Manager reports to the Manager, NED. The Stone and Webster (S&W) Project also reports to the Manager, NED, however, S&W is contracted to provide services on a task basis and each task is supervised by the cognizant NED engineering group supervisor.

The inspectors interviewed managers, supervisors and engineers and reviewed selected projects to ascertain the effectiveness of the organization, training of the individuals, communications between organizations and the plants, quality assurance involvement, and the adequacy of the staffing. Selected projects were reviewed to verify the above were effectively implemented.

5.0 Staffing

The inspectors discussed staffing with cognizant managers and supervisors to determine whether the current levels were adequate. The managers stated that the licensee planned to staff the engineering department to a level such that 80% to 90% of the routine workload could be handled by licensee personnel. The licensee plans to use contracted engineering organizations to provide personnel for the remaining work. Work on contracted tasks is performed under the

direct supervision of cognizant licensee engineers. Specialized engineering projects also are purchased from outside contractors. In this manner the licensee plans to keep a stable engineering workforce and keep the plant experience level high.

There were currently 25 to 30 S&W engineers working in the NED office reporting to licensee management. These engineers were supervised as if they were licensee personnel. The licensee stated that present plans included replacing these individuals with permanent personnel by the end of 1989.

The inspectors observed that there were only a few engineers working overtime during the inspection. In most cases this was 'casual' overtime worked at the discretion of the individuals. During preparation for and during outages and in special cases overtime is routinely scheduled to assure timely completion of design work and adequate coverage of installation work.

Conclusions

The staffing of the engineering group was adequate. The licensee does not plan to staff for complete coverage of the required engineering. By purchasing the engineering for specific tasks from contractors the licensee maintains control of the work done on these tasks and maintains direct supervision of the contractors. By performing 80% to 90% of the engineering work 'in house' the licensee is building a stable engineering force and high level of plant specific experience.

6.0 Workload

The licensee has established a system whereby the lead engineer on a project is responsible for that project for the duration of his assignment in the engineering department. This assures that there is continuity from inception of the project through installation and operation. Multidiscipline projects are assigned to a lead engineer of the principle discipline with support of assigned engineers from other disciplines as required. Each engineer in most cases is assigned to multiple projects and is responsible for scheduling the work to avoid conflicts.

NED provides engineering support to the plants. The plants depend on NED for engineering support of operations.

Management overview of the engineering activities is provided through periodic reviews of project status. These include review of project status and problems, and verification of the priority, schedule, and cost. As a result of these reviews changes in emphasis are made depending on updated plant requirements.

The current workload in engineering is relatively heavy in preparation for the Unit 1, R7 outage. The engineering group has as an objective to finish the engineering work 90 days prior to outage start. The 90 day objective is to provide time for outage planning and to allow procurement of the required materials and supplies in a timely manner. In meeting this objective the workload tends to drop shortly before the outage starts and then increase rapidly during the outage when the actual installations begin.

Priorities are set in accordance with the Beaver Valley Power Station Workload Priority System Manual. The priority is achieved through a set of weighting factors that include nuclear safety significance, regulatory requirements, industrial safety, cost/benefits, efficiency, and other management considerations.

Conclusions

The licensee has established a viable system for controlling the engineering workload, for establishing and revising priorities, and controlling the activities of the engineering organization to meet current plant requirements.

7.0 Communications

Communications within the engineering department are largely dependent on daily individual interactions, and discussions among the various engineers and supervisors. The inspectors noted during discussions with engineers that each was familiar with the plant and had a good working relationship with individuals at the plants.

Communications with personnel at the plant include the use of the Engineering Memorandum in establishing projects, Design Change Package review, and various formal design meetings. NED also is represented at the morning and afternoon plant status meetings to assure they are current on the plant activities.

Conclusions

Much of the communication with the between engineers and plant personnel is informal. However, since the lead engineers are responsible not only for the design but also for the installation, this leads to close working relationships between engineering and operations. These communications are enhanced by the onsite location of the engineering office. Attendance of the NED representative at the daily plant status meetings assures that engineering is abreast of plant activities and status.

8.0 Training

The inspectors reviewed training records and discussed engineering training with cognizant managers and engineers. As a result of these reviews and discussions the inspectors determined that the licensee has an extensive engineering training program in addition to the requirements for site access. Engineering Directive (ED) No. 42 describes the mandatory training required for the engineering staff. This directive contains a matrix of courses mandatory for individuals in various positions. Of the thirteen courses in this matrix not all are required for each position. Courses in Quality Assurance, Administrative Procedures, and Station Orientation are required for all positions. Other courses such as Reactor Theory, Auxiliary Systems, and Power Generation are mandatory for selected positions only but are available to all other positions if elected by the individual. The training received by each employee is tracked and reported periodically to department Directors. The inspectors reviewed the records for selected individuals and determined that these individuals had taken the mandatory training as required by ED-42. Management estimates that engineers new to the company spend two to three weeks in training during the first two years of employment and one to two weeks in training after the initial courses have been completed.

In addition to the above mandatory courses, there are many technical courses available to engineering personnel. These courses include subjects such as system and equipment operation and maintenance. Some course titles are:

-- Fire Protection

-- Emergency Diesel Generators

-- Reactor Protection

-- Main Steam

-- Feedwater Heater Vents and Drains

The licensee has a mandatory continuing training program, conducted quarterly. This continuing training includes plant and industry events and selected plant activities.

On June 21, 1989 NED held a Technical Information Presentation Symposium to discuss activities of the engineering department. This symposium was open to all engineering and management personnel of the company. Topics covered included the following:

-- Design Basis Documents

-- Safe Shutdown Analysis Appendix R

-- Piping Erosion/Corrosion Measurement Data Analysis

-- Probabilistic Risk Assessment

The purpose of this symposium was to inform management and technical personnel of activities that are in progress in the company.

Conclusions

The licensee has developed and implemented a comprehensive mandatory training program for engineering and management personnel. This program includes a large number of elective course. In a review of the training records attendance was found high. Management strongly supports these training programs as evidenced by the high number of courses available and the number of individuals participating. This represents a significant commitment to training by the licensee.

9.0 Review of Air Start System Modification (DCP 576) (37701)

The inspectors selected a recently completed design change to install air driers in the air compressor starting system for the EDGs. The purpose of this modification was to replace oversized check valves for more reliable operation and to provide dry air to the starter motors of the EDG.

The inspectors reviewed the design package to determine that this package was prepared, reviewed, and approved as required by the licensee's program. The inspectors discussed the package with the lead engineer and then walked down the resultant modification. The manufacturers instruction manual for the air drier was not included in the design package. However, when questioned about this manual by the inspectors the lead engineer located it by accessing the Master Equipment List (MEL) via a conveniently located computer terminal. The information requested was quickly located by this method. As a side issue the lead engineer demonstrated the use of the MEL for retrieving engineering information. It was apparent that the lead engineer was knowledgeable in the use of the MEL. The inspectors also verified that the drawings of the air drier system had been revised to include this modification.

During the walkdown of the system the lead engineer invited the Shift Technical Advisor (STA) to accompany the inspectors. The STA demonstrated good knowledge of the modification and thorough understanding of the Diesel Generator System.

Conclusions

The design package for the installation of the air drier in the Emergency Diesel Generator starting system was found to be in

accordance with the licensee's program. The installation was complete and the operations personnel demonstrated good knowledge of the operation of this modification and of the EDG System.

The lead engineer demonstrated a good working knowledge of the Master Equipment List and showed it had been revised to include the equipment installed as a result of this modification.

10.0 Safety System Functional Evaluation (SSFE) (37700, 37701)

The purpose of the SSFE and Design Basis Reconciliation Program is to provide an integrated approach to identifying, evaluating and reconciling the Unit 1 licensing and design basis and configuration baseline for the safety systems in the plant.

The objective of the SSFE program are as follows:

-- To demonstrate that safety systems are capable of performing the specified design basis functions.

-- To provide a basis for confidence that the operational readiness of safety systems is maintained.

-- To determine that the safety systems are adequately tested.

-- To determine that training procedures and programs are adequate to assure proper operation and maintenance of the system.

-- To determine that controls are adequate to verify the reliability and safety of the systems.

-- To identify and consolidate the design and licensing basis.

-- To reconcile the design to conform to the licensing and design basis and to safely support plant operation.

-- To establish base line documentation consistent with the Configuration Management requirements.

-- To document the design and licensing basis for efficient retrieval and application.

-- To identify appropriate historical records to support the plant.

The project receives overall direction from the SSFE Management Overview Committee. In addition to providing overall direction this committee is responsible for assessing the safety significant issues during the evaluation. The Management Overview Committee consists of the following individuals:

General Manager, Corporate Nuclear Services
General Manager, Nuclear Operations
Manager, Nuclear Engineering
Manager Nuclear Safety
Manager, Quality Assurance
Plant Manager

The inspectors interviewed the Project Manager and other individuals concerned with the SSFE project for Unit 1 and discussed the schedule for reviewing the plant systems. The Project Manager reported that management support has been excellent and that there were three systems completed in 1988 and there should be an additional four systems completed in 1989. When the SSFE group completes work on a system a preliminary report is written that contains information on unresolved questions. The Management Overview Committee reviews these unresolved questions and determines the safety significance and priority for resolving these questions. Once the priorities have been established the Project Manager assigns an individual to follow the items through until they have been closed. The inspectors reviewed selected reports issued by the SSFE group and observed that they were thorough and complete.

Conclusions

The Safety System Functional Evaluation (SSFE) team approach is an excellent method of updating the design basis documents for the plant. The composition of the Management Overview Committee indicates that there is significant upper level management support for this project. Responses to unresolved questions were found timely and thorough.

A secondary benefit of this project is the communications brought about during the performance of the evaluations between plant operations, quality assurance, and engineering.

11.0 Erosion - Corrosion Control Program (37701)

The inspectors reviewed the erosion program and discussed the method of selecting components to be included with cognizant personnel. The licensee selects components based on EPRI, NUMARC and the plant operating experience. Initial inspections were performed in 1983 for Unit 1, and the program was formalized in 1987 for both Unit 1 and 2 after the failure experienced at Surry. After publication of Generic Letter 89-08 a Nuclear Group Directive was written and is scheduled for publication as soon as the internal reviews have been completed.

The engineering organization selects the components to be inspected, construction prepares these components by removing insulation, cleaning, erecting scaffolding, etc., and the Inservice Inspection group performs the inspections. Component are marked with a grid pattern using high temperature paint that will remain between outages thus assuring that the same points can be later inspected for trending.

The licensee has worked with a vendor to develop a computer based means of collecting and analyzing the data collected. This system allows the data to be electronically recorded as it is collected then again electronically transferred to the computer for analysis thus eliminating the costly and error prone steps of data entry. In the analysis of thinning rates in the absence of initial wall thickness data, the licensee has taken a conservative approach by assuming the initial wall thickness of components to be at the lower tolerance of the commercial thickness.

The computer analysis program allows data analysis by printing established ranges of wall thickness in various colors to visually aid the operator in establishing areas of reduced wall thickness. In addition this program has the feature of representing the component in three dimensions, at operator selected attitudes, in colors representing the wall thickness. In addition to the three dimensional display described above the program also can present the image in two dimensions. The licensee uses prints drawn by the computer as part of the package to describe areas to be repaired.

During the Unit 1, R6 outage, selection of components was as follows:

-- ten components selected by the CHEK computer program based on experience at other plants

-- eight were selected based on NRC concerns

-- five were chosen as a direct result of experience at the Trojan plant

-- 32 were selected by engineering based on plant experience

-- ten were components that had been inspected before.

As a result of these inspections one component was found with a wall thickness below design minimum wall thickness and was repaired by weld build up. Five other components were found for which the wall thickness was projected to be below design minimum wall thickness before the next outage. Two of these were cut out and replaced, the other three were repaired by weld build up. All of these components were in a single phase system. Three were in the condensate and three were in the feedwater system.

During the Unit 1, R7 outage the licensee has tentatively identified 60 components for inspection in the erosion - corrosion program. Of these 60 components 45 are to be components previously inspected and 15 are to be component not previously inspected.

Conclusions

The licensee has established an erosion - corrosion inspection program based on industry information (INPO, NUMARC, other plants) and plant specific data. The inspections during the R6 outage identified six components requiring repair or replacement. The computer program developed for the licensee has eliminated the largest sources of error in data handling, and provides a very versatile methods for analyzing the information. These analysis methods include the ability to display the data in both two and three dimensions, in color and to rotate the three dimensional display for most effective viewing. This program is designed to allow direct comparison of the data with additional information collected in the future thus allowing effective trending.

12.0 Emergency Diesel Generator (EDG) Fuel Oil (TI 2515/100)

12.1 Background

For proper operation of the standby diesel generators, it is necessary to ensure the proper quality of the fuel oil. Appendix B to 10 CFR 50, as supplemented by Regulatory Guide (RG) 1.137, serves as an acceptable basis for licensees to maintain a program to ensure the quality of the EDG fuel oil.

The NRC issued Information Notice 87-04 on January 16, 1987 to alert licensees to potentially significant problems pertaining to the long/term storage of fuel oil. Assurance of the proper fuel oil requires purchasing the correct fuel oil and a receipt inspection to verify that the fuel oil is proper prior to addition to the storage tanks. Since fuel oil degrades with time and external sources contribute contamination, periodic inspection is required to assure continued fuel oil quality.

12.2 Fuel Procurement

Regulatory Guide 1.137 states that the oil to be used for filling or refilling the supply tank should meet the requirements of ASTM D975-77, Standard Specification for Diesel Fuel Oils; or the requirements of the diesel generator manufacturer whichever is more restrictive. The licensee procures type 2-D diesel fuel oil under a blanket purchase order in which the detailed chemical and physical requirements cited match those specified by ASTM D975. These requirements also meet the fuel recommendations of the EDG manufacturer. The licensee purchase order further imposes documentation and records requirements and audit privileges. The purchase order and several recent fuel receipt documents were reviewed. Diesel fuel procurement including an acceptable quality assurance program were previously addressed in detail in NRC Inspection Report 50-412/89-01. No deficiencies were noted in the licensee's fuel procurement program.

12.3 Fuel Receipt Inspection

Unit 1 Technical Specifications require meeting only a portion of ASTM D975 (water, viscosity, sediment and specific gravity) however, the licensee has elected to meet all of the ASTM D975 requirements. Unit 2 Technical Specifications are written to match the requirements of ASTM D975.

The Unit 1 storage facility consists of two 8,000 gallon receiving tanks, two 20,000 gallon storage tanks, two 550 gallon day tanks and and two 550 gallon tanks that are integral with the EDGs. The Unit 2 storage facility consists of two 58,000 gallon storage tanks and two 1,100 gallon day tanks.

New fuel arriving at the site is sampled and analyzed to determine if it meets the requirements of ASTM D975 using chemistry procedure C.M.2-3.61 as follows:

-- For water sediment, viscosity and specific gravity prior to adding it to the 58,000 gallon fuel storage tanks at Unit 2 and the 8,000 gallon holding tank Unit 1.

-- For oxidation stability within one week after receipt and adding to the above tanks.

-- The remainder of the ASTM D975 parameters are analyzed within two weeks (flash point, cetane number, carbon residue, ash, sulfur, copper strip corrosion, 90% distillation temperature, and cloud point).

-- After analysis the fuel is transferred from the 8,000 gallon holding tank to one of two 20,000 storage tanks.

-- At the time of new fuel arrival any accumulated water in the receiving tanks is measured and if over a specified level removed.

These samples are taken from the delivery tanker using an all-levels sampler. Both the sample parameters and sample analysis completion times are within Regulatory Guide 1.137 guidelines.

No deficiencies were noted in the fuel receipt, inspection or analysis.

12.4 Stored Fuel Degradation

Information Notice 87-04 alerts licensee's to potential significant problems pertaining to the long term storage of fuel oil for the diesel engines. The notice described an incident of EDG shutdown,

which was caused by aged and degraded fuel particulates which blocked fuel filters and caused engine shutdown. A review was made of the licensee's internal documentation of applicability and impact for both Units 1 and 2. Conclusions reached by the licensee were that the design, operation, surveillance, and maintenance of the EDG units were such that failures as described by the information notice are not expected to occur at Beaver Valley. The inspector found no discrepancies in the licensee's analysis. However, there are some concerns which are detailed in other sections of this report. In addition , the licensee does not use fuel additives to retard oxidation and inhibit biological growth in the fuel. An analysis is currently underway to evaluate the use of these additives and/or additional sampling to detect fuel degradation in long term storage.

The fuel storage tanks are pumped out and cleaned on a ten year interval basis in accordance with Regulatory Guide 1.137. Both Unit 1 tanks were cleaned in 1986. Unit 2 tanks are scheduled for cleaning in 1997.

12.5 EDG Fuel System - Unit 1

Each EDG fuel system has redundant fuel oil pumps and strainers to provide fuel from the 20,000 gallon storage tanks to the 550 gallon day tanks. Fuel oil from the day tanks is gravity fed to integral EDG 550 gallon tanks. Fuel oil from the integral tanks is pumped by both an electrical and engine driven pump through a filter to the EDG injectors. Either pump can sustain EDG operation. Although the filter is duplex, it is operated in the 'both' mode. The filters are routinely inspected and replaced each refueling outage.

For Unit 1, the licensee performs monthly routine sampling and analyses for water, viscosity and sediment on fuel oil removed from the large storage tanks and the day tanks. However, the inspector observed that there are no sampling/analysis of fuel in the integral day tanks nor are there additional analyses of the samples to determine the other ASTM D975 parameters to detect long term fuel degradation or biological growth (ASTM D2274). The extremely long residence time of fuel oil in the 20,000 gallon storage tank without the use of additives to inhibit breakdown by oxidation and to prevent biological growth may lead to sufficient fuel oil degradation to cause EDG failure to start or operate. The licensee is currently evaluating the need for additional testing and fuel additives. The long term quality analyses of the EDG fuel oil is an unresolved item pending the licensee's determination of the need for fuel additions or additional sampling and NRC review of this determination (50-334/89-17-01).

12.6 Fuel System - Unit 2

Unit 2 fuel oil system requires receipt of incoming fuel oil directly into 58,000 gallon underground EDG fuel oil storage tanks. Fuel pumping to each EDG is via redundant safety related pumps to a 1100 gallon day tank. Fuel from the day tank is pumped via an electric (start/back-up) and gear driven engine fuel pump. Fuel to the EDG units is filtered by a duplex filter prior to injection. The filter is instrumented to provide indication/alarm during operation. The duplex feature permits switchover/changeout of the filter during operation. The filters are inspected/replaced each outage. No deficiencies were observed in the Unit 2 fuel system.

12.7 EDG Fuel Oil Control - Units 1 and 2

Fuel flow to the EDG injectors is controlled by the Woodward governor which has provisions for local control. A review of the governor operating, control and shutdown circuits revealed that the governor is fail safe, i.e. in the event of loss of control power it will continue to operate as a mechanical governor. Manual operation and shutdown capability is provided. Detailed operating procedures provide the specific information required for operating in this mode. The procedures provided to the operators for local EDG operation were deemed adequate.

12.8 Adequacy of EDG Fuel Oil Supply

NRC Information Notice 89-50 identifies a potential for the existence of an inadequate onsite EDG fuel supply. The Notice indicated that a nuclear plant recently updated its EDG seven day fuel oil consumption calculation based upon the equipment loading and found this value to exceed their minimum Technical Specification fuel supply requirements. Since receipt of this Information Notice, the licensee had conducted an evaluation of the current EDG loading and fuel consumption for both Units 1 and 2. A review of the licensee's evaluation including the basis and conclusions indicates that the fuel supply is adequate and it exceeds Technical Specification minimum requirements.

12.9 Conclusions

The licensee's program for the procurement, receipt, sampling and inspection of the EDG fuel oil is considered to meet the guidelines established in Regulatory Guide 1.137 except that in Unit 1 the integral 550 gallon tank and the 20,000 gallon fuel storage tank are not periodically sampled and analyzed to assure that the fuel is in compliance with ASTM D975 parameters.

There is some concern for the long term degradation of the fuel oil as described by Information Notice 87-04. The licensee's current evaluation of the need for fuel additives and/or additional sampling and analysis should resolve this concern.

13.0 Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or violations. Unresolved items are discussed above.

14.0 Management Meetings

Licensee management was informed of the scope and purpose of the inspection at the beginning of the inspection. The findings of the inspection were discussed with licensee representatives during the course of the inspection and presented to licensee management at the August 4 and 10, 1989 exit interviews (see paragraph 1.0 for attendees).

At no time during the inspection was written material provided to the licensee by the inspector. The licensee did not indicate that proprietary information was involved within the scope of this inspection.

ATTACHMENT A

DOCUMENTS AND REQUIREMENTS REVIEWED

Document Number	Revision	Title
	10/10/88	Safety System Functional Evaluation and Design Basis Reconciliation Program Manual
		Safety System Functional Evaluation and Design basis Reconciliation Program Manual
ED-42	5	Nuclear Technology Training for Technical Staff and Managers
	6/21/89	Technical Information Presentation Symposium
NEAP-2.1	1	Station Modification Requests
NEAP-2.2	0	Design Change Control
NEAP-2.3	0	Classification of Structures, Systems and Components
NEAP-2.6	3	Design Concepts
NEAP-2.7	1	Engineering Specifications
NEAP-2.17	0	ISI Drawings
NEAP-3.3 (UAP-3.3)		Contracted Engineering Services
NEAP-6.8	0	MEL Control and Update
ASTM D975-77		Standard Specification for Diesel Fuel Oil
ASTM D2274-80		Standard Test Method for Oxidation Stability of Distillate Fuel Oils

USNRC Regulatory Guide 1.137 - Fuel Oil Systems for Standby Diesel Generators